Fundamental Chess Endings

Karsten Müller and Frank Lamprecht

Foreword by John Nunn

Gambit
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Everywhere one looks there are books about chess openings: ‘Win with the ...’, ‘Beating the ...’, ‘The Complete ...’; the titles come one after another. One gains the impression that opening theory progresses at breakneck pace and that trying to master even part of it is practically a full-time job. In contrast, endgame theory advances at a more sedate pace and readers may wonder what a new endgame encyclopaedia has to offer that is not already in the classical works by Fine, Averbakh and others. To answer this question, I must first mention the three main influences driving endgame theory forwards.

The first is simply the inevitable expansion of any field of human knowledge with time, as each generation builds on the work of the last. Endgame theory as expounded by Averbakh was more accurate and comprehensive than that of Fine, just as Fine was an advance over his predecessors.

The second is of course the use of the computer. The construction of all 5-man and many 6-man databases has removed a large element of doubt from several areas of endgame theory. What was previously only guessed at can now be stated precisely.

Finally, changes in the way chess is played, especially the introduction of faster time-limits, has led to a greater emphasis on the practical side of endgame theory. It is not enough to know that a position is theoretically drawn: one also has to know the precise method of drawing it with limited time on the clock. Thus, there is an increased emphasis on concrete knowledge.

As an example of how endgame theory has evolved, Fine’s Basic Chess Endings (1941) had this to say about the ending \( \mathbb{W} + \mathcal{A} \) vs \( \mathbb{W} \): “This is a draw unless White has a BP or centre P on the seventh rank supported by the King.” Even before the days of the computer, Averbakh had cast doubt on this statement by showing that there were good winning chances even if the king was not supporting the pawn. He also showed that there were many winning chances with a knight’s pawn on the seventh, and even in favourable cases with a rook’s pawn. However, Averbakh only analysed a few positions with the pawn further back, so the result of most positions was still in doubt. Now the computer has shown that this ending is almost always a win with a bishop’s pawn or centre pawn, except if the defending king is in front of the pawn or has a chance to get in front of the pawn (see p. 319).

As another example, Fine mentioned three points “so fundamental that they must always be borne in mind”, and the first of these was that “without pawns one must be at least a Rook ahead in order to be able to mate”. He claimed that the only exceptions to this rule were the endings with two rooks against two minor pieces and four minor pieces against a queen (he apparently forgot his claim that \( \mathbb{W} + \mathcal{A} \) vs \( \mathbb{W} \) is “won most of the time”). However, we now know of a host of other exceptions; for example, \( \mathbb{W} + \mathcal{A} \) vs \( \mathcal{A} \), \( \mathbb{W} + \mathcal{A} \) vs \( \mathcal{Q} \), \( \mathbb{W} + \mathcal{A} \) vs \( \mathcal{Q} \), \( \mathbb{W} + \mathcal{A} \) vs \( \mathcal{Q} + \mathcal{Q} \) with opposite-coloured bishops, \( \mathbb{W} + \mathcal{A} \) vs \( \mathcal{A} \), etc. (see pp. 400-6). Indeed, there are now so many exceptions that Fine’s ‘rule’ is found wanting. However, there will probably be no simple replacement because the databases have revealed many paradoxes. For example, the only ending with two minor pieces vs one minor piece to be generally won is \( \mathbb{Q} \) vs \( \mathcal{Q} \), which perhaps seems natural enough in view of the power of the two bishops on an almost empty board. But how does one then explain the fact that with \( \mathbb{W} \) vs two minor pieces, the only combination of minor pieces which generally draws is the two knights?

Karsten Müller and Frank Lamprecht have incorporated these new trends in endgame theory in their book. They have achieved an exceptional level of precision in their coverage of the most fundamental endgames by using computer databases. In more complex endings, they have not neglected general advice but there is an emphasis on the concrete analysis that is essential for the rigours of contemporary chess. Readers have a feast ahead of them, so it is time for me to finish and pass you over to Karsten, Frank and their silicon friends...
Preface

The fascinating world of chess endings has been explored in several complete works before: the five-volume Averbakh series, the five-volume Encyclopaedia of Chess Endings, Chéron’s four-volume work, Batsford Chess Endings and Fine’s Basic Chess Endings, to name just a few. There are also many books devoted to specific piece distributions. Our intention was therefore not to reinvent the wheel, but to connect the best from the past with the most suitable recent examples and research.

We both have many years of experience as chess trainers and we can assure you that your engagement in endgame theory will soon repay itself. There are various reasons for this. First, except for some new developments in computer technology, endgame theory is rather static, so what you learn will be useful throughout your chess career. Also, the number of precise positions that you need to know by heart is relatively small and in many cases the knowledge of the general assessment, win, draw or loss, is enough. Far more important is the understanding of some frequently-occurring themes and motifs that will guide you through the endgame jungle. These principles won’t just help you to improve your endgame play, but they will also strongly affect your middlegame decisions and play, especially regarding the matter of pawn play and good or bad exchanges. You will also improve your calculating abilities since in many endgame positions it is necessary to look several moves ahead, while due to the limited material it is somewhat easier to stay on track than in a complex middlegame position.

Fundamental Chess Endings is primarily conceived as a textbook and is divided into 12 chapters with exercises. We start with the basic mates and continue with chapters on all endings where each side has at most one piece, plus sections on some of the most important endings with additional pieces. The statistics (see page 11) were only a rough guideline for the space we assigned to particular endings. For instance, we devoted a lot of space to rook endings as they occur most often in practice, and to pawn endings as they are fundamental for all other endings. Some endings with more pieces, such as double-rook endings or queen against two rooks, are also covered, and in Chapter 11 some general endgame principles are explained using endings with more material. At the end of each chapter or section, rules and principles for the specific ending are given. Study them carefully — you should know them by heart! A list of selected reference works is also given in the same place.

A few words about how to work with the book: it is certainly possible to study the chapters in another order than indicated, but the underlying endings should come first, since otherwise you might skip important rules or definitions. Don’t try to read the book too fast, as many positions can’t be understood just by a short look at the diagram and reading the text. You will get the most out of the material by playing through the variations on a board or with a computer. Also try hard to solve the exercises, and don’t become despondent if you have problems; even masters usually can’t solve them in seconds!

For the five-man and the pawn endings we used the Nunn Convention (page 13). Note that for these assessments we ignore the 50-move rule, but we emphasize it when it has profound influence on the play, as in the ending rook and bishop vs rook (without pawns). Throughout the book, we have used a player-centred approach, so a c-pawn on the seventh rank is on c7 if it is white and on c2 if it is black.

Writing this book was no easy task, but fortunately it wasn’t a lonely one either. We would like to thank Georg von Bülow, Martin Voigt, Christian Wilhelmi and Werner Müller for advice and proof-reading, and Rafael B. Andrist, Tim Bogan, Thies Heinemann and Christopher Lutz for pointing out inaccuracies in the first printing of Fundamental Chess Endings. Some material from section A2d on pp. 201-4 and section A on pp. 304-5 originally appeared in a modified form in the Endgame Corner column on the Chess Cafe website; thanks are due to Hanon W. Russell for
allowing us to use this material. We would also like to thank Edward Winter and John Emms. Special thanks go to ChessBase (without the endgame tablebases and the calculating power of the latest programs like Fritz 6 and Nimzo 8 we wouldn’t have dared to start this project!) and to Gambit Publications for the initial idea to write this book and a cooperative attitude throughout. Especially Graham Burgess and John Nunn did a marvellous job, just as with our first book Secrets of Pawn Endings.

While careful work has been done, some mistakes are unavoidable and we offer thanks in advance for any corrections by our readers.

Finally, we have this dream that at some moment you will show your friend the beautiful queen sacrifice from the first round, but immediately afterwards comes this splendid endgame performance where you outplayed your strong opponent from a completely level position!

Karsten Müller, Frank Lamprecht
Hamburg, August 2001
Statistics

You don’t trust statistics? You are probably right, but these are based on a well-edited database that contains nearly 1.7 million games mainly from the last two decades. Our aim here is to see how often we can expect to get a particular type of ending in our chess career. There is no definite answer as we are talking about probabilities and the answer might also depend on your style and choice of openings. However, some endings are certainly more likely to arise than others.

We searched for endings that were on the board for at least two half-moves (a very short time: just one move by each player). If you search for longer-lasting endgames the numbers drop rapidly. Let’s take all rook endings from the database as an example:

<table>
<thead>
<tr>
<th>Half-moves</th>
<th>2</th>
<th>10</th>
<th>20</th>
<th>40</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quantity</td>
<td>142,488</td>
<td>111,534</td>
<td>80,990</td>
<td>34,693</td>
</tr>
</tbody>
</table>

Here are the results for several different types of ending. It is worth noting the high numbers for rook + minor piece vs rook + minor piece (more than 15 percent of all games) and rook endings.

<table>
<thead>
<tr>
<th>Ending</th>
<th>Quantity</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bishop + Knight vs King</td>
<td>283 (62 draws)</td>
<td>0.02</td>
</tr>
<tr>
<td>Pawn Endings</td>
<td>48,465</td>
<td>2.87</td>
</tr>
<tr>
<td>King + Pawn vs King</td>
<td>3,920</td>
<td>0.23</td>
</tr>
<tr>
<td>Knight vs Pawns</td>
<td>15,512</td>
<td>0.92</td>
</tr>
<tr>
<td>Knight vs Knight</td>
<td>26,263</td>
<td>1.56</td>
</tr>
<tr>
<td>Bishop vs Pawns</td>
<td>16,953</td>
<td>1.01</td>
</tr>
<tr>
<td>Bishop vs Bishop (Same Colour)</td>
<td>27,864 (11,351 draws)</td>
<td>1.65</td>
</tr>
<tr>
<td>Bishop vs Bishop (Opposite Colour)</td>
<td>18,653 (11,045 draws)</td>
<td>1.11</td>
</tr>
<tr>
<td>Bishop vs Knight</td>
<td>55,476 (19,670 draws)</td>
<td>3.29</td>
</tr>
<tr>
<td>Rook vs Pawns</td>
<td>12,723</td>
<td>0.75</td>
</tr>
<tr>
<td>Rook vs Rook</td>
<td>142,488 (55,974 draws)</td>
<td>8.45</td>
</tr>
<tr>
<td>Rook + Pawn vs Rook</td>
<td>11,318</td>
<td>0.67</td>
</tr>
<tr>
<td>Rook + Two Pawns vs Rook</td>
<td>9,398 (3,574 connected)</td>
<td>0.56</td>
</tr>
<tr>
<td>Two Rooks vs Two Rooks</td>
<td>58,211</td>
<td>3.45</td>
</tr>
<tr>
<td>Rook vs Knight</td>
<td>16,298</td>
<td>0.97</td>
</tr>
<tr>
<td>Rook vs Bishop</td>
<td>25,524</td>
<td>1.51</td>
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<td>Section</td>
<td>Position Description</td>
<td>Games</td>
</tr>
<tr>
<td>---------</td>
<td>----------------------</td>
<td>-------</td>
</tr>
<tr>
<td>8.1</td>
<td>Rook + Knight vs Rook</td>
<td>23,910</td>
</tr>
<tr>
<td>8.2</td>
<td>Rook + Bishop vs Rook</td>
<td>29,785</td>
</tr>
<tr>
<td>8.3</td>
<td>Rook + Minor Piece vs Rook + Minor Piece</td>
<td>255,317</td>
</tr>
<tr>
<td>9.1</td>
<td>Queen vs Pawns</td>
<td>7,066</td>
</tr>
<tr>
<td>9.2</td>
<td>Queen vs Queen</td>
<td>30,834</td>
</tr>
<tr>
<td>9.3</td>
<td>Queen + Pawn vs Queen</td>
<td>1,575</td>
</tr>
<tr>
<td>10.1</td>
<td>Queen vs One Minor Piece</td>
<td>2,798</td>
</tr>
<tr>
<td>10.2</td>
<td>Queen vs Rook</td>
<td>6,769</td>
</tr>
<tr>
<td>10.3</td>
<td>Queen vs Two Minor Pieces</td>
<td>1,276</td>
</tr>
<tr>
<td>10.4</td>
<td>Queen vs Rook + Minor Piece</td>
<td>11,637</td>
</tr>
<tr>
<td>10.5</td>
<td>Queen vs Two Rooks</td>
<td>5,257</td>
</tr>
<tr>
<td>10.6</td>
<td>Queen vs Three Minor Pieces</td>
<td>239</td>
</tr>
<tr>
<td>10.7</td>
<td>Queen and Minor Piece vs Queen</td>
<td>15,128</td>
</tr>
<tr>
<td></td>
<td>Queen + Bishop vs Two Rooks</td>
<td>Only one without pawns!</td>
</tr>
</tbody>
</table>

Source: ChessBase, Mega Database 2001, 1,687,182 games
Nunn Convention

John Nunn introduced the following system for move evaluations in his famous book *Secrets of Rook Endings*:

! The only move that doesn’t change the evaluation of the position (if we ignore moves that lead to a repetition). Thus, every move that leads to a position that has to be reached if the defender plays appropriately gets an exclamation mark. The exception is that if there is only one legal move, it doesn’t get an exclamation mark.

!! A particularly beautiful or hard-to-see exclamation-mark move.

? A move that changes the result of the position. Of course, the result can only be changed in a negative way.

?? An obvious or very unfortunate question-mark move.

?! A move that makes one’s task easier or creates problems for the opponent.

We demonstrate the convention with the following study:

```
W

```

```
```

0.01                         +/-

L. Centurini, 1856

1 $\&h4$
No exclamation mark as 1 $\&g5$ works in the same manner.

1...$\&d6$ 2 $\&f2+$ $\&a6$ 3 $\&c5!$
White has to bring about this position in any case, as ...$\&d6$ has to be prevented: 3 $\&d4?!$ $\&d6$?

4 $\&f6$ $\&b6$ 5 $\&d8+$ $\&c6$ 6 $\&e7$ $\&h2$?? and 7 $\&c5$ is not possible.

3...$\&g3$ 4 $\&e7!$ $\&b6$ 5 $\&d8+$! $\&c6$ 6 $\&b4!$ $\&h2$ 7 $\&f2+$ $\&b5$ 8 $\&a7$
8 $\&g1$ can be played first, so no exclamation mark.

8...$\&c6$ 9 $\&b8!$ $\&g1$ 10 $\&c5$ $\&a7$ 11 $\&d4$ $\&xd4$ 12 $\&b8$! +--
Promotion to a queen is unique, because 12 $\&b8$?? only reaches a drawn rook vs bishop ending (see Chapter 7).

**Important Note**
We have used the Nunn Convention throughout the analysis if the starting position of an example is a five-man endgame (which can be checked with tablebases) and in Chapter 2 (on pawn endings). If we apply it in other examples we give (NC) after the first move where we started to use it and it is valid for the whole variation from that point on.
Other Signs and Symbols

Move Assessments

When the Nunn Convention is not being used, the move-assessment symbols have the following, more standard, meanings:

!!  a very beautiful and strong move
!   a strong move
!?  an interesting move
?!  a dubious move
?  a bad move
??  a blunder

Other Symbols

+-  White is winning
±  White is clearly better and should win
±± White is a little bit better but his advantage shouldn’t be enough for a win
=  The position is equal or drawn
♀ Black is a little bit better but his advantage shouldn’t be enough for a win
♀♀ Black is clearly better and should win
→→ Black is winning

Next to the diagrams we use the following symbols:

W  The position is considered with White to move
B  The position is considered with Black to move
W/B The position is considered both with White to move and with Black to move

In the diagrams there are the following symbols:

○ a critical square
★★ a key square
☐ marks, particularly in Chapter 2, the key squares so that numbers can still be read

Figures like 1 or 1a mark the corresponding squares

Below the diagrams you will find signs like +/- . The sign in front of the slash gives the evaluation from White’s point of view with White to move, while the sign after the slash is the evaluation with Black to move from his point of view. Therefore:

/+ means that White to move wins, while Black to move can draw.
/- means that Black to move loses, and we do not discuss the position with White to move.
It might be uninteresting for us or meaningless (e.g., Black’s king might be in check).

With the exercises it is different. Stars replace the signs, and they are located next to the diagram. They mean:

* easy
** medium
*** difficult
**** very difficult
***** extremely difficult
Thus:
***/+ means that White is to move in this difficult exercise.
***/- means that it is a two-part exercise: with White to play it is of medium difficulty, while
the Black-to-play case is easy.

The following symbols are used in the move notation and the game references:
+	check
++	double check
x
captures
#	checkmate
Ch	championship
Cht	team championship
Wch	world championship
Wcht	world team championship
Ech	European championship
Echt	European team championship
ECC	European Clubs Cup
Ct	candidates event
IZ	interzonal event
Z	zonal event
OL	olympiad
jr	junior event
wom	women’s event
mem	memorial event
rpd	rapidplay game
sim
game from simultaneous display
adv	Advanced chess (human + computer)
corr.
correspondence game
1-0
the game ends in a win for White
½-½
the game ends in a draw
0-1
the game ends in a win for Black
(n)
nth match game
(D)
see next diagram

Abbreviations

(NC)	Nunn Convention is used from this point onwards
(FL)	Frank Lamprecht
(KM)	Karsten Müller
ECE	Encyclopedia of Chess Endings (of the endgame type concerned)
BCE	Batsford Chess Endings
Av	Averbakh (of the endgame type concerned)
Inf 63	Informator 63 (etc.)
CBM	ChessBase Magazine
NiC	New in Chess Magazine
1 The Basic Mates

You must of course have learned to mate with queen or rook in one of your first chess lessons, so you might want to skip the first two sections of this chapter, but you might be able to mate more quickly if you study them.

The most important mate here is the one with knight and bishop, which might be unsolvable with limited time and knowledge (even grandmasters have failed in over-the-board situations). In this chapter we consider:

1.1: King and Queen vs King

1.2: King and Rook vs King

1.3: King and Two Bishops vs King

1.4: King, Bishop and Knight vs King

1.5: King and Two Knights vs King and Pawn

1.1 King and Queen vs King

5 \text{\texttt{b6}} \text{\texttt{c8}} 7 \text{\texttt{d6}} \text{\texttt{e7}} (and not 7 \text{\texttt{d6??}} stalemate)
7...\text{\texttt{d8}} 8 \text{\texttt{d6}} \text{\texttt{e8}} 9 \text{\texttt{e7#}}.
5 \text{\texttt{b6+}}

5 \text{\texttt{d8}} is one move faster: 5...\texttt{f7} 6 \text{\texttt{f5}}
\texttt{g7} \text{\texttt{e7}}+ \texttt{h6} 8 \text{\texttt{d7}} (8 \text{\texttt{f7??}} stalemate)
8...\texttt{h5} 9 \text{\texttt{h7#}}.

5...\texttt{e7} 6 \texttt{e5} \texttt{f7} 7 \texttt{f5} \texttt{e7} 8 \texttt{e7+}
Forcing the king to the edge.
8...\texttt{f8} 9 \texttt{f6} \texttt{e8} 10 \texttt{e7#}
Or 10 \texttt{e8#}.

The procedure is quite easy. One just has to be careful not to stalemate the opponent. The queen cuts the king off, then the attacking king approaches and the defender is forced back. The attacker could even win if it were possible to pass. This is different from king and rook vs king.

Longest win (the number of moves the attacker needs to mate from the worst position that is still winning): 10 moves (\texttt{va1}, \texttt{vb2}; \texttt{b\texttt{g}5}).

1.2 King and Rook vs King

There are two completely different winning techniques for the attacker. The first is based on the opposition of the kings with the rook being far away:

1 \texttt{a5}
At first the black king is cut off along the 5th rank.
1...\texttt{d6} 2 \texttt{c2}
Then White's king approaches his enemy counterpart.
2...\texttt{e6} 3 \texttt{d3} \texttt{d6} 4 \texttt{e4} \texttt{e6}
Now as the white king has arrived, Black's king is driven further back. 4...\texttt{c6} 5 \texttt{e5} \texttt{d7}
1 ♕c2 ♕e5 2 ♗d3 ♗d5

Now Black’s king can be driven further back.

3 ♗a4 ♗c6 4 ♗d4 ♗b6

4...♕d6 5 ♗a6+ forces the king back.

5 ♗g5 ♗c6 6 ♗h5 ♗d6

6...♗b6 7 ♗c4 ♗c6 8 ♗h6+ is analogous.

7 ♗h6+ ♗e7 8 ♗d5 ♗f7 9 ♗e5 ♗g7 10 ♗b6 ♗f7 11 ♗a6 ♗e7 12 ♗a7+ ♗d8 13 ♗e6 ♗c8 14 ♗d6 ♗b8 15 ♗g7 ♗e8 16 ♗h7 ♗b8 17 ♗c6 ♗a8 18 ♗b6 ♗b8 19 ♗h8#

In the second method, the attacking rook operates near its king and confines the defending king to rectangles, which become smaller and smaller:

1 ♕c2 ♕e5 2 ♗d3 ♗d5 3 ♗a4 ♗e5

After improving the king’s position, we start the technique now:

4 ♗d4

The rectangle is d8-d4-h4.

4...♗f5 5 ♗e4

Now it is e8-e4-h4.

5...♗f6 6 ♗d4

If the rectangle can’t be reduced immediately, the king comes closer.

6...♗f5 7 ♗d5 ♗f6

7...♗g5 8 ♗e6 ♗g6 9 ♗f4 ♗g5 10 ♗e5 ♗g6 11 ♗f5 ♗g7 12 ♗f6 ♗g8 13 ♗f5 ♗g7 14 ♗g5 ♗h7 15 ♗g6 ♗h8 16 ♗f6 ♗h7 17 ♗f7 ♗h8 18 ♗h6#.

8 ♗e5

The king is more and more confined.

8...♗f7 9 ♗e6 ♗g7 10 ♗e5 ♗f7 11 ♗f5 ♗g7 12 ♗f6 ♗h7 13 ♗g6 ♗h8 14 ♗f6 ♗h7 15 ♗f7 ♗h8 16 ♗h6#

The fastest way to mate the king is a mixture of both techniques using the one appropriate for the given position.

Longest win: 16 moves.

1.3 King and Two Bishops vs King

This is a bit more difficult than mating with the rook as there are two units to command, but it is much easier than mating with bishop and knight (see following diagram).

1 ♗h3 ♗e7 2 ♗f4

The bishops confine the king. Now White’s king approaches to force Black into the corner.

2...♗f7 3 ♗f2 ♗e7 4 ♗e3 ♗f7 5 ♗e4 ♗c7 6 ♗e5 ♗f7 7 ♗f5 ♗e7 8 ♗g6 ♗d8 9 ♗f6 ♗e8 10 ♗c7 ♗f8 11 ♗d7 ♗g8 12 ♗g6 ♗f8 13 ♗d6+ ♗g8 14 ♗e6+ ♗h8 15 ♗e5#

Longest win: 19 moves.

Two bishops of the same colour cannot, of course, mate a bare king.

Note that Ken Thompson’s computer database proved in 1983 that two bishops even overcome king and knight. For this subject we refer the reader to Secrets of Minor-Piece Endings, where John Nunn deals with it extensively (pp. 265-81). Two bishops against one is on the other hand usually drawn; for example, if you add a black bishop on b2 in the position after 14...♕h8 above White can’t make any progress (even an additional white pawn on h7 wouldn’t help due to the wrong rook’s pawn – see Chapter 4!).

1.4 King, Bishop and Knight vs King

This ending is quite tricky, especially as the 50-move rule can easily come to the defender’s aid if the attacker makes a few slips. King, bishop and knight share the work in the following manner:

- The attacking king generally stays in opposition (see 2.07A, C) to, or a knight’s move away from, the defending king. It normally stays on squares of opposite colour to the bishop.
• The knight stands near the kings because of its nature as a short-range piece, and covers flight-squares of the colour the bishop can't control.
• The bishop is very fast and can easily create zugzwang situations. Mate can only be forced in a corner which is controlled by the bishop; we call these corners the 'right' corner.

The winning procedure consists of the following steps:
1) Forcing the king to the edge of the board.
2) The defending king may have to be forced from the 'wrong' to the 'right' corner.
3) Mating the king in the 'right' corner.

The win is most often spoiled by wrong knight moves. It is essential to know the following pattern by heart:

```
1.04
```
![Diagram](image)

The starting position is just reached two files shifted to the left: 2...\$e8 3 \$d7+ \$e6 \$d8 5 \$d6, and now:

a) 5...\$e8 6 \$e5 \$d8 (6...\$b8 7 \$c6 \$c8 8 \$b7++) 7 \$g6 \$a8 8 \$f7 \$d8 8...\$b8 9 \$d7 \$a7 10 \$c7 \$a8 11 \$c4 \$a7 12 \$d7 \$a8 13 \$b6+ \$a7 14 \$e8+ \$a8 15 \$d5\#) 9 \$b7+ transposes to line 'b'.
b) After 5...\$e8 6 \$g6+ \$d8 7 \$f7 Black's king has been driven two files further in the direction of the dangerous corner. White now just repeats the pattern: 7...\$c8 8 \$c5 \$d8 9 \$b7+ \$c8 10 \$c6 \$b8 11 \$b6 \$c8 12 \$e6+ \$b8 13 \$c5 \$a8 14 \$d7 \$b8 15 \$a6+ \$a8 16 \$c6#.

3 \$e6 \$c7 4 \$d7 \$c6
4...\$b7 5 \$d3 \$c6 6 \$e2 \$c7 7 \$f3 \$d8 8 \$d6 \$e8 9 \$h5+ -- lasts one move longer. 5 \$d3

Imprisoning Black's king again.
5...\$c7 6 \$e4 \$d8 7 \$d6 \$e8 8 \$g6+
We have reached the shifted starting position again.
8...\$d8 9 \$f7
This waiting move puts Black in zugzwang. 9...\$c8 10 \$e5 \$d8 11 \$b7+ \$c8 12 \$c6 \$b8 13 \$b6 \$c8 14 \$e6+ \$b8 (D)

```
1.04A
```
![Diagram](image)

Finally Black's king is confined in the 'right' corner and the third phase begins. We can choose between two ways to mate Black's king:

15 \$e5
Or 15 \$d8 \$a8 16 \$c8 \$b8 17 \$a6 \$a8 18 \$b7+ \$b8 19 \$c6#.
15...\$a8 16 \$d7
Not 16 \$a6?? stalemate.
16...\$b8 17 \$a6+ \$a8 18 \$c6#
Especially important was the knight manoeuvre $\mathcal{Q}f7-e5-d7-c5-b7$. It looks like a 'W' and served the purpose of controlling the flight-squares h8, f8, d8, b6 and c5. This method should be practised several times (also at other edges and with bishops of the other colour!) to be able to master it over the board.

Now we proceed to phase 1:

\begin{center}
\begin{tabular}{c}
<table>
<thead>
<tr>
<th>W</th>
</tr>
</thead>
</table>
| $\mathcal{Q}b2$ & $\mathcal{Q}d3$ & $\mathcal{Q}e2$ & $\mathcal{Q}c4$ & $\mathcal{Q}d5$ & $\mathcal{Q}d4$ & $\mathcal{Q}e6$ & $\mathcal{Q}f6$ & $\mathcal{Q}e7$ & $\mathcal{Q}f8$ & $\mathcal{Q}b6$ & $\mathcal{Q}f6$ & $\mathcal{Q}e8$ & $\mathcal{Q}c4$ & $\mathcal{Q}d6$ & $\mathcal{Q}d8$ & $\mathcal{Q}d7$ & $\mathcal{Q}d8$ & $\mathcal{Q}b5$ & $\mathcal{Q}c7$ & $\mathcal{Q}c8$ & $\mathcal{Q}d8$ & $\mathcal{Q}c7$ & $\mathcal{Q}c8$ & $\mathcal{Q}c6$ | 1.05
\end{tabular}
\end{center}

In the diagram White’s pieces occupy very passive positions and must first be brought into play:

$1 \mathcal{Q}b2 \mathcal{Q}d3 2 \mathcal{Q}c3 \mathcal{Q}d4 3 \mathcal{Q}c2 \mathcal{Q}e3 4 \mathcal{Q}d5+ \mathcal{Q}d4 5 \mathcal{Q}b3 \mathcal{Q}e4 6 \mathcal{Q}c3 \mathcal{Q}e5 7 \mathcal{Q}d3 \mathcal{Q}f5 8 \mathcal{Q}d4 \mathcal{Q}e6 9 \mathcal{Q}e3+ \mathcal{Q}f6$

$9...\mathcal{Q}d6 10 \mathcal{Q}d5 \mathcal{Q}e7 11 \mathcal{Q}e5 \mathcal{Q}d7 12 \mathcal{Q}c4 \mathcal{Q}e7 13 \mathcal{Q}b6 \mathcal{Q}f8 14 \mathcal{Q}f6 \mathcal{Q}e8 15 \mathcal{Q}c4$ and now:

a) $15...\mathcal{Q}d7 16 \mathcal{Q}f7 \mathcal{Q}d8 17 \mathcal{Q}c6 \mathcal{Q}c7 18 \mathcal{Q}b5 \mathcal{Q}d8 19 \mathcal{Q}e6 \mathcal{Q}c7 20 \mathcal{Q}e7 \mathcal{Q}c8 21 \mathcal{Q}d6$ (Black didn’t manage to get into the ‘wrong’ corner, so the mate is near) $21...\mathcal{Q}d8 22 \mathcal{Q}a5 \mathcal{Q}e8 23 \mathcal{Q}d7+ \mathcal{Q}b8 24 \mathcal{Q}c6 \mathcal{Q}a7 25 \mathcal{Q}c8 \mathcal{Q}b8 26 \mathcal{Q}d7 \mathcal{Q}a8 (26...\mathcal{Q}a7 27 \mathcal{Q}c7 \mathcal{Q}a8 28 \mathcal{Q}b7+ \mathcal{Q}a7 29 \mathcal{Q}c6) 27 \mathcal{Q}c7 \mathcal{Q}a7 28 \mathcal{Q}c6+ \mathcal{Q}a8 29 \mathcal{Q}b7#.$

b) $15...\mathcal{Q}f8 16 \mathcal{Q}c6 \mathcal{Q}g8 17 \mathcal{Q}e5 \mathcal{Q}h7 18 \mathcal{Q}f7 \mathcal{Q}g8 19 \mathcal{Q}e4 \mathcal{Q}f8 20 \mathcal{Q}h7++ (1.04)$.

$10 \mathcal{Q}d5 \mathcal{Q}g7 11 \mathcal{Q}e5 \mathcal{Q}g6 12 \mathcal{Q}e6 \mathcal{Q}g7$

$12...\mathcal{Q}g5 13 \mathcal{Q}f5 \mathcal{Q}h6 14 \mathcal{Q}g4+ \mathcal{Q}g7$ (or $14...\mathcal{Q}g5 15 \mathcal{Q}e4 \mathcal{Q}h5 16 \mathcal{Q}f4 \mathcal{Q}h4 17 \mathcal{Q}g6++$) $15 \mathcal{Q}e6 \mathcal{Q}f8 16 \mathcal{Q}e5 \mathcal{Q}g7 17 \mathcal{Q}f7 \mathcal{Q}f8 18 \mathcal{Q}f6++ (1.04)$.

$13 \mathcal{Q}f5 \mathcal{Q}h6 14 \mathcal{Q}g4+ \mathcal{Q}g7$

After $14...\mathcal{Q}h5 15 \mathcal{Q}f7+ \mathcal{Q}h4 16 \mathcal{Q}f4 \mathcal{Q}h3 17 \mathcal{Q}e3$ White wins much more quickly.

15 \mathcal{Q}e5

From this square the knight can reach f7 and g6, which is essential to be able to force Black’s king out of the ‘wrong’ corner.

15...\mathcal{Q}h6 16 \mathcal{Q}f6 \mathcal{Q}h7

For $16...\mathcal{Q}h5 17 \mathcal{Q}g8 \mathcal{Q}h4 18 \mathcal{Q}f5 \mathcal{Q}g3 19 \mathcal{Q}g4++$ see the main line of 1.04.

17 \mathcal{Q}g6++

We have reached the starting position of the second phase (rotated clockwise by 90 degrees). Finally, one tip for the defender: he should play his moves quickly and head for a corner opposite to the bishop’s colour if he is driven to the edge of the board.

Longest win: 33 moves.

Reference works


1.5 King and Two Knights vs King and Pawn

At first sight it is a bit surprising, but king and two knights cannot mate a lone king by force because stalemate situations arise when the king is stuck near a corner. However, if the defender has a pawn, it can provide the desired tempi. The Russian theoretician Troitsky made a detailed study of this endgame and discovered the following rule:

\begin{center}
\begin{tabular}{c}
<table>
<thead>
<tr>
<th>W</th>
</tr>
</thead>
</table>
| $\mathcal{Q}f7$ & $\mathcal{Q}g7$ & $\mathcal{Q}e5$ & $\mathcal{Q}g6$ & $\mathcal{Q}e6$ & $\mathcal{Q}g7$ | 1.06
| 14 \mathcal{Q}g4+ \mathcal{Q}g7

The Troitsky Line
\end{tabular}
\end{center}
If the pawn is securely blockaded by a white knight no further down than the line, then Black loses, no matter where the kings are. If the pawn has advanced beyond the line, there is usually a drawing and a losing zone for the defending king, which were also analysed by Troitsky.

To illustrate the mating technique, we give the following example where the black king is already caged:

1.06

A. Chéron, 1955

![Diagram]

The pawn has advanced beyond Troitsky's line (with the pawn on g6 and the knights on g5 and h3 the position would be lost no matter where the kings are), but Black's king is inside the losing zone. Before White can release the blockading knight he has to imprison the black king on a1 and b1:

1... c3?! b1
1... a1 2 b3! (after 2 a3?! a2 3 c2? b1 White has surprisingly spoiled it) 2... b1 3 b2! (3 a3+?? c1 4 c3! d1 5 d3! c1 6 c4! ++) 3... c1 4 c3! b1 5 d3! a1 6 b4 a2 7 a4! a1 8 a3! b1 9 b3! +–.

2 b3! a1 3 c1 a2 4 c2! a1 5 b3! b1 6 b2! c1 7 c3! b1 8 d3! a1 9 b4 a2 10 a4! a1 11 a3! b1 12 b3! a1 13 c2 g2 14 c2++! b1 15 a3+! a1 16 c1

Without the pawn Black would be stalemated, but now he can and must move.

16... g1# 17 c3#!!

By the way, after 17 c3? the position is drawn, while all other moves lose.

Longest win: 115 moves.

John Nunn points out the impressive number of 3,124 reciprocal zugzwang positions in the ending two knights vs pawn.

Reference works
Batsford Chess Endings, Speelman, Tisdall, Wade, Batsford 1993, pp. 112-15.

Exercises
(Solutions on page 366)

White to play and mate in three.

![Diagram]
2 Pawn Endings

It is no exaggeration to say that pawn endings form the basis of endgame play in general. After all, it is always good to know if an exchange of the last pieces is a good idea. You might think that it is simple to master these innocent-looking endings, but in many cases this simplicity is deceptive. Even the easiest pawn endings require very careful play; it is not unusual at all for a sequence of ‘only’ moves to be required to achieve the desired result. Moreover, the second-best move in a winning position might even lose! To sharpen the reader’s eye for this matter, the Nunn Convention is used throughout the chapter.

One final word before we start: it is certainly a pleasure to write this chapter if you have just recently written a book exclusively devoted to pawn endings, but it is also a curse. First you have so little space for all the beautiful studies, and second you want to present the necessary knowledge using fresh examples without any loss in quality. It is up to our ‘old’ readers to say whether we have succeeded.

This chapter is divided up as follows:

2.1: King + Pawn(s) vs King 21
2.2: Small Number of Pawns 27
2.3: Pawns on One Wing 37
2.4: Passed Pawns 40
2.5: Pawns on Both Wings 46
2.6: Corresponding Squares 51

2.1 King + Pawn(s) vs King

We start with the king’s pawn, but you can apply our results also for the queen’s, the bishop’s and the knight’s pawns.

In the following diagram, White’s king can’t help its pawn, which can only queen if White is to move: 1 e6! ♕b5 2 e7! ♕c6 3 e8♕+ +=.

If Black is to play, the pawn can’t escape the black king: 1...♕b5! (moving into the square) 2 e6 ♕c6! 3 e7 ♕d7! 4 e8♕+ ♕xe8! =.

The square that encloses the diagonal leading from the pawn to the 8th rank helps you to see more quickly whether the pawn will run through to queen.

The Rule of the Square: if the king can reach the square of the passed pawn, then it can capture the pawn; if not, the pawn can queen without the aid of its own king. If the pawn is on its original square, the double step must be taken into consideration, so the square is the same as if the pawn has advanced one square. The square rule is also valid for the rook’s pawn.

When there are more pawns on the board, one has to watch out for moves that block the king’s way into the square of the enemy passed pawn.

If the king can support its pawn, it is of course different (see following diagram).

From d7 the king controls the pawn’s path to e8, so White wins no matter where Black’s king is. d7 is called a key square of the e6-pawn.

Definition: when the king occupies a key square, this secures the win, no matter where Black’s king is. So for the e6-pawn, d8, d7, e8, e7, f8 and f7 are key squares. Of course, Black’s king mustn’t be able to capture the pawn at once. If the pawn is on e5, then d7, d6, e7, e6, f7 and f6 are key squares. For a pawn on e4, the key squares are d6, e6 and f6, while for a pawn
on e3 they are d5, e5 and f5. Finally, for a pawn on e2 they are d4, e4 and f4.

Before we explain why there are six key squares for a pawn on the 5th or 6th rank and only three for a pawn on the 2nd, 3rd or 4th rank, the following position should be studied:

2.03

Everything depends on the right to move. If White is to play, he can’t make progress: 1 e7+ (with check: 1 ♔e5?? ♔e7 2 ♔f5 ♔e8! 3 ♔f6 ♔f8! =) 1...♔e8! 2 ♔e6 stalemate.

If Black is to move, he loses because he can’t prevent White from reaching the key square d7: 1...♔e8 (1...♔e8 2 e7 +=) 2 e7! (the pawn advances to the 7th rank without check and so its promotion can’t be stopped) 2...♔f7 3 ♔d7! +=.

In 2.03 it would have been better for both sides to pass than to move.

Definition: a position is called zugzwang when the mere fact that one side has to move is disadvantageous; in other words, passing would be by far the best move, if the rules allowed such a thing.

In 2.03 whoever is to move is in zugzwang. This is known as reciprocal zugzwang. Zugzwang situations are important in nearly all types of endgame; they are often easier to detect with the question: “What would my opponent play if it were his move?” Naturally, that question helps to spot threats as well.

The following position demonstrates that the pawn on e5 has six key squares. In general, a pawn that has crossed into the opponent’s half of the board has six key squares (but on e7 it has only five).

White can win this position whoever moves first.

With White to move, the zugzwang known from the previous example applies: 1 e6 ♔e8 2 e7! ♔f7 3 ♔d7! +=.

If Black is to move, White has the opposition and penetrates to the 7th rank: 1...♔e8 2 ♔e6! (but not 2 e6? ♔d8! 3 ♔e7+ ♔e8! 4 ♔e6 stalemate) 2...♔d8 3 ♔f7! +=. If the king doesn’t occupy a key square, it is always drawn if the pawn advances with check.

With a knight’s pawn, more care is required because the edge is so near (see following diagram):

White to move wins only with 1 ♔h6! (after 1 ♔f6?! Black has 1...♔h7?! forcing White to start again with 2 ♔f7! ♔h8 3 ♔g6! ♔g8 4 ♔h6! +− because 2 g6+? ♔h8! 3 ♔f7 is stalemate) 1...♔h8 2 g6! ♔g8 3 g7! ♔f7 4 ♔h7! +−.
other factors determine whether it is important to have the opposition.

The opposition is so important that we should take a closer look at the most common forms:

With Black to move it is easier for White since there is no stalemate trap: 1...#h8 2 #f7! #h7 3 g6+! ↔.

If the pawn has not crossed the mid-point of the board, it has only three key squares:

With White to move, 2.06 is only drawn, as Black's king can defend the key squares d6, e6 and f6: 1 #e5 #e7! 2 #f5 #f7! 3 c5 #c7! 4 e6 #e8! 5 #f6 #f8! = (2.03).

With Black to move, he loses the fight for the key squares and the position: 1...#e7 2 #e5! #d7 3 #f6! #d6 4 e5+! #d7 5 #f7 ↔. The position of the kings on e5/e7 is called opposition.

Rule: The opposition is the most important weapon in the fight for three adjacent key squares. Whoever loses the opposition also loses the fight for the key squares. However, if there are fewer than three adjacent key squares, then

If we speak of opposition, most often this form is meant.

White has the distant opposition on the d-file, as it is Black's move. If d6, e6 and f6 are the critical squares (i.e., if the e-file is the main file), then White first has to take the distant opposition on the e-file:

1...#e8 2 #e4! #d8 3 #f5! #c7 4 #e5!

Reaching the normal opposition.

4...#d7 5 #f6!

White successfully takes one of the critical squares.
The following forms of opposition will be of importance later:

2.07C
The side opposition

2.07D
The diagonal opposition

Black to move has to allow the normal or the side opposition:

1...\textit{e}7
1...\textit{d}6 2 \textit{f}6! \textit{d}7 3 \textit{f}7!.
2 \textit{e}5! \textit{d}7 3 \textit{d}5!

Finally, we use the term virtual opposition if all four corners of the rectangle around the kings have the same colour (see diagram at the top of the next column).

The next two examples demonstrate the fight for the key squares if the kings are further away. In the first White can successfully defend them

2.07E
The virtual opposition

with accurate play although Black has the distant opposition:

2.08
A.Csulits – H.Darius
Bundesliga 1991/2

1 \textit{d}1!
After both 1 \textit{d}2? \textit{d}4! and 1 \textit{e}2? \textit{e}4!
Black secures the (normal) opposition and thus wins.

1...\textit{d}5
1...\textit{d}4 2 \textit{d}2! =; 1...\textit{e}4 2 \textit{e}2 =.
2 \textit{e}1!
Black can’t take the distant opposition on the c-file (the main file characterized by the central key square c3), because his own pawn is in the way.

2...\textit{e}4
Black tries his last trick. If the key squares were c3, d3 and e3, Black would be winning now.
3 $c2!
However, White is alert. This move defends the key squares $b3, c3 and $d3.
$3...$d5 4 $d3 $e4 5 $c3 $e5 6 $c2 $d4 $7 $d2 $c4 8 $c2 $c4 $e6 $e1! $d3 10 $d1! $c2+ (with check) 11 $c1! $e3 (stalemate) \(\frac{1}{2}\)-\(\frac{1}{2}\)

The second position is of great importance and should be studied closely, because it demonstrates how the attacker should proceed when his pawn is far back:

```
W

J.Drtina
Casopis Cesky Sahista, 1908
```

White can occupy the fourth rank in three moves. However, he must walk to $b4, since otherwise Black would gain the opposition (Black needs four moves to get to $b6!).
1 $c2! $e7 2 $b3! $d6 3 $b4! $e6 4 $e4! $d6 5 $b5!
White has reached a key square and wins further space with his next moves before he can advance his pawn.
5...$e7 6 $e5!
Not 6 $c4??. Remember: every pawn move changes the key squares! 6...$b7! 7 $e5 $e7! 8 $d5 $d7! 9 $c5 $e7! 10 $c6 $e8! 11 $d6 $d8! 12 $c7+ $e8! 13 $f6 stalemate.
6...$d7 7 $b6!
White has occupied a key square of a pawn on $c4 (or $c5) and can finally advance it:
7...$e6 8 $c4! $d7 9 $c5! $e8 10 $c6! $d8 11 $b7! $d7 12 $c6+!++

Before we discuss the different situation with a rook’s pawn, we state two rules for the ending king and pawn vs king:

1) The position is drawn if the defender can occupy one of the two squares directly in front of the pawn (e.g., for a white pawn on $e5, the $e6- and $e7-squares; the only exception is 2.03 with Black to move), because he can defend the key squares successfully.
2) From the attacker’s point of view, the following rule is helpful: the position is won if at least two of the following three criteria are fulfilled:
   a) King in front of the pawn.
   b) Opposition.
   c) King on the 6th rank.

Having a rook’s pawn reduces the winning prospects considerably:

```
W

J.Drtina
Casopis Cesky Sahista, 1908
```

With the defending king in the corner nothing can be done: 1 $a6 $a8 2 $b6 $b8 3 $a6 $a8! 4 $a7 stalemate.

Black also draws if he can block White’s king at the edge (see following diagram):
1...$e5! 2 $a6 $e6!
Preventing the white king from reaching the key square $b7.
3 $a7 $c7 4 $a5 $c8 5 $a6 $c7! 6 $a8 $c8 7 $a7 $c7! =
If White is to move, he wins by 1 $b6, after which the a-pawn runs through.

For a quick evaluation of the ending king and rook’s pawn vs king the following rule is often helpful: the position is always drawn if the defending king reaches $c8 (or $f8 for an h-pawn) or if it can block White’s king at the edge. It has only one (trivial) exception: White
wins in the position w\textsuperscript{\#}b6/c6, a6; b\textsuperscript{\#}c8 with 1 a7! +=.

Now one example with the kings further away from the key squares:

After 1 g5 d7 2 f6 e8 3 g7! += White has reached one key square and can now advance and queen his pawn without difficulties.

In the game it was Black to play: 1...d8 2 h5 e8 3 g6 f8! 4 h7 f7! 5 h4 f8 (2.11) \(1/2\)-\(1/2\).

If the attacker has more pawns, he usually wins easily. If they are connected passed pawns, he is always winning (if the opponent is not stalemated, of course, or one can be captured and the other stopped):
Now the same thinking process again. 2 b6 and 2 d6 fail because of stalemate, and only 2 d5 remains. Play it! The other king moves allow ...xd7 and ...c7-b7 with a draw.

2 d5! xd7
Now 3 c5 allows ...c7 and ...b7, so:
3 b6!
This is the only try.
3...d8
With the knowledge of 2.03 the rest is easy.
4 d6
4 c5 also wins, but not 4 c6?? c8!=. 4...c8 5 d6! ++ (2.03)
The method of exclusion is mainly used to save time: let your opponent think in his time if your move is clear. Certainly the method is valid in the middlegame and opening as well, but there are two points to worry about. First you have to be sure that your candidate list is complete and that you made no error in the calculation of the moves you exclude. Second: suppose you desperately want to win, you have only three moves, the first two draw and so using the method you quickly play the third – unfortunately that one loses!

Note: Averbakh ascribes the position to Pogossants, who probably followed Troitsky: w h2; b e4, f2, h4. White to move draws by playing 1 g2! (Novoe Vremia, 1898).

Even doubled pawns win very often:

W

1 f2 e4 2 e2 f3+ 3 f2 f4
3...f5?? 4 e1 e3 5 f1 f2 ++ (but not 5...f4?? 6 e1! f2+ 7 f1! =). Note that the second pawn must be behind the half-way line to force a win.

4 f1 e3 5 e1 f2+ 6 f1 f5 0-1
Black’s king reaches the key square e2.

2.14A

W

N.Grigoriev, 1935

Grigoriev illustrated the winning potential of doubled pawns as follows:

1 f1!
1 g4? c4! 2 f1! d3! 3 e1! e4! 4 g3 e5 5 e2 e4! 6 f1 e5 7 e1 f6 =.
1...c4 2 c2! d4 3 g4! c4 4 g3! d4 5 g5! e5 6 g4! e6 7 e3 f7 8 e4
8 f4?? g6! =.
8...g6 9 f4! g7 10 f5! f7 11 g6+!
9 g7 12 g5! g8 13 h6
13 f6?! f8 14 g7+ g8 15 g5 h7 16 g8# + x g8 17 g6! +- (2.05).
13...h8 14 g7+ g8 15 g5 f7 16 h7 +–

2.2 Small Number of Pawns

Our topics are now:
A: Pawns on the Same File 27
B: Pawns on Adjacent Files 28
C: Both Sides Have Passed Pawns 30
D: Geometry of the Board 30
E: King + Two Pawns vs King + Pawn 31
F: Bähr’s Rule 34
G: Fortresses 35

A) Pawns on the Same File

There are no passed pawns, so the winning plan consists of two steps:
1) The opponent’s pawn has to be conquered and
2) A key square has to be reached.
The following position is critical:

J.Mudrak – V.Tichy
Brno 1994

Whoever has the move wins the opponent’s pawn, but only for White is this sufficient to win the game, because in the act of capturing the g6-pawn, he conquers a key square of the g5-pawn:

1 ♖e5! ♘f7 2 ♖d6! ♘f8 3 ♖e6! ♘e8
3...♘g7 4 ♖e7! ♘g8 5 ♖f6! ♖h7 6 ♖f7!
♖h8 7 ♖xg6! ♖g8 8 ♖h6! +- (2.05).
4 ♖f6! ♖f8 5 ♖xg6! ♖g8 6 ♖f6?! ♖f8?!
6...♖h7? 7 ♖f7! ♖h8 8 ♖g6! ♖g8 9 ♖h6!
+-.

7 g6 ♖g8 1-0

The game shows that Black can’t defend his pawn if the white king reaches d6. This means that the squares d6, e6 and f6 are critical squares of the g6-pawn (if the white king occupies one of them the pawn is lost). If the pawns are blocked, the three squares directly adjacent to the pawn are critical. For White, the critical squares of the g6-pawn are also key squares, because taking the pawn reaches a winning position.

With Black to move it is different. He can reach the critical squares (d5, e5 and f5) of the g5-pawn using the opposition (fight for three directly adjacent squares), but this is not sufficient to win the game because White’s king can defend the key squares of the g6-pawn: 1...♖e6
2 ♖f4 ♖d5 3 ♖f3 ♖e5 4 ♖g4 ♖e4 5 ♖g3 ♖f5
6 ♖h4 ♖f4 7 ♖h3 ♖xg5 8 ♖g3! = (see 2.06).

If both kings occupy the critical squares directly adjacent to the pawn, an important situation of reciprocal zugzwang is reached:

Whoever has to move loses.

White to play: 1 ♖h4 ♖xf4 2 ♖h3 ♖f3 --.
With Black to move: 1...♖d5 2 ♖xf5! ♖d6 3 ♖f6 ++.

If the kings are one square further away, it is the other way around:

Whoever moves first wins:

White to play: 1 ♖g6! (not, of course, 1 ♖g5??
♖e4! ++) see 2.16) 1...♖e4 2 ♖g5! +- (2.16).
Black to move: 1...♖e3! 2 ♖g5 ♖e4! --.

B) Pawns on Adjacent Files

In this case the defender’s drawing chances increase considerably:
Sometimes the sacrifice of the pawn is an effective defensive resource. In the first example it makes the defence of the key squares possible:

The position is drawn if Black can defend his own pawn or attack White’s pawn: 1...\f7! (1...\b2? 2 \d4 \c2 3 \c5! \d3 4 \xe6! +--) 2 \e4?? (the game went 2 \e2 \c2 3 \e3 \d1 1/2-1/2) 2...\d2! 3 \e5 \e3! =.

Dobias illustrated this theme with the following masterpiece:

In the second case the sacrifice devalues Black’s pawn:

1 \d4!!
A very surprising bodycheck! Now f4 is a threat and Black can’t improve the position of his king. Other moves don’t work: 1 \e4? \c4! =; 1 \d5? \b4! 2 \d4 \b3! =; 1 f4? \c4! =. 1...\c6 2 \e5! \c5
2...\d7 3 \f6! +--.
3 f4! \c4 4 \f6! +--
C) Both Sides Have Passed Pawns

In this case one must be alert to possibilities for either king to support its own pawn while stopping the advance of the enemy pawn. One of the key subtleties in the play is the idea of forcing the opponent’s king to a square that allows one’s own pawn to queen with check.

White threatens to stop Black’s pawn by $\text{c2}$ and promote his own pawn. Therefore Black must support his pawn. The b8-h2 diagonal is mined, as White would queen with check, so:

1...$\text{g}3$!
2 $\text{b}5$ $\text{e}3$ $\text{g}3$! and Black wins the tempo back with ...$f4+$.

2...$f4+$! 3 $\text{c}4$ $\text{g}3$!

Black will now use the unfortunate position of White’s king to make a draw with the f-pawn against the queen. Not 3...$\text{g}4$? 4 $\text{b}6$! $\text{e}3$! $\text{g}3$ 6 $\text{b}7$! $\text{f}2$ 7 $\text{b}8$+$! +$

4 $\text{b}6$ $\text{f}3$! 5 $\text{b}7$ $\text{f}2$ 6 $\text{b}8$+$! +$

The game is drawn because White’s king is outside the winning zone (see 9.03).

The following position features a multipurpose king move aiming at both pawns:

1...$\text{d}5$!

In the game Browne missed this study-like win and after 1...$f5$? 2 $\text{b}4$! $f4$ 3 $\text{c}4$ a draw was agreed.

D) Geometry of the Board

The following two classics show a very important theme:

End of a study by N.Grigoriev
Shakhmatny Listok, 1931

Pure counting shows that White loses if he tries to win the black pawn. The king reaches c7
in five moves (it can’t go to c8, because the b6-pawn would fall), but Black would move to a6 and win. Therefore he should seek a draw by defending the key squares of the black b-pawn (a5, b5 and c5), so that after ...\#xb6, he can reply \#b4. As every tempo counts (Black needs five moves to take the pawn; White needs six to reach b4, but he is to move), White has to be careful that Black’s king doesn’t shoulder him away.

1 \#g3!!

White takes a curve to get to b4! Not 1 \#g4? \#c2!, and now:

a) 2 \#f3 \#d3! (shouldering away! It will now take White one more move to reach b4 and therefore he loses) 3 \#f2 \#c4 4 \#e3 \#c5 5 \#d3 \#xb6! 6 \#c4 \#a5! =+

b) 2 \#f4 \#d3! 3 \#e5 \#c4! 4 \#d6 \#b5! 5 \#e7 \#a6! =

1...\#c2 2 \#f2! \#d2 3 \#f1! \#d1 4 \#f2! \#d2 5 \#f1! \#d3 6 \#c1! \#c4 7 \#d2! \#b5 8 \#e3! \#c5 9 \#b3! \#xb6 10 \#b4! =

The study is: w\#h4, \#c8, \#b5; b\#a1, \#b3, b7, c5. White to move draws by 1 b6!! b2! 2 \#a8+! \#b1 3 \#c8! \#a2 4 \#xc5! =.

Looking at this theme is worthwhile: the motif of shouldering away (the kings try to prevent each other from reaching a certain aim) is quite common in endgames. One should be aware of an important feature of the chessboard: its special geometry. From our schooldays we know that a straight line is the shortest route between two points. For the kings on the chessboard this is only valid for the diagonals. White obviously has only one possible way to get from h4 to e1 in three moves. However, if the king has to reach b4 in six moves as in 2.23, then it has 141 different ways to get there (if the black king is ignored). Only very seldom do all the routes have equal merit. Often it is the outside curve, sometimes only a zigzag course, that leads to success. You should therefore always carefully consider which route is best.

The masterpiece in the following diagram illustrates the geometry of the board very well.

It seems as if White is completely lost because he can’t prevent the h-pawn from queening, but he has a saving resource:

1 \#g7! h4 2 \#f6!!

Now he threatens to support his own pawn.

2...\#b6

2...h3 3 \#e7 h2 4 c7! \#b7 5 \#d7 =.

R. Réti
Kagans Neueste Schachnachrichten, 1921

3 \#e5!!

The king is “hunting two hares” as the study composer Gurvich put it.

3...h3

After 3...\#xc6 White can enter the h-pawn’s square with 4 \#f4 =.

4 \#d6! h2 5 c7! h1\# 6 \#e8\#! =

This motif appears in several studies and games (see Av 95-103). We would just like to mention two studies:

1) de Feijter (1939, ECE 125, Av 102) w\#a8, \#f4; b\#b5, \#a6: 1 \#b7! a5 2 \#c7! \#c5 3 \#d7!! \#d5 4 \#e7! \#e4 5 \#e6!! =

2) Prokes (1946, ECE 126, Av 99) w\#g8, \#f3; b\#h4, \#a6: 1 \#f7! a5 2 f4! a4 3 f5! a3 4 f6! a2 5 \#g8! = (9.03)

E) King + Two Pawns vs King + Pawn

If the attacker has a protected passed pawn, he usually wins (see following diagram):

1 \#d2 \#d6 2 \#c3

2 \#e2 would use the fact that Black can’t access e6 to win the fight for the distant opposition: 2...\#c5 3 \#e3 \#d5 4 \#d3 \#c5 5 \#c4 ++.

2...\#c5 3 \#b3 \#d5

Black cannot play 3...\#b5 because the black king leaves the square of the f5-pawn: 4 f6 \#e6 5 f7! =+

4 \#b4 \#d6 5 \#c4 1-0

Due to 5...\#e6 6 \#d4 \#d6 7 \#e4 \#e7 8 \#e5 \#f7 9 f6 \#f8 10 \#f5 (advancing the f-pawn immediately with 10 \#e6!! \#e8 11 f7?...
Normal opposition.
2...d6 3 d4! e6 4 e4!

Diaogonal opposition.
In the game, White went wrong with 4 e5?
\(\text{c}5\)! 5 \(\text{f}6\) (5 \(\text{a}4\) 4 \(\text{d}4\) 6 \(\text{e}5\) \(\text{d}3\) 7 \(\text{f}4\)
\(\text{d}4\) 8 \(\text{f}3\) \(\text{e}5\) →) 5...h4! 6 xg6 h3! 7 \(\text{f}7\)
h2! 8 g6 h1\(\text{w}\)! → (9.01) and Williams won the
game after a few more moves.
4...h5 5 d5! b6 6 d4! a5 7 e5!

Distant opposition.
7...a6 8 e4! =

Virtual opposition.
If the position is moved one rank further
down, White is lost, because the critical square
d4 would not be in the square of the protected
passed h4-pawn.

If the attacker has a backward pawn, the re-
sult usually depends on having the opposition:

An additional black pawn on a5 wouldn’t save
Black as it falls prey to White’s king. How-
ever, adding a black pawn on b5 in 2.25 leads to
a drawn position because Black’s king can
defend it from c6 (inside the square of the f5-
pawn!).

However, no rule is without exception:

Black has the opposition, so he can hold the
draw:
1 e3!? e7
Or:
a) Not 1...c5? 2 d3! d6 3 d4! e6 4
c5! bxc5+ (4...d7 5 c6! d6 6 e4 e6 7
c7 d7 8 d5 xc7 9 e6! →) 5 xc5! d7
6 b6 c8 7 a7! ++.
b) 1...d7 2 d3 e7! = also leads to a
draw.
2 e4 e6 =
Or 2...e8 (distant opposition) and now:
a) 3 f5 d7! = (diagonal opposition; but
not 3...f7? 4 c5 ++).
b) 3 e5 e7! 4 d5 d7! 5 c5 bxc5! 6
xc5 c7! =.

All the critical squares of the g5-pawn are
inside the square of the protected passed h5-pawn
and White manages to hold the position by
maintaining the appropriate form of opposition:
1 e3 e6 2 e4!
If Black is to move, he can’t defend the critical squares c6, d6 and e6: 1...\textit{\texttt{e}c7} (1...\textit{\texttt{e}d6} 2 \textit{\texttt{c}5}! (+) 2 \textit{\texttt{e}e5!} (diagonal opposition) 2...\textit{\texttt{d}d7} 3 \textit{\texttt{d}d5!} \textit{\texttt{c}c7} 4 \textit{\texttt{e}e6!} +–.

2.27 moved one file to the left is completely drawn, because after 1...\textit{\texttt{d}d6!}, 2 b5 doesn’t win due to the remaining rook’s pawn.

If the pawns are not yet blocked, interesting play can arise:

\[ W \]

\begin{center}
\textit{H.Fahrni – S.Alapin}
\end{center}

\begin{center}
\texttt{1 \textit{\texttt{d}d5!} \textit{\texttt{c}c8} 2 \textit{\texttt{d}d4} \textit{\texttt{d}d8} 3 \textit{\texttt{c}c4} \textit{\texttt{c}c8} 4 \textit{\texttt{d}d5!} \textit{\texttt{c}c7}}
\end{center}

\begin{center}
\texttt{4...\textit{\texttt{d}d8} 5 \textit{\texttt{d}d6!} \textit{\texttt{c}c8} 6 \textit{\texttt{c}c7!} \textit{\texttt{b}b7} 7 \textit{\texttt{d}d7!} \textit{\texttt{a}a7} 8 \textit{\texttt{c}c6} +– (not, of course, 8 \textit{\texttt{c}c8?? stalemate). 5 \textit{\texttt{c}c5!}}}
\end{center}

Reaching the starting position with Black to move.

\begin{center}
\texttt{5...\textit{\texttt{d}d8} 6 \textit{\texttt{b}b6!} 1-0}
\end{center}

Alapin resigned due to 6...\textit{\texttt{b}b8} 7 \textit{\texttt{c}c6!} \textit{\texttt{c}c7} 8 \textit{\texttt{d}d5!} +–.

If the attacker has an outside passed pawn, he usually wins. However, if the pawn is very near to the others or if blocked rook’s pawns are involved, he often faces some problems. The first example shows both features (see following diagram).

If it were Black to move, it would lose immediately, because White’s king could penetrate to b6. But at first sight it seems that White is also in zugzwang. A closer inspection shows that he has more space to manoeuvre: after \textit{\texttt{d}d5} Black has to play ...\textit{\texttt{c}c8} and can only advance to \textit{\texttt{c}c7} if White is on \textit{\texttt{c}c5}. So \textit{\texttt{c}c4} and \textit{\texttt{d}d4} and \textit{\texttt{b}b8} (\textit{\texttt{d}d8}) are corresponding squares as well. So White wins as \textit{\texttt{c}c4} and \textit{\texttt{d}d4} are connected while \textit{\texttt{b}b8} and \textit{\texttt{d}d8} are not:

\[ W \]

\begin{center}
\textit{R.Vaganian – J.Sunye}
\end{center}

\begin{center}
\textit{Rio de Janeiro} 1Z 1979
\end{center}

White can draw in a study-like way if he manages to prevent Black from achieving the opposition on f4:
1 \textcolor{red}{$\text{e}2!!$}

The game in fact continued 1 \textcolor{red}{$\text{g}3$}? h5! 2 \textcolor{red}{$\text{f}3$} h4! 3 \textcolor{red}{$\text{g}2$} \textcolor{red}{$\text{g}4$}! 4 \textcolor{red}{$\text{f}2$} \textcolor{red}{$\text{f}4$}! 5 \textcolor{red}{$\text{e}2$} \textcolor{red}{$\text{e}4$}! 6 \textcolor{red}{$\text{f}2$} \textcolor{red}{$\text{d}3$}! 7 \textcolor{red}{$\text{f}3$} h3!! (D) 0-1.

If the h-pawn is on h6, h5 or h4 then White draws by moving his king to a square of the same colour as Black’s h-pawn (with the pawn on h7 he loses in any case and against a pawn on h3 he draws): 9 \textcolor{red}{$\text{f}1$}! \textcolor{red}{$\text{e}3$} 10 \textcolor{red}{$\text{c}1$}! f2+ 11 \textcolor{red}{$\text{f}1$}! \textcolor{red}{$\text{f}3$} 12 h3! =.

3 \textcolor{red}{$\text{f}2$}! \textcolor{red}{$\text{f}4$} 4 \textcolor{red}{$\text{e}2$}! \textcolor{red}{$\text{e}4$} 5 \textcolor{red}{$\text{f}2$}! h4
5...\textcolor{red}{$\text{d}3$} 6 \textcolor{red}{$\text{f}3$}! h4 7 h3 \textcolor{red}{$\text{d}2$} 8 \textcolor{red}{$\text{f}4$} \textcolor{red}{$\text{e}2$}! \textcolor{red}{$\text{f}5$} 10 \textcolor{red}{$\text{e}5$}! =.

6 \textcolor{red}{$\text{e}2$}! \textcolor{red}{$\text{f}4$} 7 \textcolor{red}{$\text{f}2$}! \textcolor{red}{$\text{f}3$}! Black’s h-pawn is on a dark square so...

8 \textcolor{red}{$\text{e}1$}
8...\textcolor{red}{$\text{e}3$} Or 8 \textcolor{red}{$\text{g}1$}, but not 8 \textcolor{red}{$\text{f}1$} \textcolor{red}{$\text{e}3$}! =.

8...\textcolor{red}{$\text{e}3$}! 9 \textcolor{red}{$\text{f}1$}! f2 10 h3! =

This position has already been deeply studied in various sources (e.g. The Final Countdown) and we also devoted a lot of space to it in SoPE.

\textbf{F) Bähr’s Rule}

If two rook’s pawns are blocked and the outside passed pawn is further away, Bähr’s Rule helps to determine whether the position is winning (of course it is also possible to evaluate it by pure calculation, but note that simply counting the number of moves needed is very risky because of a possible bodycheck!).

Requirement: the attacking king stands next to its passed pawn, and the defending king in front of it.

1) If the attacker’s blocked rook’s pawn has crossed the middle of the board, he wins. Otherwise:

2) Draw the diagonal from the defender’s pawn towards the defender’s first rank. From the point of intersection of that diagonal with the c-file or f-file, if in case the blocked pawns are h-pawns, draw a diagonal (the “border diagonal”) towards the attacker’s first rank. If the pawn is on or below that border diagonal, the attacker wins; if it is above, then the position is drawn.

We apologize if the description makes it sound complicated. Visually, the idea is readily grasped, as will become clear if we consider an actual example (see following diagram):

The diagonals go from a5 to c7 and from c7 to h2. The pawn is on the diagonal, so White wins:

1 \textcolor{red}{$\text{d}4$}

After 1 f5+? White’s pawn is above the border diagonal and the position is drawn: 1...\textcolor{red}{$\text{f}6$}
The presence of rook's pawns makes it more likely that the defender can hold on. In some cases even knight's pawns are too near the edge. We give several examples of such fortresses.

In 2.31A (see diagram at the foot of the previous column), 1...e8 e8 2 f7 is stalemate.

The position remains drawn if the blocked pawns are the base of a pawn-chain; e.g., add black pawns on g6 and f5 and white pawns on g5 and f4.

If the attacker's king has advanced further, it is also possible to apply Bähr's Rule if the king can't reach a key square of its passed pawn. If the white pawn were on h3 instead of f4 and the white king on g4, the diagonals to consider would be a6-c8-h3.

There are exceptions to the rule if a successful counterattack is possible (see the list following Av 219).

G) Fortresses

There are no tricks left:
1 g4 h8 2 g5 g8 3 f6 h8 4 g6 g8 =
The alternative 4...hxg6 is also sufficient for a draw.
1 e8 h8 2 f7 stalemate
As in 2.31A, the blocked pawns could be the base of a pawn-chain.

The fact that the black g-pawn can’t be attacked from the right provides the basis for this fortress.

1 d5
1 f8+ x f8! 2 d6 e8 3 e6 f8! = (2.31D).
1...f8! 2 e6 stalemate
By the way, even an additional bishop on d5 wouldn’t help White because sacrificing the f-pawn would only lead to fortress 4.10C (see page 97).

In 2.31F, Black need not fear the advance of White’s h-pawn: 1 h3 h8 2 h4 g8 3 h5 h8 4 h6 g8! (4...g x h 5 f7 ++) 5 e6 x h 6! =.
1 e7 g8 2 f6 h8 3 g7+ g8 (3...h7 =) 4 g6 is stalemate. Black is lost if the position is shifted one file to the left or one rank down.

The following position is no fortress, because the g-pawn is still on g5. Our discussion follows John Nunn’s analysis:

2.32

W/B

2.33

Nunn, ‘Brains of the Earth’, Test 1, 1999

1 f4!

Not: 1 f5? f7! 2 h4 g6+ 3 e5 e7! =; 1 e6? f8! 2 g6 g8 =; 1 h4? f7 =.

1...f8

1...f7 2 f5! +-; 1...h7 2 f5! +-.

2 g4!

2 g3? f7 3 f4 e6 =.

2...g8

2...g6 3 f4! f7 4 e5! e7 5 h4! +-.

If Black were to move in this position he would be in zugzwang immediately. Therefore White must lose a tempo by a clever manoeuvre:

3 h5! h7

3...f7 4 h4! f8 5 g6! g8 6 h5! +-.

4 h4! h8

4...g6 5 g4! +-.

5 g3!

Tiptoeing around g4!

5...h7

For 5...g8 6 g4! +- see the main line.

6 f4 g8 7 g4! g6 8 f4! f7 9 e5! e7 10 h4! +-.

It is amazing that White’s king, which was so well placed in the centre on e5, had to go to h4 in order to secure the win!

If Black is to move, he can hold on, but not by just hiding in the corner: 1...f8! (1...h7? 2 f5 h8 3 g6 g8 4 h4! +-; 2 f4 (2 f5 f7! 3 h4 g6+ 4 e5 e7! =) 2 e7! 3 g4 g6! 4 f4 d6 5 e4 e6! 6 h4 d6! =.

2.3 Pawns on One Wing

If the pawns are blocked, the result depends on the activity of the kings.

W/B

H. Rasmussen – O. Buch
Lyngby 1974

White has to win the fight for the critical squares of the b6-pawn. He only succeeds in this endeavour thanks to the important spare tempo b2-b3. To have more spare tempi than the opponent is often a decisive element in pawn endings.

1 e6

1 b3? uses White’s spare tempo too early: 1...d7! 2 f6 d6! 3 f5! =.

1...c6 2 b3 c7 3 e7!

Opposition.

3...c6 4 d8!

Surrounding Black’s king to gain access to the key squares. This method occurs very often and is therefore worth remembering.

4...b7 5 d7! a6 6 c6 a7 7 c7! a8 8 b8! 1-0

If Black is to move, he draws because of the possible counterattack against e4: 1...d6! (1...d7? 2 f6! d6 3 b3! d7 4 f7! d6 5 e8! [encircling Black or winning the race] 5...e5 6 d7 d4 7 c6 c3 8 xb6! xb3 9 b5!! +-.) 2 f6 d7! 3 f7 d6! 4 e8 e5! 5 d7 d4! 6 c6 xc4! 7 xb6! b4 8 b3 =.
The following construction of a stalemate cage is a very important defensive method:

1...\textcolor{red}{\textit{\textbf{f}}4} 2 \textcolor{red}{\textit{\textbf{d}}2} \textcolor{red}{\textit{\textbf{f}}4!}; 3 \textcolor{red}{\textit{\textbf{e}}2} \textcolor{red}{\textit{\textbf{g}}3!}; 4 \textcolor{red}{\textit{\textbf{f}}1} \textcolor{red}{\textit{\textbf{h}}2!}

4...\textcolor{red}{\textit{\textbf{h}}4}! throws away the win after 5 \textcolor{red}{\textit{\textbf{f}}2!} \textcolor{red}{\textit{\textbf{g}}5} 6 \textcolor{red}{\textit{\textbf{g}}3} =.

0-1

Tringov resigned due to the following encirclement: 5 \textcolor{red}{\textit{\textbf{f}}2} \textcolor{red}{\textit{\textbf{h}}1!} 6 \textcolor{red}{\textit{\textbf{g}}3} (6 \textcolor{red}{\textit{\textbf{f}}1} \textcolor{red}{\textit{\textbf{g}}3}! \rightarrow) 6...\textcolor{red}{\textit{\textbf{g}}1} 7 \textcolor{red}{\textit{\textbf{f}}4} \textcolor{red}{\textit{\textbf{x}}g}2 \rightarrow.

It is a bit surprising that the active king is enough to win in the following position:

In spite of the very active black king, White can draw:

1 \textcolor{red}{\textit{\textbf{g}}4}!

Not: 1...g6? h5! \rightarrow; 1 h5? h6! \rightarrow; 1 gx6? gx6! 2 \textcolor{red}{\textit{\textbf{g}}4} \textcolor{red}{\textit{\textbf{e}}5} 3 \textcolor{red}{\textit{\textbf{h}}5} (3 \textcolor{red}{\textit{\textbf{h}}3} \textcolor{red}{\textit{\textbf{f}}4} 0-1 was the game) 3...\textcolor{red}{\textit{\textbf{x}}f5}! 4 \textcolor{red}{\textit{\textbf{h}}6} \textcolor{red}{\textit{\textbf{g}}4}! 5 \textcolor{red}{\textit{\textbf{x}}h7} \textcolor{red}{\textit{\textbf{h}}5}! \rightarrow.

1...\textcolor{red}{\textit{\textbf{e}}4} 2 g6! h6

2...hxg6 3 fxg6! f5+ 4 \textcolor{red}{\textit{\textbf{g}}}3 = also leads to a draw.

3 \textcolor{red}{\textit{\textbf{h}}}5!! \textcolor{red}{\textit{\textbf{x}}f5} stalemate

In the next three examples, the active king is enough to secure the win.

The three-times world champion demonstrates how to encircle Black:

1 \textcolor{red}{\textit{\textbf{d}}}5!

1...\textcolor{red}{\textit{\textbf{c}}}5? \textcolor{red}{\textit{\textbf{h}}}6! 2 \textcolor{red}{\textit{\textbf{d}}}6 \textcolor{red}{\textit{\textbf{f}}}5! 3 \textcolor{red}{\textit{\textbf{g}}}5+ \textcolor{red}{\textit{\textbf{h}}}5! 4 \textcolor{red}{\textit{\textbf{e}}}6 \textcolor{red}{\textit{\textbf{g}}}4! 5 \textcolor{red}{\textit{\textbf{x}}}f6 \textcolor{red}{\textit{\textbf{x}}}f4! 6 \textcolor{red}{\textit{\textbf{x}}}g6! \textcolor{red}{\textit{\textbf{x}}}e4 =.

1...\textcolor{red}{\textit{\textbf{f}}}8

1...\textcolor{red}{\textit{\textbf{h}}}6 2 \textcolor{red}{\textit{\textbf{e}}}5! \textcolor{red}{\textit{\textbf{g}}}7 3 \textcolor{red}{\textit{\textbf{d}}}6! \textcolor{red}{\textit{\textbf{f}}}8! (3...\textcolor{red}{\textit{\textbf{f}}}5 4 \textcolor{red}{\textit{\textbf{g}}}5! \rightarrow; 3...\textcolor{red}{\textit{\textbf{g}}}5 4 \textcolor{red}{\textit{\textbf{f}}}5! \textcolor{red}{\textit{\textbf{f}}}6 5 \textcolor{red}{\textit{\textbf{d}}}7 \rightarrow) 4 \textcolor{red}{\textit{\textbf{d}}}7! \textcolor{red}{\textit{\textbf{g}}}7 5 \textcolor{red}{\textit{\textbf{e}}}8! \textcolor{red}{\textit{\textbf{g}}}8 6 \textcolor{red}{\textit{\textbf{x}}}e7 \textcolor{red}{\textit{\textbf{g}}}7 7 \textcolor{red}{\textit{\textbf{f}}}5! \textcolor{red}{\textit{\textbf{g}}}5 8 \textcolor{red}{\textit{\textbf{e}}}8 +

2 \textcolor{red}{\textit{\textbf{d}}}6! \textcolor{red}{\textit{\textbf{e}}}8

2...\textcolor{red}{\textit{\textbf{g}}}7 3 \textcolor{red}{\textit{\textbf{d}}}7 \textcolor{red}{\textit{\textbf{f}}}6 4 \textcolor{red}{\textit{\textbf{d}}}8 (4 \textcolor{red}{\textit{\textbf{e}}}8? \textcolor{red}{\textit{\textbf{e}}}6! 5 \textcolor{red}{\textit{\textbf{f}}}8 \textcolor{red}{\textit{\textbf{f}}}6! 6 \textcolor{red}{\textit{\textbf{g}}}8 \textcolor{red}{\textit{\textbf{e}}}7! 7 \textcolor{red}{\textit{\textbf{g}}}7 \textcolor{red}{\textit{\textbf{e}}}6 =) 4...\textcolor{red}{\textit{\textbf{g}}}7 5 \textcolor{red}{\textit{\textbf{e}}}8! \rightarrow

3 \textcolor{red}{\textit{\textbf{f}}}5! \textcolor{red}{\textit{\textbf{g}}}5

3...\textcolor{red}{\textit{\textbf{x}}}g5 4 \textcolor{red}{\textit{\textbf{x}}}f5! \textcolor{red}{\textit{\textbf{d}}}8 5 \textcolor{red}{\textit{\textbf{f}}}6! \rightarrow

4 \textcolor{red}{\textit{\textbf{e}}}7!

4 \textcolor{red}{\textit{\textbf{f}}}6? \textcolor{red}{\textit{\textbf{d}}}8 5 \textcolor{red}{\textit{\textbf{e}}}5 \textcolor{red}{\textit{\textbf{d}}}7 6 \textcolor{red}{\textit{\textbf{f}}}5 \textcolor{red}{\textit{\textbf{d}}}6! 7 \textcolor{red}{\textit{\textbf{x}}}g5! \textcolor{red}{\textit{\textbf{e}}}6 =.

4...\textcolor{red}{\textit{\textbf{e}}}7 5 \textcolor{red}{\textit{\textbf{c}}}8! \textcolor{red}{\textit{\textbf{d}}}6

5...\textcolor{red}{\textit{\textbf{e}}}8 6 \textcolor{red}{\textit{\textbf{f}}}6! \rightarrow

6 \textcolor{red}{\textit{\textbf{x}}}g4! \textcolor{red}{\textit{\textbf{e}}}5 7 \textcolor{red}{\textit{\textbf{e}}}7 \textcolor{red}{\textit{\textbf{f}}}6 8 \textcolor{red}{\textit{\textbf{f}}}7! \textcolor{red}{\textit{\textbf{f}}}4 9 \textcolor{red}{\textit{\textbf{x}}}f6! \textcolor{red}{\textit{\textbf{e}}}4 10 \textcolor{red}{\textit{\textbf{g}}6} \rightarrow
Botvinnik took the idea for this study from his analysis of Trojanescu-Botvinnik, Budapest 1952.

White’s h-pawn has already advanced to h3, so Black wins in any case. However, a certain amount of care is still required:

1...g5

1...g2!? is right against a pawn on h2 as well. After 2 h4 the following method wins: 2...f3 3 f1 h5 4 g1 f5 5 f1 f4 6 gxf4 xf4 7 g2 g4! 8 f3+ xh4! 9 h2 g5 (9...g5? 10 g2! g4 11 fxg4 hxg4 12 h2! =) 10 g3 g6 =.

2 f1 h5

2...f5 3 g1 f4 4 gxf4 gxf4! 5 f1 (5 h4 e2! 6 g2 f3+ 7 g3 h5! =) 5...h5 6 h4 g4 7 g2 f3+! 8 h2 f5 g3 e5 10 g3 e4! 11 h3 d3 d3 12 h2 d2! 13 h3 e1 14 g3 e2! =.

3 g1 f4 4 f1 f5!

4...h4? allows White to escape with 5 g4! =.

5 h4?!

5 g1 h4 6 gxh4 gxh4! 7 f1 f4! 8 e1 (8 g1 e2! 9 g2 f3+! 10 g1 e1! =) 8...g2! 9 c2 xh3 10 f3 11 h3 e5 g4 12 h2 =.

5...gxh4! 6 gxh4 g4 7 g2 xh4 8 f3 h3! The game continued 8...g5? 9 g3! f4+ 10 h3! ½-½.

9 f4 h4 10 g5 f4 →

With the pawn still on h7, passive defence is often possible:

1...e6 2 c5 e7

Surprisingly, 2...h6 is also playable: 3 gxh6 (3 h4 hxg5 4 hxg5! e6? 5 d5 d7? =) 3...f7! 4 d5 g8! =.

3 d5 d7 4 e5 e7 5 b4 c6 6 c6 6 h5 e7 7 h6 leads to fortress 2.31A.

6...g8! 7 h5? 7 e7 g7? 8 e8 g8! =.

7 gxh5! 8 xh5 f7 9 e4 h6

9...g6 10 e5 h4! 11 f5+ g5! 12 f6 g6! 13 e6 h3! 14 f7! h2! 15 f8 w! h1 w! 16 w5+ h6! =.

10 gxh6 g6! Hartston defends accurately. After 10...g8?
White manages to reach a winning queen ending: 11 f5! h7 12 f6 g6? (12...xh6 13 f7! h7 14 e6! g8! 15 e7! +++) 13 e5! h4 14 e6! h3 15 f7! h2! 16 f8 w! h1 w! 17 f6+ h5 18 h7 =. Black’s king is outside the drawing zone (see 9.11) and 18...e4+ is met by 19 e5+!.

11 e5 xh6 12 f5

12 g6 e7 13 e6 g6 14 e6! =.

12...g7 13 f6+ f7 14 f5 h4 15 g4 h3

16 g3 ½-½.

In the next example Biolek shows how to convert an extra pawn into victory (see following diagram).

Black’s h-pawn is already on h6, which renders it a bit easier. First the kings advance as far as possible:

1...f6 2 d4 f5 3 e3

White now wants to mobilize his pawns. He can find the right idea by using Nimzowitsch’s
rule: ‘candidate in front’. Definition: a candidate is a pawn that has no opposite number on its file. Advancing it first serves the purpose of avoiding structures with backward pawns. Black in turn must decide if he just waits or if he advances his pawns to exchange more pawns. With the pawn still on h7 it would be best just to sit and wait, but as the pawn is on h6 Keitlinghaus decides to advance it further and set a trap:

3...h5
Or:
   a) 3...g5 4 g3 h5 5 f4 g4 6 h4! h6f6 7 e4 +–.

   b) White can break the other strategy as follows: 3...e5 4 f4+ d5 5 g4 d6 6 e4 e6 7 h4 f6, and now:
   b1) 8 d5? h5! 9 g5+ (9 gxh5 f5! =)

   b2) 8 g3+ hxg5 (8...g6 9 e5 h5 10 f5
   h4 11 gxh6! gxh6 12 g6 ++) 9 hxg5+
   g6 10 e5! f7 11 d6 g6 12 e6 h7 13 f7 h8 14 f5 +–.

        4 g3
The immediate 4 f4? is wrong since after 4...h4! the g-pawn becomes backward: 5 f3 g6! e3 f6 and White can’t make progress.

        4...e5 5 f4+ f5 6 f3! g6

        6...f6 7 e4 e6 8 g4 hxg4 9 hxg4! f6 10 d5 f7 11 e5 e7 12 f5 f7 13 g5 f8 14 g6 g8 15 f5 h8 16 f7 h7 17 g5 h8 18 f8 h7 19 f6 +–.

2.4 Passed Pawns
The handling of passed pawns plays an important role in endgame theory in general and in this respect pawn endings are no exception. It is clear that the king has to deal with any passed pawn personally and so even if it is impossible to queen a pawn directly, it will often lead to a decisive deflection, granting the attacker a free hand on the other wing.

Our topics are:
A: King vs Passed Pawns
B: Protected Passed Pawn vs Two Passed Pawns
C: Protected Passed Pawn vs Passed Pawn
D: Outside Passed Pawn
E: Breakthrough

A) King vs Passed Pawns
We start with some preliminary observations regarding the battle of king against passed pawns:

        2.40A
The king can easily halt two connected passed pawns. However, he can’t actually capture them, since taking the backward one would
mean leaving the square of the more advanced one. Obviously, the defending king has no chance if the enemy king can come to support its pawns. On the other hand, the pawns cannot advance by themselves and will be lost if they have to move due to zugzwang.

If the pawns are separated by one file, the situation is very similar:

![Diagram 2.40B]

Black can stop the pawns easily by moving back and forth between d7 and d6. However, an attempt to win them is doomed to fail. If Black takes the d5-pawn he leaves the square of the f-pawn and if he tries to attack the f-pawn with 1...e8??, then 2 d6! puts him in zugzwang. If the pawns have to move, they are lost as in the previous example.

If the pawns are separated by two files, it is completely different:

![Diagram 2.40C]

The pawns can’t protect themselves. If Black is to move, he wins both of them: 1...e6! 2 d6 e5! 3 g5 xdx6! 4 g6 e6.

The rule of the common square can be used to evaluate such races. Draw a line from the more backward pawn to the file of the other pawn and complete it to make a square. If this square reaches the eighth rank, then one of the pawns will queen. This is the case with White to move:

1 g5!

The pawns’ common square has reached the eighth rank, so Black’s king can’t stop them: 1...e7 2 g6! f6 3 d6! xg6 4 d7

If the pawns are separated by three files, they can defend themselves again. The following position is critical:

![Diagram 2.40D]

If Black is to move, he mustn’t try to win one of the pawns, but should keep both options open by moving back and forth on the squares e5, e4 and e3. White loses the pawns only if he has to move them: 1...e5! (not 1...d5? 2 g4! e4 3 c4!, when the common square has reached the eighth rank) 2 g4 f4! 3 e4 xg4! 4 c5 f5!.

If White is to move, he queens one of the pawns: 1 g4 e5 2 c4! d4 3 g5! xc4 4 g6.

Passed pawns separated by four or more files usually cannot be stopped by the lone king.

The last important issue of this type is how the king fares against three connected passed pawns (see following diagram).

Normally three connected passed pawns are too much for the king. However, if they are not
too far advanced, the king can set up a zugzwang situation:
1...\(\text{\textit{\textbullet}}\text{b}8\)!
Not 1...\(\text{\textit{\textbullet}}\text{a}8\)? 2 \text{c}6!, when the pawns are unstoppable. With the text-move, Black makes sure that he can put his king in front of whichever pawn White chooses to advance.
2 \text{c}6
2 \text{b}6 \text{\textit{\textbullet}}\text{b}7! is reciprocal zugzwang.
2...\(\text{\textit{\textbullet}}\text{c}7\)! 3 \text{a}6 \text{\textit{\textbullet}}\text{b}6!
If White has a spare move (e.g. with his king), the pawns queen. If not, they are all lost:
4 \text{a}7 \text{\textit{\textbullet}}\text{xa}7! 5 \text{c}7 \text{\textit{\textbullet}}\text{b}7! 6 \text{b}6 \text{\textit{\textbullet}}\text{c}8! 7 \text{b}7+ \text{\textit{\textbullet}}\text{xb}7 8 \text{c}8\# + \text{\textit{\textbullet}}\text{xc}8!
When White is to move, the pawns queen even without a spare tempo: 1 \text{b}6! (zugzwang!)
1...\(\text{\textit{\textbullet}}\text{b}8\) 2 \text{a}6 \text{\textit{\textbullet}}\text{a}8 3 \text{a}7 \text{\textit{\textbullet}}\text{b}7 4 \text{c}6+! \text{\textit{\textbullet}}\text{a}8 5 \text{c}7! \text{\textit{\textbullet}}\text{b}7 6 \text{a}8\# + \text{\textit{\textbullet}}\text{xa}8 7 \text{c}8\#.
Averbakh discusses the situation of 2.40E in more detail (see Av 442-59).

**B) Protected Passed Pawn vs Two Passed Pawns**

The square of the protected passed play plays the main role in evaluating such positions. If it is far-advanced or the square is very far away from the passed pawns, the position is usually drawn. Otherwise the attacker has good winning chances (see following diagram).

The d4-pawn limits White’s king, but doesn’t stop it leading its pawns to the 8th rank:
1 \text{\textit{\textbullet}}\text{e}4 \text{\textit{\textbullet}}\text{g}4 2 \text{h}4 \text{\textit{\textbullet}}\text{h}5 3 \text{\textit{\textbullet}}\text{f}4 \text{\textit{\textbullet}}\text{h}6 4 \text{g}4 \text{\textit{\textbullet}}\text{g}6 5 \text{h}5+ \text{\textit{\textbullet}}\text{h}6 6 \text{\textit{\textbullet}}\text{e}4

Note that White can manoeuvre freely inside the square of Black’s protected passed pawn, whereas Black has to oscillate between h6 and g5.
6...\(\text{\textit{\textbullet}}\text{g}5\) 7 \text{\textit{\textbullet}}\text{f}3 \text{\textit{\textbullet}}\text{h}6 8 \text{\textit{\textbullet}}\text{f}4 \text{\textit{\textbullet}}\text{h}7 9 \text{g}5 \text{\textit{\textbullet}}\text{g}7 10 \text{g}6
10 \text{h}6+? \text{\textit{\textbullet}}\text{g}6 11 \text{\textit{\textbullet}}\text{g}4 \text{\textit{\textbullet}}\text{h}7! =
10...\text{\textit{\textbullet}}\text{h}6
10...\text{\textit{\textbullet}}\text{f}8 11 \text{h}6 \text{\textit{\textbullet}}\text{g}8 12 \text{\textit{\textbullet}}\text{f}5 \text{d}3 13 \text{\textit{\textbullet}}\text{f}6 +–
11 \text{\textit{\textbullet}}\text{g}4 \text{\textit{\textbullet}}\text{g}7 12 \text{\textit{\textbullet}}\text{g}5!
White has to leave the square to make progress. Of course, before deciding on such a move, one has to make sure that it doesn’t lose!
12...\text{\textit{\textbullet}}\text{d}3 13 \text{b}6+! \text{\textit{\textbullet}}\text{g}8 14 \text{\textit{\textbullet}}\text{f}6!
14 \text{g}7? \text{\textit{\textbullet}}\text{f}7! +–
14...\text{\textit{\textbullet}}\text{d}2 15 \text{\textit{\textbullet}}\text{h}7+! \text{\textit{\textbullet}}\text{h}8 16 \text{\textit{\textbullet}}\text{f}7 \text{d}1\# 17 \text{g}7+!
\text{\textit{\textbullet}}\text{xh}7 18 \text{g}8\# + \text{\textit{\textbullet}}\text{h}6 19 \text{\textit{\textbullet}}\text{g}6#

If the d4-pawn were on b4 in the starting position or if all the pieces are shifted to the left, then the position is only drawn, as the reader can verify.

If the passed pawns are isolated, it is similar (see following diagram):
1 \text{c}4
1 \text{\textit{\textbullet}}\text{e}3!? sets a trap as after 1...\text{\textit{\textbullet}}\text{e}6 2 \text{\textit{\textbullet}}\text{e}4, 2...\text{\textit{\textbullet}}\text{e}3? is wrong: 3 \text{\textit{\textbullet}}\text{f}3! \text{\textit{\textbullet}}\text{xe}5 4 \text{\textit{\textbullet}}\text{fx}3! \text{\textit{\textbullet}}\text{e}4 5 \text{c}4! +– and it is Black’s move in the position of reciprocal zugzwang. However, Black can hold on nevertheless; e.g., 2...\text{\textit{\textbullet}}\text{d}7 3 \text{c}4 \text{\textit{\textbullet}}\text{e}6 4 \text{\textit{\textbullet}}\text{f}4 \text{\textit{\textbullet}}\text{d}7 5 \text{c}5 \text{\textit{\textbullet}}\text{d}8 (5...\text{\textit{\textbullet}}\text{c}6? 6 \text{e}6! \text{\textit{\textbullet}}\text{c}7 7 \text{\textit{\textbullet}}\text{e}4 \text{\textit{\textbullet}}\text{c}6 8 \text{\textit{\textbullet}}\text{e}5 \text{g}3 9 \text{c}7! \text{\textit{\textbullet}}\text{d}7 10 \text{\textit{\textbullet}}\text{f}6! \text{g}2 11 \text{\textit{\textbullet}}\text{c}6+ \text{\textit{\textbullet}}\text{c}7 12 \text{e}8\# 13 \text{\textit{\textbullet}}\text{d}7+! \text{\textit{\textbullet}}\text{b}6 14 \text{\textit{\textbullet}}\text{c}7 \text{\textit{\textbullet}}\text{f}2+ 15 \text{\textit{\textbullet}}\text{g}6 \text{w}g3+ 16 \text{\textit{\textbullet}}\text{hx}5+–) 6 \text{\textit{\textbullet}}\text{e}3 (6 \text{e}6 \text{\textit{\textbullet}}\text{c}7? 7 \text{\textit{\textbullet}}\text{e}5 \text{g}3! 8 \text{c}6! \text{g}2 19 \\text{\textit{\textbullet}}\text{c}7! \text{\textit{\textbullet}}\text{g}1\#! 10 \text{c}8\# \text{w}g3+=) 6...\text{\textit{\textbullet}}\text{d}7=.
1...\text{\textit{\textbullet}}\text{e}6 2 \\text{\textit{\textbullet}}\text{c}4

Now Black can surprisingly trade his protected passed pawn for the e-pawn:
However, it is surprisingly difficult to realize this advantage:

1...\( \text{c}d4 \)

1...\( \text{c}b4 \ \text{c}b6 2 \text{c}a4 \text{a}5 3 \text{h}5! \text{gxh}5 4 \text{e}6! \text{c}c6 5 \text{b}xa5! \text{d}d6 6 \text{b}b6 \text{exe}6 7 \text{c}c6 ++ ; see the main line.

1...\( \text{c}c7 \)

1...h5 2 \( \text{c}c4 \text{c}c7 3 \text{b}b5 \text{b}b7 4 \text{a}a5 \text{a}6 5 \text{e}6! \text{c}c6 6 \text{d}xa6! \text{d}d6 7 \text{b}b6 \text{exe}6 8 \text{c}c6! ++ ; (see 2.33).

2 \( \text{c}e5 \text{d}d7 3 \text{d}d5 \text{a}6 4 \text{c}c5 \text{c}c7 5 \text{c}c4 \text{c}c6 6 \text{b}b4 \text{b}b8 7 \text{a}a5 \text{b}b7 \text{h}5! \text{gxh}5 9 \text{e}6! \)

A typical procedure: the protected passed pawn is exchanged so that the king can enter the position.

9...\( \text{c}c6 10 \text{d}xa6! \text{d}d6 11 \text{b}b6 \text{exe}6 12 \text{f}f6 \)

12...\( \text{f}f7 13 \text{d}d7 \text{f}f8 14 \text{d}d6! (14 \text{c}c6? \text{e}e8! 15 \text{x}xf5 \text{h}4! 16 \text{gx}h4 \text{x}xf7 =) 14...\text{g}g7 15 \text{c}c7 \text{g}g6 16 \text{e}e6 \text{h}6 17 \text{c}c5 \text{g}g7 18 \text{f}f5! \text{f}f7 19 \text{c}c5 ++ .

13 \( \text{d}d6 \text{h}6 14 \text{d}d5! \text{f}f7 15 \text{e}e5! \text{g}g6 16 \text{e}e6! \text{g}g7 17 \text{x}xf5! \text{f}f7 18 \text{c}c5 \text{e}e7 19 \text{f}f5 \text{f}f7 20 \text{d}d6! \text{c}c8 21 \text{f}f4

21 \text{e}e6?! \text{f}f8 22 \text{f}f7? \text{h}4! 23 \text{gx}h4! \text{h}5! =)

21...\( \text{f}f8 22 \text{e}e4 \text{e}e8 23 \text{e}e5! \text{f}f8 24 \text{e}e6! \text{e}e8 25 \text{f}f7+! \text{f}f8 26 \text{f}f6! \text{h}4 27 \text{gx}h4! \text{h}5 28 \text{e}e6 ++ .

Averbakh gives the rich history of 2.43 in more detail.

The next example is easier:

Fine wanted to demonstrate the superiority of a protected passed pawn with this position.
the fight for the corresponding squares (the pairs are e4/g5, f4/g6 and f3/h6):

1...h6 2 f3
2 e6 g7 3 e5 d3 4 e7 h7! ++.
2...h7 3 e4 g7 4 f3 h6! 5 g4
5 f4 g6! 6 e4 g5! 7 f3 h5! ++.
5...h4!
5...g5? 6 gxh5! h4xh5! 7 f4! g6 8 g4!
7 f7 9 e5 e6 10 e4 =.
6 e6 g6 7 g5 h3 8 g3 d3 0-1

D) Outside Passed Pawn

T. Oral – M. Röder
Sydney 1999

1...h3+!
1...f4?! 2 h3 e3? 3 h4! d3 4 g3
e3 5 f3 xb3 6 e3 xa4 7 d2! b3 8
c1! = (Hecht in CBM 70).
2 h2 h4! 0-1
Due to 3 h1 g3! 4 g1 h2+! 5 h1
h3! 6 b4 axb4! 7 a5 g4 8 h2 b3 → and
the b-pawn promotes.

If both sides have a passed pawn, possession
of the more outside pawn is generally a decisive
factor:

R. Fischer – B. Larsen
Denver Ct (5) 1971

White's a-pawn deflects Black's king to the
queenside and then his kingside pawns fall prey
to the white king:

1 d4 d6 2 a5 f6 3 a6 c6 4 a7
4 h4 b6 5 d5! xa6 6 e6! g5 7 xf6!
gxh4 8 gxh4 b6 9 g5 c6 10 xh5! d7
d6 g7 12 g7! ++.
4...b7 5 d5! h4!? 6 e6
6 gxh4 xa7 7 xe6! f5 8 h5! f4 (8...gxh5 9
xf5! b6 10 g5! c6 11 xh5! d7 12
g6 c7 13 g7! ++) 9 hxg6! f3 10 g7! f2 11
8 f1! f7+! ++.
1-0
Larsen resigned due to 6 f5 7 f6 hxg3 8
hxg3 ++.

If the defender has a backward pawn or can't
create a passed pawn himself, the strategy seen
in the following diagram is often very efficient.
White's b-pawn is the cause of his own downfall:

J. Krejcík – S. Takacs
Vienna 1924

White exchanges his h-pawn for Black's f-
pawn and wins because his king is then nearer
to the queenside:
1 h3??
1 h6+ also wins: 1...hxh6 2 fxh6! a4 3 c5 g7 4 a4 f7 5 c5! a3 (5...e6 6 b4! +–) 6 bx a4! e7 7 c6 d8 8 b7! +–.

1–0

Due to 1...hxh6 2 fxh6! hxh5 3 e5 g6 4 d5 f7 5 e6 a4 6 bx a4! e7 7 c7 +–.

E) Breakthroughs

Some pawn breakthroughs have been known for a very long time. We start with a classic:

```
WB

C.Cozio, 1766

White’s pawns are very far advanced and the black king is outside their square. These are good signs that a breakthrough will be successful:

1 b6! cx b6
1...axb6 2 c6! bxc6 3 a6! +–.
2 a6! bx a6 3 c6! +–

If Black is to move, then he can win by entering the square of the c-pawn:

1...ff5!
Instead, 1...b6? = draws, while all other moves lose (e.g. 1...a6?? 2 c6! +–).
2 b6 cxb6! 3 axb6 axb6! +–

In the next example, the pawns manage to break through despite the better position of the defender’s king (see following diagram).

Black’s very far advanced pawns can’t be stopped:

1...d4+ 2 dd2
2 cxd4 e3 3 bxc3 (3 d3 cxb2 +–) 3...b2 +–.
2...e4 3 cxd4 e3+ 4 xe3 e3 5 bxc3
```

```

G.Marco – H.Pillsbury
Budapest 1896

5 d3 cxb2 +–.
5...b2 +– 0–1

After the breakthrough of a pawn-majority that was already very far advanced, here is a very surprising one:

```

W

H.Ree – L.Ftačnik
Kiev 1978

Black’s last move, ...g6-g5, was a serious mistake:

1 g4! hxg4
1...gxh4?! 2 gxh5! h3 (2...f5 3 h6! ff6 4 exf5 +–) 3 ff2 +–.
2 h5! ef6 3 ff2! ff7 4 gg3 gg7 5 xg4!
6 h6 6 ff5! xh5
6...h5 7 gg4 gg7 8 e5! xe5 9 xg5! +–.
7 xxf6! g4 8 e5! g3 9 e6! g2 10 e7! g1+w 11 e8+w! h4 12 h8+w! gg3 13 gg7+ ff2 14
```
\[ \text{We hope these three examples have alerted you to watch out for possible breakthroughs. There are several factors that favour a breakthrough: flexible far-advanced pawns, weaknesses in the pawn-structure (e.g. doubled pawns) and a defending king that is too far away from the action (i.e. the square of a potential passed pawn). You may find additional material in the exercises (E2.05 and E2.06).} \]

### 2.5 Pawns on Both Wings

First an easy example to warm up:

![Diagram 2.51](image)

\[ \text{The conversion of the extra pawn falls into three phases:} \]

1. The king is activated:
   \[ 1 \text{g}1+! \text{g}1 15 \text{e}5 \text{f}2 16 \text{d}5 \text{e}3 17 \text{c}6! \text{d}2 18 \text{x}b6! \text{e}2 19 \text{a}5 \text{x}b2 19...\text{b}3 20 \text{b}5! ++. \]
   \[ 20 \text{xa}4 \text{e}3 1-0 \]

2. Mobilization of the majority:
   \[ 4 \text{b}4 \text{c}6 5 \text{c}4 \text{h}5 6 \text{a}4 \text{h}4 7 \text{b}5+ \text{b}6 8 \text{b}4 \text{g}5 9 \text{a}5+ \text{b}7 10 \text{e}5 \text{c}7 11 \text{b}6+ \text{xb}6+ 12 \text{axb}6+ \text{b}7 \]
   \[ 3 \text{The king goes to the kingside to gobble up the black pawns (transformation of one advantage into another):} \]
   \[ 13 \text{d}6 \text{xb}6 14 \text{e}7 \text{f}5 15 \text{f}6 ++ \]

3. The following pawn-structure can arise from the Exchange Spanish, so it is important to deal with it:

![Diagram 2.52](image)

\[ \text{Because of the large number of pawns still on the board, White has to play very precisely to stop the position becoming completely closed:} \]

\[ 1 \text{e}2 \text{e}7 2 \text{e}3 \text{e}6 3 \text{f}4 \text{c}5 4 \text{e}4 \text{c}6 5 \text{a}4 \text{b}5 6 \text{b}3! \]

\[ \text{White has set up a pawn formation that prevents Black from creating a passed pawn.} 6 \text{cxb5? cxb5! = throws the whole advantage away.} \]

\[ 6...\text{f}6 7 \text{g}4 \text{g}6 7...\text{x}d6 8 \text{f}5 \text{e}5 9 \text{a}5! ++. \]

\[ 8 \text{f}5+ \text{g}xf5 9 \text{e}5+ \text{d}4 10 \text{h}6 \text{f}4 11 \text{h}5 12 \text{h}4 \text{b}4 13 \text{f}3! \text{d}4 14 \text{f}4! \text{c}3 15 \text{e}5! ++. \]

\[ 9...\text{e}5 10 \text{h}3 \text{bxa}4 11 \text{bxa}4/ \text{a}5 12 \text{h}4 \text{h}6 13 \text{f}3/ \text{h}5 \]

\[ 13...\text{d}4 14 \text{g}5 ++. \]

\[ 14 \text{g}xh5 ++ \]

If the two sides have a majority on different wings, the shorter majority often has the advantage. In particular, a 2-1 majority is beneficial, because after its mobilization there remains a protected passed pawn or else there is no enemy pawn left. A 3-2 or 4-3 majority may therefore be weaker, as the defender can often keep one pawn, which he can later make into a passed pawn by counterattacking on that side with his king. Thus the deflection value of the outside majority is reduced. But returning to a 2-1 majority, our first example is clear-cut (see following diagram).

Black wins easily, even though his king seems to be far away from the action. The winning plan falls into two phases. Firstly, Black activates his king:
1. a5 2 d3 g7 3 e2 f8 4 c3 e7 5 c2 d6 6 d3 e5

The first aim is achieved, while White could do nothing without weakening himself. Now Black's king threatens to penetrate into the position, so White has to take active measures:

7 f4
7 c3 b4+ 8 b3 b5! 9 f4 a4+ 10 c2 c4 11 fxe5 d4! ++.

7...f6
Note that with the 3-2 majority White is unable to exchange both black kingside pawns!

8 c3
8 fxe5 fxe5! ++. Now the white g-pawn is doomed, because White's king has to stay inside the square of the black pawns, while Black's king comes around to capture it.

8...d6
White has opened up a pathway on the kingside, so the black king can simply come back to enter White's camp.

9 d2 e7 10 d3 f7 11 d2 g6 12 e3 h5 13 f3 b4 14 g4+ g6 15 fxe5 fxe5 16 e3 g5 17 d3 xg4 18 e4 f3 19 b5 xe4 20 xa5 d3 21 xb4 e4! 22 b5 e3 23 a4 e2 0-1

However, a 2-1 majority doesn't win by itself (see following diagram).

White's actively placed king even gives him an edge:

1 d4 e6 2 e5 fxe5+ 3 fxe5 a6 4 e6 d6 5 e7 xe7 6 e5! c6 7 b6 d5 8 xxa6 e5 9 b7 b4 10 c7 b5 11 xde6 a4 12 xec6 a5 13 c5 a4 14 b6

Now Black has to follow a very narrow path to reach the draw: 15...h6! (15...g6? 16 b5 b3 17 axb3! xxb3 18 c5 e3 19 d5 d3 20 e5 c3 21 f6! f4 22 g5! g3 23 g7! h4 24 h6! ++) 16 c4 xa2! 17 xb4 b2 18 c4 c2 19 d5 d3 20 e6 e4 21 f7 f4! 22 xg7 g5! 23 h7 h5! = securing the half-point.
14...b3 15 axb3+! AXB3! 16 c5 c3 17 d6 d4 18 e6 e3 19 f7 f2 20 xg7
g4 d3 21 xg7 xh3! 22 g5
h4! 23 h6 g4! 24 h3+ h4!=) 21 g5 h4=.

20...xg2?

Automatically capturing the pawn is wrong.
Black can save himself with 20...h5! 21 g6
h4! 22 g5 xg2! 23 xh4 xh2!=.

21 h4: h5
21...g3 22 h5! g4 23 h6! --.
22 g6 g3 23 xh5 f4 24 g6! 1-0

If both sides can create passed pawns, the play often becomes very sharp:

Correct is 3 bxa5! bxa5 4 d3 (forcing Black
to choose where to put his king; 4 h4 gxh4 5
gxh4! a4 6 e2 a3 7 c2 ++ is also possible)
4...f6 (4...d6 5 h4 +-) 5 c5 a4 6 c2 e5 7 c6
e7 8 h4 ++.

3...axb4?

This is bad, because White’s king is already
in the square of the new b-pawn! In such positions
every tempo counts. 3...a4! 4 d2 (4 cxb6?
fxd6! 5 d2 e5 6 h4 gxh4 7 gxh4 a3 8 c2 a9
b2 e4! ++) and now:

a) 4...a3? 5 c2 bx5 (5...d5 6 cxb6 c6
7 b3 ++) and then:

  a1) 6 bx5!? c5 7 h4 (7 b3 xc5 =)
     7...gxh4 8 gxh4 e5 9 h5 e4 10 h6 a2! 11 b2!
e3 =.

     a2) 6 b5! d5 6...d6 7 b3! e5 8 xa3!
+-) 7 b3 e5 b6! (8 xa3? e4! 9 b2 e3! 10
c2 e4! 11 b6! f3! =) 8...c6 9 xa3! e4
ten b2 bxb6 11 h4! ++.

b) 4...d5 5 cxb6 c6! =.

  c) 4...bxc5 b5?! (5 bx5 d5 6 h4! gxh4 7
gxh4! a3 8 c2 e5 9 h5 =) 5...d6 6 h4 gxh4
gxh4! a3 8 c2 e5! 9 h5 a2 10 b2 e4! 11 b6=.

4 cxb6! d6 5 h4
5 d3 e5 6 c4 ++.

5...b3??

5...e5?! 6 hxg5 (6 d3 --) 6 b3 7 b7 c7 8
b8 w+ x b8 (D).

R.Seger – S.Agdestein
Bundesliga 2000/1

Black has just used two of his remaining
three minutes to reach this terrible pawn
dending. With seconds on both clocks it is impossible
to avoid errors in such a mess.

1 g3!

Preparing to create an outside passed pawn.
1...e3? loses an important tempo: 1...b6! 2 c4
(2 x d3 a5! 3 bx a5 bx a5! 4 g3 x f6 5 c4 6 c5
a3 7 x c2 e5! ++) 2...a5 3 bx a5 bx a5! 4 g3 a4 5
d2 x f6 ++.

1...b6!?

Agdestein prepares the creation of an outside
passed a-pawn. 1...e4 loses without a fight;
e.g., 2 c4 d4 3 h4 gxh4 4 gxh4! e4 5 b4? (5
c5 x f4 6 d2 x g4 7 x e3! x h4 8 x f4 ++) 5...axb5 6 cxb5! b6 7 h5 x f5 8 x e3 ++.

2 c4?!
2 h4 ++.
2...a5 3 c5?

9 d1! (avoiding early checks! 9 d2? e4
10 g6! e3 11 x e3 b2! 12 g7! b1 w 13 g8 w++!
x c7! =; for 9 d3?? e4! 10 c3 e3! ++ see the
game) 9...e4 10 g6! e3 11 g7! ++.

6 d3 e5

The time-control had now been reached, but
Seger was not sure of this and made a ‘safety
move”, which turned out to be a most unfortunate blunder:

7 hgx5??
7 d3 e4 8 xb3 ++.
7..e4+! 8 c3 e3! 9 b7 c7! 10 b8+w+
xb8! 11 g6 e2! 12 xd2 b2 0-1
Due to 13 g7 e1+w! 14 xe1 b1+w! --.

The next example shows what happens if a majority can’t be mobilized so easily:

2.55
V.Golod – Y.Kosashvili
Beersheba 1998

White has problems creating a passed pawn on the queenside.
1...d6 2 c3 c7
2 e5? 3 fxe5+! xe5 (3...fxe5 4 d3! e6
5 e4 =) 4 b4! cxb4+ 5 axb4! axb4+! 6 xb4
b6 7 c5 f5 8 gxf5 gxf5! 9 a5 f4 10 c6 f3 11 c7
f2! 12 c8+w f1+w! = (Golod in CBM 68).
3 d3
3 b4 cxb4+! 4 axb4 a4! --.
3...g6 4 c3 d6 5 h3 f5 6 gxf5 gxf5! 7 b4
cxb4+! 8 axb4 a4! 9 b5
Or: 9 c5+ d5! 10 h2 e5! 11 fxe5 xe5!
=+: 9 d4 e5+ 10 fxe5+ e6! 11 b5 a3! 12
d3 xe5 13 b6 d6 --.
9 e5!
9...a3?! 10 b6! xe6 11 c5! e5 12 fxe5! f4 13
e6! f3 14 e7! d7 d7 15 e8+w+ xe8 16 b7! ++
(Golod).
10 fxe5+ xe5! 11 b4 d6 12 c5+ c7
13 xa4 f4! 0-1

2.56
E.Cohn – A.Rubinstein
St Petersburg 1909

White’s doubled pawns and misplaced king offer a clear route for the black king:
1...f6! 2 d2 g5! 3 e2 h4!
White would draw if he could only play 4
g2 now!
4 f1 h3! 5 g1 e5 6 h1?!
This allows Black to create a spare tempo on the queenside. However, the position was lost in any case: 6 b5 f5 7 h1 g5 8 g1 h5 9 h1
e4 10 fxe4 fxe4! 11 g1 g4 12 h1 h4 13 g1
g3 14 hxg3 hxg3! 15 f1 h2 --.
6...b5?! 7 g1 f5 8 h1 g5 9 g1 h5 10
h1 g (D)

2.56A

W

11 c4?!
11 f x g 4 f x g 4 12 g1 h 4 13 h 1 g 3 14 h x g 3
hxg3! 15 f3 g2+! 16 g1 g3! 17 f4 exf4! 18
e xf4 x f 4! 19 x g 2 e 3 -- (Nunn in Tactical
Chess Endings). After the liquidation of all the

We continue with positions without majorities. Here the question is whether the kings can penetrate.
D. Ippolito – K. Müller  
Bermuda 1998

White has to defend extremely carefully to avoid defeat as Black tries to open a way through for his king on the queenside: 1...b5!!? 2 c3?
2 cc2 cb6 and now:
   a) 3 cc3? ca6! 4 cd3 bxc4+! 5 ccxe4 cb6! 6 cd5 cb5! 7 h5?? gxh5 8 cc5 cb4! 9 cx5 cbx3! =.
   b) 3 h5 gxh5 (3...bxc4 4 bxc4! a4 5 hxg6 hxg6! 6 cd3 ca5 7 cc3! =; by playing h5 and
      hxg6, White has robbed Black of his spare moves) 4 cb1! =.
   c) 3 cb1 bxc4 4 bxc4! a4 5 ca2! ca5 6 cb3! h5 7 b3! =.

If White’s g3-pawn were instead on f3, then 2 cc2! cb6 3 cb1! would be White’s only defence.

2...bb6!
2...h6? 3 cd3 cb6 4 ce3 bxc4 5 bxc4! a4 6 cd2 ca5 7 g4! h5! 8 gx5 gx15! 9 cc3! = and
White saves the game.

3 cc2 3 cd3 bxc4+! 4 ccxe4 cc6! 5 cd3 cb5! 6 cc3 (6 h5 gxh5! 7 cc3 h6! 8 cd3 cd4 9 cc2
h4 10 gxh4 h5 --) 6...h6! 7 cd3 cb4! 8 cc2 (8 g4 h5! 9 gxh5 gxh5! 10 cc2 cc4! --) 8...h5!
--.

3...bxc4! 4 bxc4 a4! 5 cd3 ca5 6 cc3 h5 7
b3 a3! 0-1

Sulsks first improves the situation on the queenside before he exchanges his g-pawn for
Black’s h-pawn: 1 a5?? (freezing Black’s pawns first) 1...bh7 2 b3 bg7 3 cc5 (3...bh7 4 cx5
cx5 5 g4 cg7 6 g3 hxg5 7 cxg5! ++ – Hecht
in CBM 75) 4 dxg5! dxg4 5 e4 cc7 6 g3
g7 7 g4 bh7 8 g5 hxg5 9 ccg5 10 cc
f7 11 c6 (11 cc5 cc7 12 cc5 cc7 13 c6+
bxc6+ 14 cc5! cc7 15 c5! ++) 11...bxc6 12
cc5 cc7 13 cc5! 1-0.

If the kings occupy good positions and there are not many pawn moves left, both sides have
to fight for tempi (see following diagram).

Black has the outside pawn-majority, but
White’s active king and central passed pawn are
enough compensation:

1...d7 2 h4?
2 g4 g5 3 h3 h6 4 a4 cg7 5 c6! b6! 6 cc6!
cxe6! 7 cb7! cd6 8 xa7! cc7! = (Psakhis
in CBM 74 Extra).

2...h5!!
Now the spare tempo...g6 decides the game.

3 a4
After 3 e6+ cc7! 4 cc5 h5! 5 cd5 cc5! 6 cc5
b4! we see Black using the fact that White’s
pawn is already on a3 (with the pawn on a2,
White would draw easily): 7 axb4 axb4! 8 cc
xe6! 9 cc5 cc5! ++ (Psakhis).
‘don’t touch me’ situation. For this extreme form of a fight for tempi, the following rule is applicable:

If both sides have no or the same number of spare tempi then one should not move to the ‘don’t touch me’ square, but stay a short distance away. If the two sides have a different number of spare tempi, one should move to the ‘don’t touch me’ square as quickly as possible.

Both sides have an equal number of tempi in reserve, so...

1 ♕h3??

This move is right. 1 ♕h4? ♕g6! 2 c3 a6 3 b3 d6 4 c4 a5! —++; 1 ♕f3?! ♕g6 2 ♕f4! h4 3 ♕g4! h3! 4 ♕xh3! ♕xg5 5 ♕g3 =.

1...♕e7

1...♕g6? 2 ♕h4! d5 3 b4 d4 4 b5! ♕f4 5 ♕xh5! ♕g7 6 ♕g4 ♕g6 7 ♕f4 +. After 1...a5? the number of tempi in reserve isn’t equal any longer, so White immediately advances to the ‘don’t touch me’ square: 2 ♕h4! ♕g6 3 b3 d5 4 c3! ++–.

2 ♕g3! ♕g7? 3 ♕h3 =

With Black’s kings instead on b7 and c7, the number of spare tempi is equal as well, so the kings have to stay a short distance away from the ‘don’t touch me’ squares.

2.6 Corresponding Squares

The theory of corresponding squares is one of the most difficult topics in pawn endgames and so far we have only covered the most important special cases: opposition and triangulation.
However, the theory is more general; when correctly employed, it offers clear solutions to otherwise very difficult positions. The theory is mainly applicable to blocked positions, where king manoeuvres play the main role. It is also relevant to zugzwang positions. The ideal case is a system of squares where both kings are in reciprocal zugzwang. That means, for example, that if White moves to a particular square, then Black has to move to the corresponding square in order to draw; White should seek to move to squares in such a way that the black king is unable to keep moving to the corresponding squares, either because it is already there or because it can’t fly.

Of course, not all cases where the theory can be successfully applied fit this ideal picture – pawn moves or counterattacks may disrupt the pattern. We will start with a famous example to illustrate what this is all about:

White threatens to reach a key square or move to a square marked 4, so f3 = 5 is the corresponding square (protects the key squares and is next to 4). If the white king is on f1, Black has to move to e3. However, f1 gets no number because after 1...e3?, 2 f1?? would even lose due to the counterattack 2...d2!. Because of the edge of the board, White has only a1 = 6 for manoeuvring. It corresponds to b5. If Black is to move, he can secure a draw by using the theory:

1...f3!
1...e3? 2 d1! f3 3 c1! e3 4 b1! d5 5 a2! c5 6 b3 d4 7 b4 ++.
2 d1
2 f1 e3! 3 e1 f3! =
2...e3! 3 c1 d4! 4 b1 c5! 5 a1 b5! 6 a2 b4! 7 d4 c4! 8 d5 xd5 9 b3 d4 10 b4 d5! 11 xc3 c5! =

Applying the theory makes the path to victory clear in the next example. The winning manoeuvre is in fact a triangulation.

Naturally, the main question is how the kings should manoeuvre. Therefore, one should determine first the key squares, then the corresponding squares near the key squares, followed by the rest of the system. The key squares are e2, f2 and b3, a3. If the key squares are not connected, we should identify the shortest route between them. For White to get from b3 to e2, the route is a2-b1-c1-d1 and Black has to defend via b4-c5-d4-e3. As both sides have exactly one shortest route, the squares along the way correspond to each other. We number them from 1 to 4. Next we investigate the squares near the key squares: e1 gets a 5. From here.

2.62 (d2 = 1 = f3)
N. Grigoriev
K Novoi Armii, 1920

The key squares are d4, e2 and e3. We start the numbering near the key squares: d2 = 1 corresponds to f3 = 1, because Black can’t leave the square of the d-pawn. From c3 = 2 it is possible to go to d2, so Black has to go to c3 = 2. The squares on the first rank don’t get numbers because a counterattack against the d-pawn would be possible, but on the c- and b-file there are further corresponding squares: from c2 = 3 White threatens to go to 1 or 2 so Black has to be on f4 = 3. Finally, from b2 or b3 White can reach the 2 or 3, but Black has only one square.
from which he can go to 2 and 3: f3 = 1. So b2 and b3 get a 1 as well and White wins:

1 \&c2 +f4 2 \&b3 +f3 3 +b2 +f4 4 +c2! +f3 5 +d2! +f6 6 +e2! +e5 7 +e3! +d5 8 +d4! +e4 +b4 10 +d5! +e5 11 +e5! +b4 12 +d6! +b3 13 +d7! +b2 14 +d8?! +b1 +e15 +c7+ +b4 16 +b6+ ––

Now we proceed to more complicated examples, where extensive manoeuvring of the kings is necessary:

2.63 (a7 = 2a)

\textbf{Em. Lasker and G. Reichhelm}

\textit{Chicago Tribune, 1901}

The key squares are b5, g5 and h5. The shortest route between them for White is c4-d3-e2-e3-f2/f3-g3-h4 and for Black b6-c7-d7-d8-e7-e8-f7-f6-g6 (the vertical lines in the diagram indicate that the squares c1, e3 correspond to the squares d7, d8 and that f2/f3 corresponds to e7/e8 and g3 to f6/f7). On the kingside Black has more squares and we only number h4 = 6 = g6. If Black’s king has arrived on the kingside he has the possibility of a counterattack against the white f-pawn, so White can’t simply go back and try again. It is clear now that for the system on the queenside, the distance to the kingside is of interest. The squares on the d-file for White correspond to squares on the c-file for Black. It follows: c4 = 1 = b6, d3 = 2 = c7, e3 = 3 = b7, d2 = 4 = c8, e2 = 5 = b8. The remaining squares on the b-file and the first rank carry no new threats and so no new numbers have to be introduced. The squares on the b-file have an additional ‘a’, because Black can defend on the c-file and on the a-file accordingly. Furthermore we have a7 = 2a and a8 = 4a for Black. a1-a3 don’t get numbers as b7 and b8 would correspond to them.

How does the play proceed in the system?

The defender (Black) has to move to the corresponding square. If this isn’t possible, the threat (at the moment occupation of b1 = 2 or b2 = 4) has to be parried. If Black is to move, he achieves this with 1...+b7 or 1...+b8.

The attacker (White) has to occupy a corresponding square or move in such a way that the defender can’t go to the corresponding square. The attacker should approach the key squares if possible. If not, he should not move further away. Thus, if it is White’s turn to play, he should occupy the corresponding square to a7:

1 +b1!

Note: 1 +b2? +a8!! =; 1 +a2? +b7 2 +b3 +c7 3 +c3 +b7! 4 +d3 +c7! 5 +e2 +d7 6 +f3 +e7 7 +g3 +f7 8 +h4 +g6! =

1...+b7 2 +c1! +c7 3 +d1! +d8 (D)

\textbf{2.63A

+/-

4 +c2!}

The corresponding square b8 is out of reach for Black, so White comes closer.

4...+e8 5 +d2! +d7 6 +e3! +c7 7 +d3! +b6 8 +e3 +=

White penetrates on the kingside.

2.63 shows Reichhelm’s version from the \textit{Chicago Tribune 1901}, presumably constructed following analysis of a game between Reichhelm and Lasker, while Lasker had put the white king on a3 and the black king on a8 in the \textit{Manchester Evening News 1901} (the \textit{British Chess Magazine} of November 1910 has the white f-pawn on f5 and the black one on f6). In 1944, Chéron placed the f-pawns in another way
There is the obvious key square f4 with the pair of corresponding squares e3 = 1 = g5. Additionally, the threat of White playing e5 gives us d4 = 2 = f6. (Note that we ignore the key squares d6 and d7 in the diagram; they induce the corresponding squares c7-e7 and c8-e8, but although White can use them by 1 ²b2? ²h8!! 2 ²b3 ²g8! 3 ²b4 ²f8! 4 ²h5, it doesn’t actually help him.) We proceed to label d3 = 3 = g6. Then we mark c4, c3, c2, d2 and e2 = 4-8, which correspond to f7, g7, h7, h6 and h5 respectively. For the other squares, no new numbers have to be introduced. Squares on the a-file are not numbered due to the possible counterattack against the e4-pawn. If White goes to the f-file, Black can oscillate between g6 and h6, so the correspondence is not one-to-one.

If Black is to move, he can draw with either 1...²g7 or 1...²h7.

White to play can win as follows:

1 ²b1!

Not: 1 ²b2? ²h8!! 2 ²b3 ²g8! 3 ²c3 ²g7!
4 ²d4 ²f6! =; 1 ²a2? ²g7 2 ²b3 ²g6 =
(2...²f6? 3 ²c2! ++).

1...²g7 2 ²c1! ²g6 3 ²d1! ²g5
Now Black has no access to h7 and White can approach:

4 ²c2!

4 ²e1? ²g6 and White is not making progress.

4...²h6 5 ²d2! ²h5 6 ²c3!

6 ²e2?! ²h6 and White has to go back and try again.

6...²g6 7 ²d3! ²f6
7...²g5 8 ²e3! ²g6 9 ²f4! ²h5 10 ²f5 ++.

8 ²d4! ²g6 9 ²e5! ²f5 (D)
9...²xe5+ 10 ²xe5! ²f7 11 ²f5! ²c7 12
²xg4! ²d6 13 ²f5! ++.

By now you should be following concepts and (distant, diagonal, vertical) passed pawn (outside) square rule, majority, reciprocal zugzwang, triangulation, enencirclement for tempi, liquidation of weaknesses.

Always remember the difference between a win and just one careless king capture.

Reference works


*Baueremypse* (A) Publishers, Berlin 1988


*Secrets of Pawn Endings*, and Lamprecht, Gambit.

Exercises
(Solutions on page 130)

We offer a few words of advice. There are many ways to lose but it is probably best to play a friend or a computer; the harder Pawn endings are very difficult to calculate abilities, so analyse the easier ones (one or two moves) and analyse the others on the principle of elimination (see 2.13A) until you find that the main point of the exercise is the first move: there is only one solution that needs to be detected! After solving the solution, you should get some sort of information about the final result line. Most importantly, the exercises enjoyable.
By now you should be familiar with the following concepts and expressions: opposition (distant, diagonal, virtual), main file, key squares, passed pawn (outside, protected, connected), square rule, majority, breakthrough, zugzwang, reciprocal zugzwang, corresponding squares, triangulation, encirclement, king-march, fight for tempi, liquidation of one wing.

Always remember that in pawn endings, the difference between a win, loss or draw is often just one careless king or pawn move. Be alert!

Reference works
Encyclopaedia of Chess Endings (ECE), Pawn Endings volume, Belgrade 1982
Bauernendspiele (Av), Averbakh, Sportverlag Berlin 1988
The Final Countdown, Hajenius and Van Riemsdijk, Cadogan 1997

Exercises
(Solutions on pages 366-8)

We offer a few words of advice before you start. There are many ways to work with exercises. It is probably best to play the positions out with a friend or a computer; take your time over this. Pawn endings are very suitable to train your calculating abilities, so at least try to solve the easier ones (one or two stars) in your head and analyse the others on the board. The method of exclusion (see 2.13A) might help you. Note that the main point of the exercise is not always the first move; there is often a later trick that needs to be detected! Anyway, before you read the solution, you should have reached an opinion about the final result and the expected main line. Most importantly, we hope that you find the exercises enjoyable and stimulating.

White’s king has penetrated a long way up the board. Is Black lost?

It looks pretty grim for Black as his king is very far away from the action. Does Black have a way to defend?

The grandmaster with Black in this example thought that he had found a good defence when he simplified into this pawn ending. However, one of his students later proved him wrong. Can you do the same?
Is White lost?

Can White’s extra pawn and more active king be converted into victory?

How do you assess this position?

The position looks drawish, but Black has a way to break through. Can you spot it?

In this top-level game, Black found the way to defend. Can you do the same?

How should Black’s protected passed c-pawn be neutralized?
White to play and win.

White to play and draw.

Which is the correct method for White to draw?
3 Knight Endings

Before we go into details, we should talk about some of the knight’s characteristics. We all know that the knight is somewhat slow. Even on an open board, reaching a particular square from a corner can take up to six moves! Thus, the knight is not especially adept at fighting simultaneously on both flanks. On the other hand, the knight is tricky. From your earliest chess experiences you undoubtedly recall having lost your queen through a knight fork, while the knight often gains unexpected speed thanks to little checks along its way. Its influence ranges from eight squares when standing in the centre to a meagre two squares when in a corner. With every move, the knight changes its square colour and attacks a new set of squares, but it totally loses its direct influence on all the squares previously attacked: when forced to move, it can’t maintain protection of a certain pawn or square. Also, it can’t protect a pawn that in turn protects the knight. Finally, the knight is unable to lose a tempo, as it always needs an even number of moves to get from one light square to another.

Bearing these characteristics in mind, let’s start. Our subchapters are:
3.1: Knight vs Pawns 58
3.2: Knight vs Knight 76

3.1 Knight vs Pawns

Now we discuss:
A: Knight vs Pawn 58
B: Knight vs Two or Three Pawns 61
C: Knight and Pawn vs King 63
D: Knight and Pawns vs Pawns 65

A) Knight vs Pawn

This material balance is usually a draw. The knight faces most problems dealing with a rook’s pawn, because its mobility is restricted at the edge.

If the knight occupies the square directly in front of the pawn, the position is always drawn (there is just one exception – see 3.02).
The only exception is a rook's pawn on the seventh rank:

With White to move, Black's king arrives too late: 1...\textit{\texttt{b7! e5 2 xa8! c6 3 b8 +--}}.

If Black is to move, he draws: 1...\textit{\texttt{e5! 2 b7 d6! 3 xa8 c7! stalemate.}}

In some positions the knight is able to build a barrier:

The position seems hopeless, but with Black to move, the barrier gains the tempo he needs:
1...\textit{\texttt{g2 2 e5 (2 f7 a8 = and Black reaches c7 in time; 2 e7 c8+! =; 2 d6 c8+! =)}}
2...\textit{\texttt{f3 3 d4 a8 =.}}

If White is to move, he wins with either 1 \textit{\texttt{f7}} or 1 \textit{\texttt{e5}}, stepping around the minefield.

Chekhov realized this theme in an attractive study:

Black's king can't approach the kingside pawns since the whole c-file and the b3-square are mined: 1...\textit{\texttt{b3 (NC; 1...c5 2 e4+ =; 1...c4 2 e4! f5 3 d6+! =)} 2 c4 f5 3 g3! f4 4 e2! f3 5 d4+! = and Black loses his f-pawn.}

You should always remember that the knight can get into severe trouble near the edge of the board:

The knight is not only helpless itself, but even obstructs its own king: 1 a6! c7 (1...c5 2 a7! ++) 2 a7! ++ and Black can't prevent the pawn from queening.

The following practical example also demonstrates this theme (see diagram on following page):
1...\textit{\texttt{f3! 2 xe1 f2! 3 d3 f1 = 0-1}}
The next two studies from Grigoriev present a more agile picture of the knight.

\[1 \text{d}4!\]
\[1 \text{e}3? \text{h}5! 2 \text{d}5+ \text{f}3! 3 \text{c}7 \text{h}4! 4 \text{e}6 \text{g}4! +.-\]
\[1...\text{h}5 2 \text{c}6! \text{e}4\]
\[2...\text{h}4 3 \text{e}5! \text{h}3 4 \text{g}4+ = (3.01).\]
\[3 \text{a}5!! \text{h}4 4 \text{c}4! \text{h}3\]
\[4...\text{f}3 5 \text{e}5+/ \text{g}3 6 \text{c}4! \text{h}3 (6...\text{f}2 7 \text{e}5! =) 7 \text{e}3! \text{h}2 8 \text{f}1+/ =.\]
\[5 \text{d}2+! \text{e}3 6 \text{f}1+/ \text{f}2 7 \text{h}2! = (3.01).\]

Note that it doesn’t matter where Black’s king starts in the original position; White always draws (exercise: prove it!). However, with the pawn on h5, White is very often lost.

For example, if Black is to move, he wins by pushing his pawn with 1...\text{h}5! +.-.

Grigoriev composed White to play and win studies with this material as well; e.g., \[\text{w}3 \text{d}3, \text{g}4; \text{h}6 \text{a}5, \text{a}1 (‘64,’ 1932): 1 \text{g}5! \text{b}3 2 \text{e}4! \text{c}5 3 \text{f}5! \text{b}7 4 \text{e}5! +.-\]

There is one important case where the knight wins (see following diagram):

White’s king is poorly placed in front of its pawn, and has only two squares in which to breathe. After 1 \text{a}8 \text{e}8 White is forced to nail shut his own coffin: 2 \text{a}7 \text{b}6+!

With Black to move it is a bit more difficult:

\[1...\text{b}5+!\]

Only this wins. After 1...\text{e}8+? 2 \text{a}8 \text{b}6+ 3 \text{a}7 it is only a perpetual, which by the way
might be the only way for Black to save the game if White had some more pawns.

2  a8  c8! 3  a7  c7#!

Note that you can never force a mate if the pawn is still on the fourth rank. However, the same idea can also work with several pawns; see Salvio 1634 (Av 385; w a2 f2,  e8; b  h2, g6, h3) or Mendheim 1832 (Av 402; w f1, f6; b  h1, e6, f4, g5, h3).

The next example features Stamma’s Mate:

B) Knight vs Two or Three Pawns

Against two pawns, the knight usually draws:

The knight is far away and the connected passed pawns look menacing, but it is nevertheless a draw:

1  e7  d4 2  e1  d3 3  e6

The game in fact ended 3  d5? f2+! 4  f1  e4! 0-1.

3...  e3 4  f1!

4  g5? g2 5  h3 f2+! ++.

4... g2+ 5  g1!  e2 6  f4+  e1 7  xg2+

It is important that the knight is on the right track. With the knight on h8 or d8 White loses, but with the knight on h8 it is a draw again!
If the pawns are not so far advanced, the cooperation between king and knight usually leads to a draw, as in the above diagram:

1. ♦f3 ♦c3 2 ♦e2 b4
...c5 3 ♦d1 ♦b2 4 ♦e3 c4 5 ♦e2 c3 6 ♦b4
♕b3 7 ♦c2 b4 8 ♦xb4 =.
3 ♦d1 ♦b2 4 ♦e5 b3 5 ♦xc6
5 ♦d2? ♦a1 →.
5...♖a1 6 ♦d4 b2 7 ♦b3+!
Not 7 ♦e2+? ♖a2! 8 ♦b4+ ♖b3! → and Black wins.
7...♖a2 ½-½
Due to 8 ♦d2 ♖a1 9 ♖c2 =.

Now we discuss the situation with isolated pawns:

The following grandmaster game features an interesting battle:

![Chess Diagram](image)

### 3.1OA

**J. Hector – J. Levitt**

*Grazed 1990*

Hector managed to save himself by the skin of his teeth:

1 ♦f6 ♖g4 2 ♦e5

To achieve the draw, the king and knight have to swap their duties.

2...♗h5 3 ♕d4 ♖h4 4 ♕c4!

Now with White's king in the square of the a-pawn, his knight deals with the other rook's pawn.

4...♖f3 5 ♕e5+! ♖g3 6 ♕c4!! ♖f2
6...♖h3 7 ♕c3! ♖h2 8 ♖f1+! =.
7 ♕e5! ♖g3 8 ♕c4! ♖a3 9 ♕c3! ♕f3 10 ♕e5+! ♖g3 11 ♕c4! ♖f2 12 ♕e5! ♖g3 13 ♕c4! a2 14 ♕b2! ♕f3 15 ♕e5+! ♖g3 16 ♕c4!
♕f3 17 ♕e5+! ½-½

Against three pawns, the knight has much more difficulty. We again start with connected passed pawns (see following diagram).

If the passed pawns have the support of the king and cross the middle of the board they usually win:

1 ♖f5+ ♖g7 2 ♖g5 ♖d5
2 ♖h5 3 ♖h4+ =.
3 ♖e4 ♖d6
3...♖c3+ 4 ♖e5 ++.
4 ♖f6+

There is an alternative win by 4 ♖h5 ♖d7 5 ♖d5 ♖f7 6 ♖h6 ♖f8 7 ♖d6 (7 ♖g6? ♖xg6)!
7...♖g8 8 ♖g6 ++.

4...♖g6 5 ♖e5 ♖d7+ 6 ♖e6 ♖f8+ 7 ♖e7
♖h7 8 ♖f7 ♖g7 9 ♖h5 ♖f8 10 ♖g6 ++
If Black is to move, he can prevent the enemy pawns from advancing to the fifth rank in a broad front:

1...\textit{\(Qd5\)}! \textit{2 f5+}
2 \textit{h5+} \textit{\(Qh6\)}! (2...\textit{\(Qf6\)}? 3 \textit{h6} \textit{\(Qg6\)} 4 \textit{g5} \textit{\(Qe7\)} 5 \textit{\(Qg4\)} \textit{\(Qf5\)} 6 \textit{h7 +=} 3 \textit{\(Qe4\)} \textit{\(Qf6+\)} 4 \textit{\(Qf5\)} (4 \textit{\(Qf3\)} \textit{\(Qd5\)} 5 \textit{\(Qg3\)} \textit{\(Qe3\)} 6 \textit{\(Qh4\)} \textit{\(Qg2+\)} =) 4...\textit{\(Qd5\)} 5 \textit{\(Qe5\)} \textit{\(Qe3\)} 6 \textit{\(g5+\)} \textit{\(Qh5\)} =.

2...\textit{\(Qf6\)}! 3 \textit{\(Qe4\)} \textit{\(Qc3+\)} 4 \textit{\(Qd3\)}
Or: 4 \textit{\(Qf4\)} \textit{\(Qd5+\)} =; 4 \textit{\(Qe3\)} \textit{\(Qe5\)} 5 \textit{\(h5\)} \textit{\(Qe4\)} =; 4 \textit{\(Qd4\)} \textit{\(Qe2+\)} =.

4...\textit{\(Qd1\)} 5 \textit{\(Qe2\)} \textit{\(Qc3+\)} 6 \textit{\(Qf3\)} \textit{\(Qe5\)} 7 \textit{\(h5\)} \textit{\(Qe4\)} 8 \textit{\(Qe3\)} \textit{\(Qg5\)} = (D)

Against three isolated pawns, the knight has a tough job (see following diagram).

White draws with annoying checks, eventually winning one of the pawns:

1 \textit{\(Qe2+\)}

1 \textit{\(Qe6+\)} \textit{\(Qe5\)} 2 \textit{\(Qg5\)} (2...\textit{\(Qxc7\)}? \textit{\(h3!\)} 3 \textit{\(Qg3\)} \textit{\(e3!\)} =+) 2...\textit{\(Qf5\)} 3 \textit{\(Qh3\)} \textit{\(Qg4\)} 4 \textit{\(Qg1\)} \textit{\(Qf4\)} (4...\textit{\(h3\)} 5 \textit{\(Qxh3\)} \textit{\(Qxh3\)} 6 \textit{\(Qe3\)} =) 5 \textit{\(Qh3+\)} \textit{\(Qf5\)} 6 \textit{\(Qe3\)} \textit{c5 7 \(Qf2\)} \textit{c4 8 \(Qxe4\)} =.

1...\textit{\(Qf5\)} 2 \textit{\(Qc3\)} \textit{\(Qf4\)} 3 \textit{\(Qe2+\)} \textit{\(Qe5\)}

3...\textit{\(Qg4\)} 4 \textit{\(Qc3\)} \textit{\(Qf5\)} 5 \textit{\(Qe3\)} \textit{h3} 6 \textit{\(Qxe4\)} \textit{h2 7 \(Qf2\)} \textit{c5 8 \(Qf3\)} \textit{c4 9 \(Qg2\)} \textit{\(Qe5\)} 10 \textit{\(Qxh2\)} \textit{\(Qd4\)} 11 \textit{\(Qd1!\)} =.

4 \textit{\(Qg2\)} \textit{\(Qf5\)} 5 \textit{\(Qh3\)} \textit{\(Qg5\)} 6 \textit{\(Qd4\)} \textit{e3} 7 \textit{\(Qf3+\)}
\textit{\(Qf4\)} 8 \textit{\(Qe1\)} \textit{e2} 9 \textit{\(Qxe4\)} (NC) 9...\textit{\(Qc5\)} 10 \textit{\(Qh3!\)} \textit{c4} 11 \textit{\(Qg2\)} \textit{\(Qe3\)} 12 \textit{\(Qg3\)} \textit{c3} 13 \textit{\(Qg2!\)} \textit{\(Qd2\)} 14 \textit{\(Qf2\)}
\textit{\(Qd1\)} 15 \textit{\(Qg2\)} ½-½.

Duc to 15...\textit{\(Qc2\)} 16 \textit{\(Qe3+!\)} \textit{\(Qd2\)} 17 \textit{\(Qxc2!\)} \textit{\(Qxc2\)} 18 \textit{\(Qxe2!\)} =.

\textbf{C) Knight and Pawn vs King}

As the knight doesn’t have enough horsepower to mate on his own, everything depends on the survival of the last pawn. If the king protects its pawn, there are no problems, since the pawn can advance to the seventh rank, whereupon the knight can, if necessary, make a waiting move to avoid stalemate. The exception is a rook’s pawn; then the knight is needed to control the corner square. If the king is far away, the knight has to protect the pawn until its king can come into play. For these cases the following rule is useful: the knight should protect the passed pawn from behind. The diagram on the following page explains why.

Although the knight is attacked, it can’t be captured (note: this wouldn’t be the case with the knight on c7 or b8) and so there is plenty of time to activate the white king:

1 \textit{\(Qb3\)} \textit{\(Qa7\)}

1...\textit{\(Qxc5\)} 2 \textit{\(a7!\)} =+.
2 ♚b4 ♙b6 3 ♙c4 ♙a7 4 ♙b5 ♙a8 5 ♙b6 ♙b8 6 ♙e6 ♙a8 7 ♙c7+

The knight must control the queening square.
7...ｂｂ8

White now mates in four moves:
8 ａ7+ ｂc8 9 a8++ ｂd7 10 ｂe8+ ｂd6 11 ｂe6#

You should memorize this mate, as it would also work with, for instance, a new-born black queen on f1.

The next diagram shows the only exception (the knight could also be on c6 or c8):

The knight protects the pawn from behind, but due to stalemate White can't win. Shift the position to the right (or down the board) and it would be an easy win.

Even if the knight protects the pawn from the front, the attacker might win the pawn ending:

1 ♙a5! ♙c5 2 ♙g2! ♙b4 3 ♙f3! ♙xa5 4 ♙e4! ♙b6 5 ♙d5! ♙c7 6 ♙c5! ++ (2.06) and White occupies a key square next move.

The chessboard's special geometry is the key to a study from Kuzmichev (ECE 2; ♙b2; ｂf1, ｂa6): 1 ｂc3! ♙c5 2 ♙d4! =. If Black is to move, he has a lot of winning options, including 1...ｂe5, but 1...a5? 2 ｂb3 only leads to a draw.

There is one more position worth noting:

The white king is jammed in the corner, while Black's king must keep moving between c7 and c8. Since the knight can't lose a tempo, White can only win with Black to move: 1...ｂc7 2 ｂg3 ｂc8 3 ｂf5 ｂc7 4 ｂd6 ++.

If White is to move, he can achieve nothing:
1 ｂg3 ｂc7! 2 ｂf5 ｂc8! 3 ｂc7+ ｂc7! 4 ｂe6 ｂc8! =.
D) Knight and Pawns vs Pawns

From one of our first chess lessons we know that the knight is worth three pawns. Unfortunately, this rule is not so useful here, as knight endings are all about concrete calculation. However, some key ideas occur again and again.

Our topics now are:
D1: No Passed Pawns 65
D2: Both Sides Have Passed Pawns 66
D3: Both Sides Have Several Pawns 67

D1) No Passed Pawns

With blocked pawns the attacker always wins when the king protects its pawn (except for some very unfortunate cases; John Nunn gives w@c8, @b5; b@a7, D@a8, @b6, when Black to move is even losing). There is just one important elementary fortress:

B

3.18

A.Lugovoi – P.Skatchkov
St Petersburg Chigorin mem 1999

chance for an honourable resignation has come. Note that with his king on a1 instead of b4 Black would also win, since the white king needs two moves each time it oscillates between c7 and d5, while the black knight swings to e4 and back to g5 in one move, thus gaining time for its king to approach. With blocked rook’s pawns this swing would be impossible.

If the pawns are not yet blocked, the drawing chances increase:

W/B

3.19

J.Blackburne – J.Zukertort
London (13) 1881

If White is to move, he can put Black in zugzwang:
1 @f2! g5

Blocking the pawns. After 1...@e4 White’s king reaches its pawn, winning shortly; 2 @g2

The typical win with a blocked pair of pawns is illustrated in the next example (see following diagram): 1...@e7 2 @d5+ @b8 3 @b5 @a8 4 @c6 @b8 5 @b6 5 @f6 @e8?? 6 @d7! @d8 7 @b6! ++.

5...@xb6 6 @xb6 @a8! 7 @a7 (stalemate) ½-½

E.Lobron – P.Blatny
Erevan OL 1996
3.20
A. Remon – R. Vera
Havana Capablanca mem 1990

Black’s pawns are safely blocked, which gives White all the time in the world: 1...f3 f5 2 h7! (2...e4? e5 3...e3 f5! 4...d4? [NC] 4...f4! 5...d3! 5...d5 f5!= 5...f5! 6...e3 f4! =) 2...e5 3...g4 e4 4...f6+ e5 5...g8 e6 (5...e4 6...h6 +++) 6...f4 d5 7...f6+ d4 8...g4 d5 f5 9...e3 e6 10...e4 d6 11...f6 (11...e5 e6 12...xf7 xf7 13...d5! ++) 11...e6 12...d5 (D) 1-0.

D2) Both Sides Have Passed Pawns

Usually the attacker’s king should support its passed pawn:
The king has to work with the c-pawn and the knight must stop the pawns and provide spare tempi. Alekhine starts the task-switching immediately:

1...\(\text{Re2} \text{ Rd7} \text{ 2 Re4}!\)

After 2 \(\text{Rxe5+}?! \text{ Rd6} White can't win; e.g., 3 \text{ c6 Re6 = or 3 Re3 h4 4 f3 Re5 = (4...h3? 5 Re4! h2 6 f2 g4 7 Rh1 --). White's king has to watch the passed pawns and the knight has to protect the c-pawn, so no progress can be made.

2...g4 3 d3 h4 4 f5 e6
4...e5 5 d4 h3 6 g3 h2 7 c4 ++.
5 Re4!

After 5 Rhxh4?? Re5 White's last pawn is lost.

5...h3 6 g3 h2 7 d4 e7 8 d5 i-o

Black is powerless against the advance of White's c-pawn; 8...e7 9 c4+ e6 10 c4 e6 11 d6+ c7 12 c7+ e8 and now the knight acts as a source of a tempo: 13 Rh1 ++.

If the passed pawns are very far advanced they sometimes secure the draw; e.g., 3.21A

G. Hertneck – K. Müller, Bundesliga 1989/90: \(wR4, a5, h5; bRe6, cR8, dR5: 1 RRe4 RRe5 2 Re4 Re6 ½-½.

By the way, the knight can't stop two connected passed pawns on their sixth rank unless it can capture one of them immediately. Two passed pawns on the fifth can be stopped; e.g., \(wRB1, a5, h5; bRb3, dR5, aR5, bR5: 1...cRe6! 2 g6 cRe7! 3 g7 cRg8! ++.

If the defender has only one passed pawn, he usually loses. The next position is an exception:

The knight is too far away from the kingside:

1...cRg8!

After 1...h8? the knight arrives in time: 2 cRg6! cRg8 3 h7+ cRh8 4 cRe3 a2 5 cRd5! a1 cRf 6 cRf7#!

2 cRg6 cRh8! 3 cRc2 cRg8 4 cRf5!? cRd7 5 cRc3 cRg8! 6 cRd2 cRf7 7 cRh5! cRf6+ ½-½

When the knight is on a2, only the retreat to h8 draws!

In 1933, Grigoriov composed a study with the same theme: wRg5, cRd4, cRb6; bRf7, aR3. White to play and win, Black to play and draw (ECE 55).

D3) Both Sides Have Several Pawns

If all the pawns are on the same wing, the knight usually wins. The next example is fairly typical (see following diagram):

Anand managed to win the game as follows:

1...cRf7 2 cRc2 cRe6 3 cRd6 h5

This allows White to make inroads, but Black is lost in any case; e.g., 3...cRc5 4 cRc4+ cRc5 5 cRd6 cRf7+ cRc6 7 cRh6 gRg6 8 cRxf5 ++ or 3...f4 4 gRg4 cRc5 5 cRc4+ cRe6 6 cRc2 cRd5 7 cRc3 ++.

4 cRh4? f4

4...gRh4 5 aRc3 cRc5 6 cRc4+ cRa5 7 cRc5 8 cRc6+ cRd5 (8...cRd6 9 cRd4 cRc5 10 cRc2 ++) 9 cRc7+ cRc6 10 cRg6 cRf6 11 cRh4 cRg5 12 cRg3 f4+ 13 cRc7 cRg3 14 cRg3 cRg4 15 cRf5 cRg5 16 cRc5 cRg4 17 cRe6 ++.
Fundamental Chess Endings

5 hxg5 1f5 6 xC4 xg5 7 d6 e3+ 8 xfe3 h4 9 xe4+
  9 e4? fx3 10 gxh3 h3 11 e5 xg6 12 xe4 xxf3 13 xg5+ xg4 = (Khuzman in CBM 59).
  9 xe4 10 xC2 xB5
  10...fxe3 11 xg3 12 xC2+! xg3 13 xg3 14 xg4 +–.
  11 xC2 1–0

If the defender has two pawns for the knight and a good structure, his drawing chances are increased:

3.23
V. Anand – J. Polgar
Dos Hermanas 1997

a) 2...fxe4+? gives White the entry points he needs: 3 xh4 xh5 4 C6a6 Cxe7 (4...h4 5 Kh3 Cg5 6 Cg4 C1b5 7 Ce5 +) 5 Ce5 C1f6 6 Cg6
  6...h4 7 C1f2 +–; 6...g4 7 C1f4 Cg6 8 Ce5 C1f6 9 g3 +– 7 C1e5 h4 (7...f7 8 C1e1
  g4 9 g3 Cg6 10 C1g2 +–; 7...g4 8 C1f4+ Cg5 9 C1xe6 C1h4 10 C1f4 g3 11 C1e4 C1g4 12 C1f4
  +–) 8 C1f2 C1f7 (8...h5 9 C1xe6 g4 10 C1f5 h3
  11 g3 +–) 9 C1g4 C1e7 10 C1h6 C1d7 11 C1f6 +–.
  b) 2...h5 3 exf5 exf5 4 C1g3 Cg4 =.
  2...h5 3 C1b4 h4 4 C1d3 C1d5 5 C1f2 C1e5 6 C1d3+ C1d5 7 C1e1 C1e5
  7...g4+ was possible immediately: 8 C1f4
  8 C1g4 9 C1e5 C1c3 10 C1xe6 h3 11 gxh3 gxh3 12 C1f3 C1d3 =.
  8 C1e2 C1g4+ 9 C1f2 C1d4 10 C1d4 e5 11 C1e6 f4
  12 C1f4 C1f4 13 C1c5 C1d4 14 C1e6+ C1e5 15
  C1c5 C1f5 16 C1d3 h3 17 gxh3 gxh3 18 C1f3
  1/2–1/2

An additional outside pawn can distract the knight:

3.25
L. Brunner – M. Petursson
Lucerne Wch 1993

Against accurate play, the c-pawn does not provide enough compensation:
  1 C1a6 C1e4 2 C1c7+
  2 C1e3 C1e7 3 C1c5 C1d6 4 C1d4 C1c3 5 C1e4+
  C1e6 6 C1xc3 C1f5 7 C1f2 +– (Blatny in CBM 38).
  2...C1d7 3 C1d5 C1e6 4 C1f4+ C1f5 5 C1e3?

Blatny proved that 5 C1f3! wins: 5...g5 (5...C1g6
  6 C1d5 +–; 5...C1g5 6 C1d5 h4 7 g4 f5 8 gxh5
gxf5 9 h3 +–) 6 C1h5 c3 7 C1e3 (this is more
clear-cut than Blatny’s 7 g4+!...C1e5 (7...C1g6
  8 g4 f5 9 C1d3 C1xg4 10 C1g3 +–) 8 C1d3 f5

3.24
S. Ivanov – S. Rublevsky
Russian Ch (Elista) 1997

White’s knight is badly placed, which helps
Black to secure the draw:
  1 C1d6 2 C1a6
  2 C1e4 and now:
\[ \text{xc3} \text{xe4} 10 \text{xd2} \text{xf3} 11 \text{g7} \text{f4} 12 \text{gxf4} \text{gxf4} \\
(12...\text{xf4} 13 \text{xe2} \text{g4} 14 \text{f2} \text{h3} 15 \text{g1} \\
g4 16 \text{f5} ++) 13 \text{f5} \text{g4} 14 \text{d4} \text{h3} 15 \\
\text{h3} 15 \text{f3} \text{g2} 16 \text{f2} ++.
\]

5...\text{c6} \text{f3}
6 \text{xf2} and then:

a) 6...\text{e4} 7 \text{xc}3 \text{h4} (7...\text{e3} 8 \text{d5} \\
\text{e2} 9 \text{f4} 10 \text{g4} 11 \text{g5} \text{h3} 12 \\
\text{f3} ++) 8 \text{xf2} and here:

a1) 8...\text{h3} 9 \text{d5} \text{h2} 10 \text{g4} \text{h3} (10...\text{f5} \\
11 \text{g5} \text{h3} 12 \text{f3} \text{h2} 13 \text{f4} ++) 11 \text{xf6} \\
+=.

a2) 8...\text{hxg3}+ 9 \text{hxg3} \text{f5} 10 \text{d5} \text{h5} 11 \text{f3} \\
=.

b) 6...\text{c2} 7 \text{d4}+ \text{g4} 8 \text{xc}2 \text{h3} =.
6...\text{c2} (D)

\[ \text{h4}+ \text{f5} 9 \text{c1} \text{g5} 10 \text{d3} \text{e6} 11 \text{e4} \\
f5+ 12 \text{f3} \text{f4} 13 \text{f5} \text{e4} =.
\]

8...\text{h4} 9 \text{g4} 10 \text{gxf5} \text{xf5}! \\
10...\text{gxf5} 11 \text{e3} \text{f4}+ (11...\text{xf6} 12 \text{d2} \text{g5} \\
13 \text{xc2} \text{f4} 14 \text{d2} \text{f5} 15 \text{e2} \text{e4} 16 \text{f2}+ \\
++) 12 \text{e4} \text{f3} 13 \text{xf3} \text{xf5} 14 \text{e1} \text{g5} \\
(14...\text{e5} 15 \text{g4} ++) 15 \text{e4} +=.

11 \text{c1} \text{g5} 12 \text{e2} \text{g4}+ 13 \text{hxg4}+ \text{g5} \frac{1}{2} \frac{1}{2}
Due to 14 \text{c1} \text{h3} 15 \text{g3} \text{h2} 16 \text{hxh2} \\
\text{hxg4} =.

The next example is very complicated and we are still not completely sure of the correct outcome. However, it seems that White's connected passed pawns sufficiently distract Black so that White can hold on by the skin of his teeth:

With the help of his passed pawn, Black now manages to deflect White's pieces from the kingside, exchange a pair of pawns and hold the draw:

7 \text{d3}
7 \text{e2}?? \text{e5} 8 \text{d3} \text{g5} and now:

a) 9 \text{d2} \text{c4} 10 \text{g1} (10 \text{xc2} \text{f3} 11 \\
\text{d3} \text{g2} =) 10...\text{h4} 11 \text{g4} (11 \text{xc2} \text{hxg3} 12 \\
\text{hxg3} \text{e3} =) 11...\text{f4} 12 \text{xc2} \text{e4} 13 \text{d3} \\
\text{d4} 14 \text{e2} \text{g4} =.

b) 9 \text{c1} \text{h4} 10 \text{g4} (10 \text{d3} \text{e5} 11 \\
gxh4 \text{g4} 12 \text{hxg5} \text{fxg5} 13 \text{e2} \text{h3} 14 \text{g1} \\
g4 =) 10...\text{hxh4} 11 \text{d3}+ \text{f5} 12 \text{h3} \text{e6} 13 \\
f4 (13 \text{d2} \text{f5} 14 \text{xc2} \text{e4} 15 \text{d2} \text{f3} \\
16 \text{e1} \text{g2} 17 \text{e2} \text{f5} =) 13...\text{e7} (13...\text{f5} 14 \\
\text{g5} \text{d5} 15 \text{d4} \text{e4} 16 \text{xc2} \text{f4} 17 \text{hxh4} \\
f3 18 \text{g3} =) 18 \text{f5} \text{f7} 19 \text{g4} \text{g6} 16 \\
\text{xh4} \text{f5} 17 \text{e3} \text{g5} 18 \text{h4}+ \text{h5} 19 \text{h3} \text{f5} \\
=.

7...\text{g5} 8 \text{h3}

\[ \text{W} \]

3.25A

\[ \text{W} \]

3.26

V. Salov – J. Timman
Sanghi Nagar FIDE Ct (1) 1994

1 \text{b4} \text{c6} 2 \text{b5} \text{a5} 3 \text{c5} \text{c6} 4 \text{b2} \text{b3} 5 \\
c6 \text{d6} 6 \text{e3} \text{d4} 7 \text{b6}! \text{xc6}

After 7...\text{xc6} 8 \text{e4} \text{b6} Black's king is too far away, since the knight can't protect the pawns efficiently: 9 \text{xe5} \text{fxe5} 10 \text{f5} \text{exh2} \\
(10...\text{g5} 11 \text{h4} \text{g4} 12 \text{g4} \text{f4} 13 \text{g4} =) 11 \\
\text{g6} \text{f1} 12 \text{g7} \text{h5} 13 \text{g6} \text{g5} 14 \\
\text{g5} = (\text{Salov in CBM 42}).

8 \text{e4}?

8 \text{f4}! \text{Salov draws according to Salov and Ribi}, but 
Ftačnik states that Black has good winning chances. We think that White can draw, but it is very difficult to prove that. One sample continuation runs 8...\text{d8} 9 \text{e4} \text{exf4} 10 \text{xf4}, and now:

a) 10...\text{e6}+ 11 \text{f5} \text{f8} 12 \text{b7} \text{c7} 13 \\
\text{e5} and then:
a1) 13...h5 14 b8=Q+ xe8 15 d6 xe8
(15...g6 16 d8=Q h8 17=Q e7 =) 16=Q e7 d7
17 d7 f7 =

a2) 13...xb7 14 d6 g5 15 b4 g4 16 e5 =.
b) 10...g6 11 h4 and here:
b1) 11...e6+ 12 g4 and now:
b11) 12...h5+ 13 f3 e5 14 b7 d4+ 15
e3 c6 16 f3 f5 17 e3 g4 18 e4 = (or
18 f2 =)
b12) 12...g7 13 b7 c7 14 f4 bxb7 15
e5 e5 16 g4 =
b2) 11...e6 12 e4 b7 (D).

3.26A =/

White can again hold the draw, because the
king’s scope is limited and it is impossible to
win the b-pawn without exchanging the kingside
pawns; e.g., 13 d4 and then:

b21) 13...d6 14 e5 h5 15 d4 b7 16
e4 a5 17 g4 hxg4 (17...b7 18 gxh5 gxh5
19 f4 e6 20 e4 =) 18 f4 g3 19 e3
f5 20 e3 b7 21 g3 =.

b22) 13...d6 14 e4 e5+ 15 d4 d7
(15...g5 16 hxg5 hxg5 17 e3 e5 18 c4 f5
19 e3 g4 20 d4 d7 21 b7 g3 22 d5 =)
16 b7 c6 17 b8=Q e8b8 18 e5 d7+ 19
e6 h5 20 e7 e5+ 21 e6! =.

8...e6 9 b7
9 f4 b8 10 fxe5 d7 11 b7 e5+ -- (Salov).

9...b8?? 10 f4
10 h4 d7 11 e3 d5 12 h5 e6 13 f4
xb7 (13...exf4 =) 14 e4xb7 15 f5 d8
16 g4 c6 17 g5 d6 18 gxh6 gxh6 19 f6 =
14 fxe5 f8 (14...e5? 15 d4 f7 16 f5
h8 17 c6 e6 18 e7 d5 19 e8 f6 20
e7g7 d7 21 g6 =) 15 c4 e6 16 f5
d5 = (Voigt).

10...d7 11 e3
11 fxe5 c5+ 12 f4 b7 13 g4 g6 --.

11...e4 12 d4
Or; 12 xe4 b5+ --; 12 g4 h5!? 13 h3 (13
gxh5 xf5 14 h3 b8 ++) 13 xe4 b5+ 14
e3 xb7 15 gxh5 xf5 =) 13...hxg4 14 hxg4
d5 15 e2 (15 g5 g6 16 xe2 f6 17 d7
f5 18 e3 b8 ++) 15...d4 16 g5 h8 17
e5 e5 18 f6 gx6 19 g6 e6 20 e3 f5 ++.

12...h5 13 h3 f5 14 e3 g6 15 g4+
15 f2 h4 16 xe2 hxg3 17 xg3 b8 18
b4 e3 19 e3 e4 20 h4 d3 ++.

15...hxg4 16 hxg4+ e4 17 xe4 d5+
0-1

Salov resigned due to 18 e5 xb7 19 f6
h5 20 f5 g5 21 e7 c5 22 f6 g6 23 f7
d7 24 xd7 xf7 ++.

If the attacker’s king is on the other wing, a
typical problem of the knight plays the main
role: it can’t protect pawns that in turn protect
the knight:

3.27 =/

B.Damljanovic – J.Hall
La Coruña 1993

Black cannot save his kingside pawns:
1 d4! b3+
Or; 1...e6 2 d5 b5 =; 1...b3 2 e5
e3 3 f6 d4 4 xe6 e4 5 xe6 d5
(5...d3 6 g5 xg3 7 h4 d6 8 h5 d8
7 f6 ++) 6 g6 e6 7 h4 (7 g4 f4xg4 8 hxg4
d6 9 f5+ c7 10 g7 d5 11 g5 e8 12 g6
g4 13 f6 xg6 =) 7...d7 8 h5 d6 9 h6
d7 10 h7 d8+ 11 g7 e7 =.

2 e5 d2 3 f6 d4+ 4 e6 xg6 xg3 5
e6 b3 6 g6 x3 7 h4 d4 8 h5 xh5
9 xf5 ½-½.
Avoiding the last trap: 9 \textit{\texttt{xh5?? e3!} 10 \textit{\texttt{g5 e4 ++.}}}

The next example is similar:

\begin{center}
\begin{tabular}{|c|c|c|c|c|}
\hline
A. Romero & M. Illescas & \textbf{Spanish Ch (Palencia) 1999} \\
\hline
\end{tabular}
\end{center}

White's king is too far away and the knight can't prevent Black's king from eating the kingside pawns:

1...\textit{\texttt{d5 2 \textit{\texttt{x5 d4 3 b3+}}}}
3 \textit{\texttt{b5 d3 4 xc5 e2 f4 f2 =.}}
3...\textit{\texttt{d3 4 xc5+}}
4 \textit{\texttt{b5 c4 5 e5+ e2 e6 xc4 xf2 7 g4 g3 =.}}
4...\textit{\texttt{e2 5 e4 f1 6 g4}}
6 g3 \textit{\texttt{g2 7 b5 f3 =.}}
6...\textit{\texttt{g2 7 b3 xh3 8 g5}}
8 f3 \textit{\texttt{g2 9 d2 g6 10 xc2 h5 11 gxh5 gh5}}
12 \textit{\texttt{d1 h4 13 e2 h3 14 f1 h2 =.}}
8...\textit{\texttt{fxg5 9 xg5+ g4}}
9...\textit{\texttt{g2 10 f4 g3 11 e6 g4 12 c4 f5}}
13 \textit{\texttt{d5 h5 =.}}
10 \textit{\texttt{c7 f3 f1 11 c2 position half-1/2}}

If the attacker's king is closer to its pawns, great care is required (see following diagram).

White can draw this position with precise play:

1...\textit{\texttt{d7 2 g4 g7 3 f5 e8 4 f6}}
4 \textit{\texttt{h5 g7+ 5 h6 xf5+ 6 xh7 e7 (6...\textit{\texttt{xh4 7 g6 xg6 8 xg6 + -; see 2.15) 7 h5 f7 =.}}}}
4...\textit{\texttt{e7 5 g6?}}
5 \textit{\texttt{h5 xd5 6 h6 e6 7 g7 (7 xh7 f7 8 h5! xf6+ =) 7...e3 8 f7 xf5+ 9 g8 e7+ 10 g7 f5 =.}}

10...\textit{\texttt{d8!}}

Schrösser had probably missed this resource, only counting on 10...\textit{\texttt{e8?}, when he draws}}
\textit{\texttt{easily: 11 h7! xh7 12 e6 =.}}
\textit{\texttt{11 e4}}
\textit{\texttt{11 h7 xh7 12 e6 c7 13 f7 g5+ -++.}}
\textit{\texttt{11...e8 0-1}}

With pawns on both wings, the result depends on the knight's possibilities (see following diagram).

White is winning, but it is not so easy to put the knight to good use:

\begin{itemize}
\item 1 c4 b6 2 e5 b5 3 e3
\end{itemize}
S. Movsesian – P. Schlosser
Baden-Baden tt 1996

3.30

W

Not 3 axb5? cxb5 4 b4 a4 5 c4 e4 6 c2, and then:

a) 6...h3?! 7 g3 f5 7...a3 8 c2 a2 9 d3 and both rooks’ pawns fall prey to White’s king since the protected passed c-pawn prevents Black’s king from playing an active role. 8 c2 g4+ 9 d3 f6 10 c1 e6 11 f3 =+

b) 6...c7 7 d2 2 8 f3 g5 =.

3...g5 4 f3 f6 5 f2

The breakthrough 5 b4? is wrong as Black’s king can defend the queenside and become active if necessary: 5...bxa4 6 bxa5 7 c3 f3 d7 8 c2 (8 a6 f3 9 f2 h4 10 g2 c8 =) 8...h4 9 f3 f3 10 b3 h3 11 d3 h2 (not 11...f3? 12 exf5 g4 13 f2 h2 14 h1 gxf3 15 f6 +=) 12 f2 b7 13 a3 a6 14 b4 b7 15 c3 f6 16 f2 f3 17 f2 18 f3 f1 f7 19 f4 f4 20 g4! c5 21 bxf6 c4 22 b5 g4 (22...c7? 23 d2 d3 24 a4 b3 25 a1 e2 =) 26 b4 a4 27 d4 g4 28 e5 29 a5 e4 25 a5 (see 3.13).

5...bxa4

5...f5 runs into 6 exf5+ fxf5 7 b4 f6 6...b5 7 a5 f5 8 bxa5 e7 9 axb5 cxb5 10 d5 c7 11 d3 ++.

6 bxa4 f5 7 g3?

It was necessary to activate the knight by playing 7 b2! g4 8 fxg4 hxg4 (8...fxe4 9 g5 ++) 8...fxg4 9 d3 f6 10 h4 g3 11 c3 g5 12 c4 9 f3 fxe4 10 e3 ++.

7...g4!

7...f4+ 8 h3 f6 9 g2 ++.

8 c1

Or:

a) 8 exf5+ fxf5 9 fxe4+ hxe4 10 f2 e5 11 d5 = (Mowsziszian in CBM 55).

b) 8 h2 xf3 9 xf3 fxe4 10 f2 e4 11 d3 h3 12 f2 h2 13 d1 f6 =

8...h4+ 9 f2

9 xf4 gxh3 10 exf5+ xh5 11 d4 f4 =+

9...fxe3 10 fxe3 11 d3 f6 12 f2 h2 13 d1 fxe4+

Black can also draw by 13...g5 14 g3 fxe4+ 15 f5 =.

14 fxe4 e6?

Black should play 14...g5! 15 xe5 g4 16 e4 h3 17 f3 h4 (D).

Mowsziszian stops here, giving an assessment of equality. We agree, but give more evidence: 18 f2 g5 19 e4 (19 g2 f4 =), and now:

a) 19...h4? 20 f4 h5 21 h1 c4 c4 22 g3 g3 h2 23 f4 e4 24 g2 g4 25 c3 xh1 g4 26 f2 f4 27 g3 e4 28 e5 g5 29 d2 20 f4 21 c2 d6 22 c6 c6 23 c6 d6 24 d4 d4 25 d5 26 d5 27 d5 28 d5 29 e3 e3 30 a5 a5 (see 3.13).

b) 19...g6 20 e5 a5 21 h1 g4 22 d6 c3 23 c6 c6 g2 24 b6 b6 c6 25 c6 and the resulting queen ending is drawn (see 9.10).

15 f2 f6 1-0

Schlosser didn’t wait for 16 g4+ and resigned. It was already too late for a counterattack anyway: 15...f7 16 xg5 xg6 17 xg6 f5 18 xg6 d4 19 d6 b6 20 h3 g2 21 c6++ and White can exchange the new-born queens immediately.

At first sight it is astonishing that the knight prevails in the next example as well:
White’s passed pawns look menacing, but the decisive factor is that his king is out of play:

1. d6 f6 2 c7 3 b3 (3 c7 b6 4 b3 d6 5 c2 c7 6 d6 7 d6 c4++)

V. Tukmakov – Z. Klarić
Zadar 1997

W/B

3.31

=/+ 3.32

W

V. Anand – M. Krasenkow
Madrid 1998

2...e8?? 2 e4 f6+ and then:

b1) 3 xe5?? g4+ 4 f5 exf2 (4...xf2? 5 g6 g4 6 h4 xex3 7 h5 b7 8 xex7 f5+ 9 g6 xg3 10 h6+ -- Hecht) 5 e4 b6 6 g6
c5 7 f4 f1 8 g4 e3 9 g5 d4 10 e5 e4 11 e6 f5 =

b2) 3 xf5! b6 (3...e4 4 h4 b6 5 g6
e8 6 f7+ --) 4 g6 g4 5 h4 xf2 6 xg7
g4 7 h5 xe3 8 g6 g4 9 f5 h6 10
xe5 c7 11 f6 d6 12 g6 g4 13 h6
e7 14 h7 e5+ 15 g7 f7 16 g4+--.

2 c4 g5+ 2...c5+ 3 f5 (3 xe5? d3+ 4 f5
xf2 5 g6 g4 =) 3..e4 (3...d3 4 f4++)
h4 d3 5 xe4 xf2+ 6 h5+--

3 f5! h3

3...f3 4 h4 b6 5 g6++

4 f4 1-0

Krasenkow resigned due to 4...xf2 5 xf2
b7 6 g6 e7 f5 d6 8 xg7 g5 9 h4

Rules and Principles: Knight vs Pawns

In summary, we can say that a knight can’t lose a tempo (3.16), but can stop one passed pawn if it can reach a square in front of the pawn (a rook’s pawn on the seventh is the only exception – see 3.02). A friendly passed pawn is best protected from behind (see 3.13). The knight has difficulties protecting friendly pawns (compare 3.26-3.28) and is not adept at fighting simultaneously on both wings (see, e.g., 3.28 and 3.30).
Reference works

*Encyclopaedia of Chess Endings (ECE)*, Bishop and Knight Endings volume, Nicosia 1993, Nos. 1-123

*Läufer- und Springerendspiele (Av)*, Averbakh, Sportverlag Berlin 1987, pp. 208-62

Exercises

(Solutions on pages 368-9)

Will the passed pawns run through?

Can the knight stop Black’s c-pawn?

Is White winning?

Black’s king is short of breathing space. How can you exploit this?

Black threatens to win your last pawn. How would you protect it?
Can Black’s fortress be taken?

Black has just played ...\$e6, and the players agreed a draw. Was that correct?

The position is more difficult than it seems at first glance. White’s fourth move in the main line is especially hard to see.

A super-grandmaster game was agreed drawn here. Was that correct?

Annotate the following play: 1...\$e7 2 \$e5 \\$g8 3 h4 \$d4 4 h5 \$d3 5 \$f5 \$d5 6 \$e6 \$e4 7 \$f7 \$f5 8 h6 \$g5 9 \$g9 \$e7 10 \$f6 \$f6 11 \$e6 12 h7 \$h6 13 h8 \$e7 14 \$g7 \$d7 15 \$g8 \$f6 15 \$xh7 \$f7 16 \$h8 \$f8 0-1.
3.2 Knight vs Knight

As we have already seen, mastering the knight is no easy task, but to foresee the intrigues of two knights is even more difficult. Our geometrical imagination is probably much better trained to think about rooks and bishops moving along ranks, files and diagonals. In this subchapter the reader should be especially alert to some similarities to pawn endings, the ever-present possibilities of knight sacrifices and the fact that small differences in the knights’ positions often make all the difference. Still, at least you can’t lose your knight due to a knight fork here!

We consider the following topics:
A: Knight + Pawn(s) vs Knight
B: Knight + Pawns vs Knight + Pawn(s)

A) Knight + Pawn(s) vs Knight

An escorted pawn on the seventh rank wins (Fine’s rule) if there is no immediate draw and it is not a rook’s pawn:

If White is to move, he wins easily in spite of the bad position of his knight: 1...e6 2 d8+! d6 3 f6 4 c7! ef5 (4...e7 5 c8 6 ef7 7 d8+! d6 +++) 5 d3 e6 6 d4 e7 7 c6+! f6 (the ensuing manoeuvre is typical: the knight moves to d6 and deflects the defending knight) 8 a5 e5 9 c4+ e6 10 d6 xd6 11 d8=+.

If Black is to move, he draws immediately by 1...e8! 2 d8+ e6+ =. This fork is a very important defensive motif! If Black’s king is on c7 and his knight on a7 he has another resource: 1...e8+! 2 c8 d6+! =. Note that the position w a7, b c7, d8 is drawn, whoever moves first.

If the pawn is not so far advanced, the drawing chances increase a lot:

B

Y. Averbakh, 1955

1...h7!

After 1...h7?? the pawn can safely advance to the 7th rank: 2 f7+! g7 3 c7 h6 4 d6 +

2 c4

2 d3 cxf3! 3 f7 and now the same fork as in the first example rescues Black: 3...e5 4 f8+ g6+! =.

2...g6

2...h6 3 d6 g6 4 e4 f7! =.

3 d6 h5!

3...h7? 4 c4! f3 5 f7 c5 6 g5+ (forcing the king either to walk into a promotion check or to occupy the square the knight needs) 6 g6 (6...h6 7 f8=+) 7 f8=+

4 c4 c3! 5 f7 c5 6 f6+ h4 7 f8=+ g6+! =

With the black knight on h6 instead of g5, 3.34 is still drawn (Averbakh 1955, ECE 275), but with the knight on h8 Black is lost, whoever moves first (Chéron 1952, ECE 273; White to move wins with 1 c8= +).
Extraordinary accuracy is required to win. At first, White has to transfer the move to Black:
1 \( \text{a}b8 \) \( \text{a}d5 \) 2 \( \text{a}d3! \) \( \text{a}c7 \) 3 \( \text{a}e5! \) \( \text{a}a6+4 \) \( \text{a}a7! \) \( \text{a}c5 \) 5 \( \text{a}b6! \) \( \text{a}a4+6 \) \( \text{a}b7! \) \( \text{a}c5+7 \) \( \text{a}c6! \) \( \text{a}a6 \) 8 \( \text{a}b6! \) \( \text{a}c7 \) 9 \( \text{a}b7! \) \( \text{a}e6 \) 10 \( \text{a}d3! \) \( \text{a}c7 \) 11 \( \text{a}c5! \)

The first aim is achieved: Black is in zugzwang and has to make way for the pawn.
11 \( \text{a}b5 \) 12 \( \text{a}e7 \) 13 \( \text{a}b6 \) \( \text{a}d6 \) 14 \( \text{a}c6 \) \( \text{a}e8 \) 15 \( \text{a}c7 \) \( \text{a}d6 \)
15 \( \text{a}a7 \) 16 \( \text{a}e4 \) \( \text{a}e6 \) 17 \( \text{a}c3 \) \( \text{a}e7 \) 18 \( \text{a}b7 \) ++
16 \( \text{a}b7 \) \( \text{a}b5+ \) 17 \( \text{a}b6 \) \( \text{a}c3 \) 18 \( \text{a}e7 \) \( \text{a}d5+ \)
19 \( \text{a}e6 \) \( \text{a}b4+ \) 20 \( \text{a}e5 \) \( \text{a}a6+ \) 21 \( \text{a}b6 \) ++

If the defending king is further away, the winning prospects are better.

The following deep study by Nunn shows that even with the pawn on the fifth rank there are winning positions:

1 \( \text{a}c5! \) \( \text{a}b4 \) 2 \( \text{a}d7 \) \( \text{a}a5 \)
2 \( \text{e}d6+ \) 3 \( \text{a}c7 \) \( \text{b}5+ \) 4 \( \text{b}6 \) \( \text{d}6 \) 5 \( \text{b}8 \)
\( \text{c}e8+ \) 6 \( \text{b}7 \) \( \text{d}6+7 \) \( \text{e}c7 \) \( \text{b}5+ \) 8 \( \text{b}6 \) \( \text{c}e4 \)
\( \text{c}c6 \) \( \text{d}6 \) 10 \( \text{a}e7 \) \( \text{b}5 \) 11 \( \text{a}f5 \) \( \text{a}b4 \) 12 \( \text{d}d4 \)
\( \text{d}d6 \) 13 \( \text{a}c7 \) \( \text{e}c5 \) 14 \( \text{a}7+\)
3 \( \text{a}b8 \) \( \text{a}d6+ \) 4 \( \text{c}c7 \) \( \text{b}5+ \) 5 \( \text{c}c6 \) \( \text{a}a4 \) 6
\( \text{a}b6 \) \( \text{b}4 \) 7 \( \text{a}c6+ \) \( \text{c}c4 \) 8 \( \text{c}e7 \) \( \text{b}4 \) 9 \( \text{a}d5+ \)
\( \text{a}c4 \) 10 \( \text{c}c7 \) \( \text{d}d6 \) 11 \( \text{a}c6 \) \( \text{c}e8 \) 12 \( \text{a}b7 \) \( \text{d}d6+ \)
13 \( \text{a}b8 \) ++

When Black is to move, White wins more easily:
1... \( \text{a}b4 \) 2 \( \text{a}b6 \) \( \text{c}c4 \) 3 \( \text{a}f6 \) \( \text{d}d6 \) 3... \( \text{a}b4 \) 4
\( \text{d}d5+ \) \( \text{e}c4 \) 5 \( \text{a}c7 \) ++
4 \( \text{c}e8 \) \( \text{b}5 \) 5 \( \text{c}c7 \) \( \text{d}d6 \)
6 \( \text{a}c6 \) \( \text{c}e8 \) 7 \( \text{a}b7 \) \( \text{d}d6+ \) 8 \( \text{a}b8 \) ++.

Kasparov managed to win this position:
1 \( \text{a}d4! \)
White must be accurate. 1 \( \text{a}c3? \) \( \text{a}g6 \) 2 \( \text{a}d5 \)
\( \text{a}b3 \) 3 \( \text{a}c4 \) \( \text{d}d2+! = \) and 1 \( \text{a}d5? \) \( \text{a}a4! \) 2 \( \text{a}c4 \)
\( \text{g}g6 \) 3 \( \text{a}b4 \) \( \text{b}6 \) 4 \( \text{c}c5 \) \( \text{a}a4+ \) are insufficient.
1... \( \text{a}a6 \)
Or:
a) 1... \( \text{a}a4 \) 2 \( \text{a}c3! \) \( \text{b}2 \) 3 \( \text{d}d1!! \) \( \text{a}d1 \)
(3... \( \text{a}a4 \) 4 \( \text{c}c4 \) \( \text{b}6+ \) 5 \( \text{b}5 \) \( \text{c}e8 \) 6 \( \text{a}g7 \) 7
\( \text{a}5 \) \( \text{b}7 \) 8 \( \text{c}c6 \) \( \text{c}e7 \) 9 \( \text{a}c7 \) \( \text{d}d6 \) 10 \( \text{c}c3 \) \( \text{e}8+11 \)
\( \text{c}c6 \) \( \text{a}d8 \) 12 \( \text{a}d5 \) \( \text{c}e8 \) 13 \( \text{a}6! \) \( \text{b}b8 \) 14 \( \text{b}b6! \)
++) 4 \( \text{a}4! \) \( \text{b}2 \) 5 \( \text{a}5! \) \( \text{g}7 \) 6 \( \text{a}6 \) \( \text{a}4 \) 7 \( \text{a}7! \) \( \text{b}6 \) 8
\( \text{e}5! \) \( \text{a}a8 \) 9 \( \text{c}e6! \) ++ (Blatny in CBM 70).
b) 1... \( \text{a}b3+!? \) is the toughest defence; e.g.,
2 \( \text{a}c4 \) \( \text{a}a5+ \) 3 \( \text{a}b4 \) \( \text{b}6+ \) 4 \( \text{a}c5! \) \( \text{a}a5 \) 5 \( \text{a}4 \)
\( \text{g}g6 \) 6 \( \text{a}d4 \) \( \text{f}6 \) 7 \( \text{b}5 \) \( \text{b}7 \) 8 \( \text{b}3 \) \( \text{a}5 \) 9 \( \text{b}6 \)
\( \text{a}d6 \) 10 \( \text{c}c6 \) \( \text{a}c4 \) 11 \( \text{d}d2 \) \( \text{e}3 \) 12 \( \text{a}5 \) \( \text{a}d5 \) 13
\[ \text{W} \]

3.37

\[ \text{D. Blagojević – B. Maksimović} \]

Yugoslav Ch (Podgorica) 1996

White's pawns are further apart but the win is by no means trivial as they are not very far advanced:

1 \text{e4 f4} 2 \text{b2 e2}

2...\text{c5} 3 \text{c3 e2}+ 4 \text{d2! g3} 5 \text{e3 b4} 6 \text{d3+ a3} 7 \text{c1 b4} (7...\text{b2} 8 a4 ++) 8 \text{d4 +—}

3 \text{d5 d4+ 4 c3 e2+}

After 4...\text{c6} 5 \text{c5} Black has to give way to the white king: 5...\text{a4} 6 \text{e6} \text{a3} (6...\text{b5} 7 \text{c5} \text{c7} 8 \text{d5+} 7 \text{c4} \text{e7} 7...\text{a2} 8 \text{a4+} 9 \text{b4+} 10 \text{c5} \text{c5} --) as the c-pawn will promote.

5 \text{d2 d4 6 e3 e6}

6...\text{c2+ 7 f4 c4 8 b2+ 9 b4 9 e5 d4 10 e4 +—}

7 \text{f4 g5 8 d4 f3+ 9 d5 b6 10 e5 c5}

\[ \text{W} \]

After 10...\text{xe5} 11 \text{xe5} \text{c5} White's knight can protect the a-pawn from behind: 12 \text{d3+ b5} 13 \text{b2 b4 14 a4 +—}

11 \text{e6+ b6 12 d4 b4 13 d6} \text{d6} 14 \text{e6 a5 15 c2 1-0}

Two connected passed pawns usually win, but they must be advanced with care so as not to allow the knight to sacrifice itself for them:

\[ \text{W} \]

15 \text{d4 a4 +—}.

15...\text{a4} 16 \text{c5+ a3} 17 \text{c2 f5} 18 \text{b1 e3} 19 \text{e6 b3} 20 \text{c7 c4} 21 \text{b5+} 21 \text{xd5 c2+ 22 c1 b2+ 23 xd2 b1++ +—}

21...\text{b4} 22 \text{c7 d4 0-1}

\[ \text{W} \]

3.38

A. Vitalinš – A. Kobsie

Franz 1979

Black's forces form a team and advance together:

1 \text{f5 c7} 2 \text{xe4 b5} 3 \text{d4 a6} 4 \text{d6} 5 \text{e5 a6} 6 \text{e7 a4?}

6...\text{b4} 7 \text{f4} (7 \text{g3 b5 8 f5 d5 +—})

7...\text{a4} 8 \text{f5} (after 8...\text{d5} b3 the b-pawn is unstoppable) 8...\text{b5} 9 \text{c3} (9 \text{xd6 b2} 10 \text{e4 a3} 11 \text{d2} \text{a2 +—) according to Fine's rule; see 3.33}) 9...\text{d5} 10 \text{b2 d4 +—}.

7 \text{g2?}

Overlooking 7 \text{c8!}, when the d-pawn is lost due to the knight fork on b6: 7...\text{b4} (7...\text{d5} 8 \text{b6+ a3 9 xd5 = 8 } \text{c2}\text{d5 9 c6=}.

7...\text{b4} 8 \text{d5+ c5} 9 \text{f6 d5} 10 \text{b3 d4+ 11 c3 b4+ 12 d3 c6 13 d7+ b5}

14 \text{e6 c7 15 c7}
1...\( \text{\textgreek{h}}5 + 2 \text{\textgreek{f}}3 \text{\textgreek{g}}5 3 \text{\textgreek{h}}4+ \text{\textgreek{g}}6 4 \text{\textgreek{g}}4 \text{\textgreek{g}}7 5 \text{\textgreek{d}}5! \)

First White seeks control over the holes a pawn advance would make. Instead:

a) 5 \text{\textgreek{h}}5+?? would of course be foolish due to 5...\text{\textgreek{x}}h5 =.

b) 5 g5?! preserves the win. 5...\text{\textgreek{h}}5 and now:

b1) 6 \text{\textgreek{g}}3? (D) is wrong:

The following motif is worth remembering:

6...\text{\textgreek{e}}6! 7 \text{\textgreek{d}}5 \text{\textgreek{x}}g5! 8 \text{\textgreek{f}}4+ \text{\textgreek{h}}6 =.

b2) 6 \text{\textgreek{g}}2! \text{\textgreek{f}}5 (6...\text{\textgreek{e}}6 7 \text{\textgreek{f}}4+ \text{\textgreek{x}}h4 8 \text{\textgreek{x}}e6 +—) 7 \text{\textgreek{f}}4 \text{\textgreek{e}}7 8 \text{\textgreek{e}}5 \text{\textgreek{g}}6+ (8...\text{\textgreek{g}}6 9 \text{\textgreek{f}}4+ \text{\textgreek{f}}7 10 \text{\textgreek{h}}5 +—) 9 \text{\textgreek{f}}6 \text{\textgreek{f}}8 10 \text{\textgreek{f}}5 +—.

5...\text{\textgreek{e}}8 6 \text{\textgreek{f}}4 \text{\textgreek{d}}6 7 \text{\textgreek{h}}5+

This advance is strong now that White has g5 firmly under control and can follow up by bringing his knight to f5.

7...\text{\textgreek{h}}6 8 \text{\textgreek{e}}3 \text{\textgreek{f}}7 9 \text{\textgreek{f}}5+ \text{\textgreek{h}}7 10 \text{\textgreek{g}}5 \text{\textgreek{h}}8 11 \text{\textgreek{d}}6 1-0

To illustrate that holes make life not only more difficult but can even spoil the win, we give the following example of a blockade:

B) Knight + Pawns vs Knight + Pawn(s)

Now:

B1: Pawns on One Wing 79
B2: Pawn Races 83
B3: Outside Passed Pawn 85
B4: PositionalAdvantages 86

B1) Pawns on One Wing

An endgame with two against one is drawn if the attacker has no special advantages (see following diagram):

1...\text{\textgreek{g}}4

1...\text{\textgreek{g}}4 2 \text{\textgreek{c}}2 \text{\textgreek{d}}3 3 \text{\textgreek{g}}3 \text{\textgreek{f}}4+ 4 \text{\textgreek{g}}1 and now 4...\text{\textgreek{g}}5 leads to a position similar to that in the game, while 4...\text{\textgreek{h}}3 5 \text{\textgreek{h}}1 \text{\textgreek{h}}4 6 \text{\textgreek{e}}2 \text{\textgreek{e}}x2 is stalemate.
3.40

C. Floreșcu – A. Florean
Romanian Ch (Bucharest) 1998

2 \( \text{c4} \)
2...\( \text{h4} + 3 \text{f4} \) (2...\( \text{h4} 3 \text{f4} \) 4 \( \text{d5} \) 5 \( \text{g3} \) \( \text{c4} + 5 \text{h2} \) \( \text{hxh3} 6 \text{f5} \) \( \text{g4} \) \( \text{h6} + =) \) 3 \( \text{c2} + \text{g5} \) (after 3...\( \text{de3} \) even 4 \( \text{h4} \) is possible, drawing immediately: 4...\( \text{xe2} 5 \text{hxg5} \) \( \text{xe2} \) 6 \( \text{g3} \) \( \text{d4} 7 \text{h4} =) \) 4 \( \text{g3} + \text{g6} 5 \text{f3} = \) is another drawing line.
2...\( \text{d5} 3 \text{d2} \text{f4} \)
3...\( \text{f4} + 4 \text{g1} \) \( \text{h3} 5 \text{e4} = \).
4 \( \text{f2} \) \( \text{g4} 5 \text{b3} \) \( \text{f6} 6 \text{d4} \)
6 \( \text{d2} \) \( \text{e4} + 7 \text{xe4} \) \( \text{xe4} 8 \text{g3} \) \( \text{f5} 9 \text{h3} = \) (Ftačnik in CBM 69).
6...\( \text{h4} 7 \text{e2} + \text{e4} 8 \text{c3} + \text{d3} 9 \text{b5} \text{e4} + 10 \text{g2} \text{e3} (D) \)

3.40A

G. Kasparov – A. Karpov
Moscow Wch (40) 1984/5

1...\( \text{d5} 2 \text{h4} \) \( \text{c6} 3 \text{c3} \) \( \text{e4} 4 \text{f3} \) \( \text{e7} \)
5 \( \text{d4} \) \( \text{e6} 6 \text{c4} \) \( \text{f2} \)
6...\( \text{g3} 7 \) \( \text{d4} + \text{e7} 8 \text{d5} \) \( \text{g6} 9 \text{e5} \text{e4} 10 \text{f3} = \) (Karpov in ECE 335).
7 \( \text{d4} \) \( \text{e4} 8 \text{c1} \) \( \text{d6} 9 \text{c2} \) \( \text{c5} 10 \text{c3} \text{e6} 11 \text{d4} \text{c7} 12 \text{d2} \text{c5} 13 \text{d3} \text{d5} \)
14 \( \text{c2} \) \( \text{h5} 15 \text{c3} \) \( \text{g7} 16 \text{g3} \) \( \text{d6} 17 \text{f3} \) \( \text{e7} 18 \text{e2} \) \( \text{e6} 19 \text{g3} \) \( \text{g7} 20 \text{f1} \text{f7} 21 \text{c3} \) \( \text{g6} 22 \text{d5} \) \( \text{e6} \) \( \frac{1}{2} - \frac{1}{2} \)

With three against two, the winning chances increase considerably although the general result should still be a draw (see following diagram):

1...\( \text{d4} \text{g7} 2 \text{f3} \text{f6} 3 \text{g3} \) \( \text{d5} \)
3...\( \text{g5} 5 \text{f6} 5 \text{h4} \) \( \text{f6} 6 \text{b4} = \).
4 \( \text{h4} \)

This formation makes it difficult for Black to advance his pawns without allowing pawn exchanges. Furthermore, White gets some more breathing space.

4...\( \text{d7} 5 \text{d4} \text{d5} + 6 \text{e4} \text{c3} + 7 \text{f4} \text{d5} + 8 \text{e4} \text{c7} 9 \text{f3} \)
Not 9 $f4??$ because the pawn ending after
9...$e6+$ is lost. However, 9 $g4$ is playable.

9...$h5$ 10 $e5$ $e6$ 11 $f3$ $e8$ 12 $g5+$
$e7$ 13 $f3$ $f6$ 14 $f4$ $g4$ 15 $e6$ $h6$
$f4$ $e6$ 17 $e4$ $e7$ 18 $f4$ $f6$ 19 $e4+$
$e6$ 20 $g5+$ $d5$ 21 $e4$ $g4$ 22 $c3+$ $e4$
23 $e4$ $d5$ 24 $c3+$ $e6$ 25 $e4$ $e5$ 26
$g5+$ $d5$ 27 $e3$ $f6$ 28 $e4$ $e6$ 29 $f4$
$d3+$ 30 $e3$ $b4$ 31 $f4$ $d5+$ 32 $f3$ $e5$
33 $d2$ $b6$ 34 $g4$?? (D)

This liquidation leads to more weaknesses in
both camps, but Jugelt has calculated that he
can hold the resulting position.
34...$f5$

This leads to a draw.

38...$e6$ 39 $f4$ $f6$ 40 $d6$ $g6+$ 41 $g3$
$f4+$ 42 $f3$ $e5$ 43 $f7+$ $f5$ 44 $d6+$ also
leads to a draw.

39 $d6$!

Defending passively by 39 $e3?$ is wrong:
39...$g6$ 40 $g2$ $e5$ 41 $e3$ $f4+$ 42 $f3$ $f5$

39...$g6$ 40 $e8+$ $f7$

40...$e5$ 41 $g7$ $xh4+$ 42 $g3$ $g6$ 43
$xh5$ =
41 $d6+$ $e6$ 42 $e8$ $xh4+$ 43 $g3$ $f7$
44 $xh4$ $xe8$ 45 $xh5$ $e7$ 46 $g5$ $e6$ 47
$f4$ $f2$ =

Fine tried to prove that four pawns always
win against three on one wing. We will not go
that far, but it is clear that the following quite
favourable position is won:

1 $d6$ $g8$ 2 $h5$ $f8$ 3 $f5$

White’s king can enter the stage with
devastating effect: 8...$c5$ 9 $d4$ $e6+$ 10 $d5$ $g5$
11 $d6$ $e4+$ 12 $d7$ $c5+$ 13 $c6$ $c6$ 14
$d6$ $f8$ 15 $d4$ $h7$ 16 $e6+$ $xe8$ 17 $f5$ ? 9
$xe6+$ $g7$ (D).

10 $f5+$! $xf5$ 11 $gx$ $c7$ and then:
a) 12 $f6+$ $xf7$ 13 $f4$ (13 $c4$ $e6$ 14 $f5$
$e4+$ 15 $f4$ $xe6$ 16 $b6$ $d6$ 17 $h7$ $xe5$ =
Tsesarsky in CBM 58) 13...$e4$ 14 $e4$
$g5+$ 15 $f5$ $xe6$ 16 $b6$ $d4+$ (16...$f8$? 17
e6+$! $xe6$ 18 $h7$ = Tsesarsky) 17 $g4$ $g6$

b) 12 $f4$ $f6$ 13 $f6$ $xh5$ 14 $f5$ =.
the wrong foot”) and the position therefore drawn: White can’t dislodge both defenders.
a2) 25 Qe2 Qe3 26 Qf4 Qf5 27 Qg8 Qe7 28 Qh8 Qh6 29 Qh7 +=.
b) 14...Qg7 15 Qf4 Qf7 16 Qf5 Qd5 17 e6+ Qe8 18 Qg6 Qe7 19 Qxh6 Qf6 20 Qh7 Qe3 21 Qg8 Qd5 22 Qe2 Qg5 23 Qf7 Qxh5 24 Qf4+ =.

8 Qd4

8 e5?! is simpler, using the powerful position of the knight on f5 (see 3 e4?!).

8...Qc5 9 Qf5 Qe6 10 Qh4 Qe7 11 Qf5+ 11 e5 was again possible.

11...Qf7 12 Qd4 Qc5 13 Qe2?! (D)

White has a winning advantage according to Tsesarsky. We give some further evidence: 13...Qc7 14 Qd4, and now:
a) 14...Qe8 15 Qf5 Qg7+ 16 Qg4 Qe8 (16...Qg8 17 Qf5 ++) 17 Qe6 Qg8 18 Qf4 Qf7 (18...Qh8 19 Qf5 Qh7 20 Qf4 Qg7 21 Qe6 ++) 19 Qf5 Qe7 20 Qd4 Qf7 21 e6+ Qe7 22 Qg6 Qc7 23 Qxh6 Qf6 24 Qh7 Qd5 and then:
a1) After 25 h6? Qe7 26 Qh8 Qg6 27 h7 Qf6 28 Qe2 Qg6 = White’s knight is on a square of the wrong colour (Nunn introduced the term “parity of White’s knight is wrong” and coined the expression “the parity shoe is on
25 \( \text{Qf5+} \text{Qf6} 26 \text{e7} \text{Qc7+} 27 \text{Qd6} \text{Qe8+} 28 \text{Qd7} \text{Qe7} 29 \text{Qd6+} \text{Qxd6} 30 \text{Qxd6} \text{Qe8} 31 \text{Qe6} \text{g6} 32 \text{hxg6} 1-0

B2) Pawn Races

If both sides have one passed pawn and one is much further advanced, there are some similarities to the one vs zero case. On the other hand zugzwang is not possible, because the pawn can move, and there are some extra defensive ideas, such as the following one:

\[
\begin{array}{c}
\text{3.43}
\end{array}
\]

S. Tatal – B. Abramović
Pamperova 1982

Black has a dangerous h-pawn, which is more advanced than White’s pawn, and he has the move, but the d-pawn saves the day for White:

1...\( \text{Qg2} \) 2 \( \text{Qc5} \) h4 3 \( \text{Qg5} \) h6

After 3...\( \text{Qg3} \)? White must use a totally different strategy to halt the passed pawn:

a) 4 \( \text{d4?} \text{Qg4} 5 \text{Qe4} \text{Qf4} 6 \text{Qf2} \text{Qe3} 

b) 4 \( \text{Qe4+??} \text{Qf3} 5 \text{Qg5+} \text{Qg4} 6 \text{Qc4} \text{Qg3} 7 \text{Qf2+} \text{Qf3} 8 \text{Qh3} \text{Qe2} 9 \text{d4} (9 \text{Qxd6} \text{Qh4} 10 \text{Qg5} \text{Qg4} 11 \text{Qc4} \text{Qxd3} \rightarrow) 9...\text{Qg3} 10 \text{Qg5} \text{Qg4} 11 \text{Qc4} \text{Qg3} 12 \text{Qf2+} \text{Qf3} 13 \text{Qh3} \text{Qe4+} 14 \text{Qc4} \text{Qg3} 15 \text{Qg1} \text{Qg5} 16 \text{d5} \text{Qf2} 17 \text{d6} \text{Qxf1} 18 \text{d7} \text{Qf7} 

c) 4 \text{Qd5!} \text{Qg4} 5 \text{Qe4} \text{Qg3} 6 \text{Qf2+} \text{Qf3} 7 \text{Qh3} \text{Qe2} 8 \text{Qe5} \text{Qg3} 9 \text{Qg5} \text{Qg1} (9...\text{Qg4} 10 \text{Qe4} \text{Qg1} 11 \text{Qd2+} \text{Qf3} 12 \text{Qe4} \text{Qg2} 13 \text{Qf6} \text{h3} 14 \text{Qg4} \text{Qg3} 15 \text{Qf5} \text{Qf3} 16 \text{Qe3} =) and now:

c1) 10 \text{d4!} \text{Qg4} 11 \text{Qe4} (11 \text{Qf7} \text{h3} 12 \text{d5} \text{h2} 13 \text{d6} \text{h1} 14 \text{d7} \text{Qc6} 15 \text{d8} \text{Qf3} #) 11...\text{Qf3} 12 \text{Qd5} \text{Qg5} 13 \text{Qd2} \text{h3} 14 \text{Qf1} \text{Qf3} 15 \text{Qh2+} \text{Qg3} 16 \text{Qf1+} \text{Qf2} 17 \text{Qh2+} \text{Qf3} 18 \text{Qg4+} \text{Qg3} 19 \text{Qe3} \text{Qd2} 20 \text{Qe6} \text{h2} 

c2) 10 \text{Qe4+} \text{Qg2} 11 \text{Qf6} \text{h3} 12 \text{Qg4} \text{Qg3} 13 \text{Qf5} \text{Qf3} 14 \text{Qe3} \text{Qd2} 15 \text{Qg4} =.

d4 \text{Qf7}??

Deflecting the defending knight, but now White’s pawn reaches the seventh rank and – together with the knight – draws against the queen. If Black’s king tries to dislodge the knight, White can again successfully hold on:

4...\( \text{Qg3} 5 \text{d5} \text{Qg4} 6 \text{Qe4} \text{Qf7} 7 \text{Qd2} (7 \text{d6?} \text{Qf3} 8 \text{Qd2+} \text{Qe2} 9 \text{Qe4} \text{Qe3} 10 \text{Qd5} \text{Qxd6} \rightarrow) 7...\text{h3} 8 \text{Qf1} \text{Qf3} 9 \text{d6} \text{Qf2} 10 \text{Qh2} \text{Qg3} 11 \text{Qf1+} \text{Qg2} 12 \text{Qe3+} \text{Qg1} 13 \text{Qg4} =.

5 \text{Qxf7} \text{h3} 6 \text{d5} \text{h2} 7 \text{d6} \text{h1} 8 \text{d7} \text{Qh5+} 9 \text{Qd6} \text{Qg6+} 10 \text{Qe7} \text{Qd4+} 11 \text{Qd6} \text{Qb4+} 12 \text{Qe6} \text{Qc4+} 13 \text{Qd6} \text{Qa6+} 14 \text{Qe7} \text{Qb7} 15 \text{Qd6} \text{Qb6+} 16 \text{Qe7} \text{Qc5+} 17 \text{Qe6} \text{Qc6+} 18 \text{Qe7} 1/2-1/2

Two connected passed pawns usually have very good winning chances, as the next two examples demonstrate:

\[
\begin{array}{c}
\text{3.44}
\end{array}
\]

A. Vydeslaver – I. Tsesarsky
Israeli Ch 1997

1...\( \text{f4+} 2 \text{Qg2} \text{Qh4} 

Black has an alternative win by 2...\( \text{Qh4+} 3 \text{Qf1} \text{g3} 4 \text{b5} (4 \text{Qc5} \text{Qg4} 5 \text{Qd3} \text{g2+} 6 \text{Qf2} \text{f3} 7 \text{b5} \text{h3} 8 \text{Qg1} \text{Qg3} 9 \text{Qf2} 10 \text{Qf4} \text{Qf4} 11 \text{Qf2} \text{Qd4} 12 \text{Qh2} \text{Qc2} \rightarrow) 4...\text{g2+} 5 \text{Qf2} \text{Qg4} 6 \text{b6} \text{Qh3} 7 \text{b7} \text{Qf3} 8 \text{b8} \text{Qf1} 9 \text{Qxf3} 

\text{Qe3} #.

3 \text{Qc5}

3 \text{b5} \text{f3+} 4 \text{Qf1} (4 \text{Qf2} \text{Qe5} 5 \text{Qe3} \text{g3} \rightarrow)

4...\text{g3} 5 \text{b6} \text{g2+} 6 \text{Qf2} \text{Qc5} 7 \text{b7} \text{Qg4+} 8 \text{Qxf3} \text{g1} 9 \text{b8} \text{Qf3} 10 \text{Qg2} \text{Qf2+} 11 \text{Qh1} \text{Qf1} #

(Tsesarsky in CBM 58).

3...\text{f3+} 4 \text{Qf2} \text{Qe5} 5 \text{b5}
5 Qe4 Qd3+ 6 Qe3 Qxb4 7 f2 Qd3+ 8 Qe3 f2 ++.
5...g3+ 6 Qe3 g2 7 f2 Qg4+ 8 Qg1 Qh3 9 Qe4 f2+ 0-1

The defender's chances are much better in the next example because White's knight is distracted by the passed b-pawn:

![Chess Diagram](image)

R. Kholmov – V. Hort
Leningrad 1967

White's pawns look menacing, but we didn't find a way to break the defence:

1 g5 Qh4

After 1...Qf8? White's king has enough time to capture the b-pawn: 2 f5 Qg8 3 Qd3 Qf7 (3...Qh7?? 4 Qe6 ++ is absolutely fatal for Black) 4 Qe4 Qxe4 5 fxe4 Qh7 6 g6 Qf6 6...Qg5 7 Qd4 Qf6 8 Qe5 Qg5 9 Qe4 10 Qe6 Qd4+ 11 Qe5 Qc6+ 12 Qf4 Qh6 13 Qf6 ++. 2 f5 Qg7 3 Qe6+ Qf7 4 Qd4 Qg7 5 Qf4 Qg2+ 6 Qe5 Qh4 7 Qd4

7...Qe6+ (7...b3? 8 Qxb3 Qf3 9 g6 Qh4 10 f6+ Qg6 11 Qd4 ++) and now:

a) 8 fxg6 Qxg6 9 Qf3 b3 =,

b) 8 Qxd4 Qh4 9 Qe5 Qf7 ±,

c) 8 f6+ Qg8 9 Qh3 Qe8 ±.

7...Qg2?

7...Qf7! is called for, when 8 Qe5 (8 Qf4 Qg2+ 9 Qg4 Qd3+ 10 Qh5 b3 =) 8...Qg7 9 Qe6 ± transposes to the note to White's 7th move.

8 Qe6+ Qg8

White also wins after 8...Qf7 9 g6+ Qf6 10 g7 Qf7 11 f6 ++.

10...Qg2+ 11 Qf3 Qe1+ 12 Qg4 Qf7 13 Qg6+ Qg7 14 Qh5 b3 15 Qd7 ++.

11 Qg4! Qg2 12 Qg6+ Qf6 13 Qd7+! Qe7 13...Qg7 14 Qg5 b3 15 f6+ Qh8 16 f7 ++.

14 f6+ 1-0

In the next race White has an advantage because he is slightly faster, but Black should be able to hold on with exact play:

![Chess Diagram](image)

E. Vasiukov – M. Usatchyi
Biel sentors Wch 1994

Black has to act very carefully:

1 a4 Qf4+?

This mistake loses a lot of time. Black should create counterplay immediately with 1...g6! 2 b4 Qf2+ 3 Qe4 axb4 4 cxb4 f5 5 Qxf5+ Qxf5 6 a5 Qf4, and now:

a) 7 Qxf5 Qd7 8 b5 Qf3 9 Qd5 (9 a6 Qc7 10 a7 Qb7 11 b6 Qe4 =) 9...Qd1 10 Qxe5 b2 11 Qg3 Qe3 =.

b) 7 Qxd5 Qd1 8 a6 Qf3 9 Qd3 Qb2+ 10 Qe4 Qc4 11 Qe3 (11 a7 Qf2 12 a8Q Qd6+ =) 11...Qf2 12 Qxf2 Qd6 13 Qd3 Qh6 =.

2 Qc4 Qf6 3 b4 axb4 4 cxb4 Qd6

4...Qf5 5 Qxf5+ Qxf5 6 a5 Qg6 7 a6 Qc7 8 Qc5 (8 a7? Qe8 9 a8=Q is not exactly what White wants) 8...Qc8 9 b5 ++.

5 a5 Qe4

5...Qe6 6 b5+ Qb7 7 Qd5 ++.

6 b5 Qe6

6...Qe7 7 Qd4 Qe2+ 8 Qc5 Qh7 9 Qd5 ++.

7 a6 Qc7 8 Qb4 Qa8 9 Qc4+ Qc7 10 Qc5 f5 11 Qxf5 Qxf5 12 b6+ Qxb6 13 Qxb6 Qb8 14 Qd5!

White is winning easily; the knight stops the pawns, freeing the king to help its own pawn.
14...a7 15 b5 f4 16 xf4 e3 17 a5 b8 18 b6 1-0

B3) Outside Passed Pawn

In pawn endings outside passed pawns are very strong and knight endings are similar in that respect. Botvinnik even stated the following important 'rule': knight endings are really pawn endings. A knight can't lose a tempo, an outside passed pawn is very favourable as it deflects the defending pieces and with an extra pawn one usually has quite good chances to win. Of course there are differences: the knight can sacrifice itself and there are tactical possibilities such as knight forks.

The following two examples are justly famous:

![Diagram](attachment:image.png)

Em. Lasker – A. Nimzowitsch
Zurich 1934

Black's h-pawn is a major force, but it is of course much more difficult to convert it into a win than in a pawn ending:

1...f7 2 c1 f6 3 d2 e5 4 e3 h5 5 a3

The pawn ending after 5 f3+? xf3 6 xf3 h4 = is hopeless, but 5 h3? comes into consideration: e.g., 5...e6 6 f2 f4 7 f3 a5 8 e3 h5 9 xf3 e6 10 e3 e5 +.

5...a5 6 h3 c2+ 7 d3

7 d2 d4 8 e3 e6 +.

7...e1+ 8 e2 g2 9 f3

9 d3? f4+ 10 xf4 xf4 11 d4 h4 12 e5 f5! 13 d5 h3 ++.

9...h4+ 10 e3 g6 11 g5 f6 12 h7+ g7 13 g5 f6 14 h7+ e7! 15 g5

After 15 h4? Black is able to force the exchange of knights: 15...f8! 16 g5 (16 xf8 exf8 17 e5 e7 18 h4 19 g4 e6 ++) 16...e6+! ++.

15...e5 16 d4 d6 17 h3 a4 18 f4 h4 19 h3 b6!?

Keeping the spare tempo ...b5 in reserve.

20 f4 b5 21 h3

For 21 c3 f2 22 h3 e5 23 d3 e5+ 24 c3 e6 25 d3 b4 see the game.

21 c6+

After 21...c4?! 22 c3 e5? White can defend himself: 23 b3! axb3 (23...xa3 24 b2 c4 25 bxc4 bxc4 26 c3 a3 27 f2 f4 28...
\( \text{\textcopyright c2 = 24 \text{\textcopyright x b3 \text{\textcopyright x e4 25 \text{\textcopyright b4 \text{\textcopyright d3 26 \text{\textcopyright g1 (26 \text{\textcopyright b5? \text{\textcopyright x a3 + 27 \text{\textcopyright c5 \text{\textcopyright e4 \text{\textcopyright a5 26...\text{\textcopyright e3 27 a4 =. 22 \text{\textcopyright e3 22 \text{\textcopyright c3?! \text{\textcopyright e5 23 \text{\textcopyright d3 \text{\textcopyright a5 24 \text{\textcopyright g1 \text{\textcopyright f4 25 e5 \text{\textcopyright c6 26 e6 \text{\textcopyright f5 27 \text{\textc DIRECTIVE ON USE OF THESE MATERIALS:} } 1 \text{\textcopyright e7 2 \text{\textcopyright e3 g5?! “Fixing the weakness on h3.” (Lukacs in CBM 71.) 3 c4 Activating the king further with 3 \text{\textcopyright e4! is interesting as the pawn ending after 3...\text{\textcopyright f6+ 4 \text{\textf6 \text{\textf6 is drawn: 5 a4 h5 6 b4 \text{\textf6 7 c4 g4 8 hxg4 hxg4 9 \text{\textf4 g3 10 \text{\textc3 \text{\textc5 11 a5 \text{\textc4 12 a6 bx a6 13 c5 =. 3...\text{\texte6 4 b4?! \text{\texte5?! 5 a4? Now White can’t exchange knights on f4 as the pawn ending that arises is lost. 5 b5?! \text{\textf4 (5...\text{\textg7?!?) 6 \text{\textf4 xf4+ 7 \text{\textf3 b6 (7...\text{\textd4 8 \text{\textf4 xc4 9 \text{\textg5 =) 8 h4 \text{\textf5 9 a4 \text{\texte5 10 c5 bx c5 11 a5 c4 12 b6 bx b6 13 ax b6 \text{\textd6 14 \text{\textf4 xc6 15 \text{\textc3 =. 5...\text{\textf4! 6 \text{\textc3 6 \text{\textf4 xf4 7\text{\textd3 (7 \text{\textf3 \text{\textd4 8 \text{\textf4 xc4 =) 7...f3 8 \text{\textc3 (8 a5 \text{\textf4 -=) 8...f2 9 \text{\textf2 \text{\textd4 10 c5 \text{\textc4 11 a5 a6 =. 6...\text{\textxh3 7 c5 \text{\textf4 8 \text{\textf3 \text{\textd5 9 \text{\texta2 \text{\textd4 0-1 B4) Positional Advantages The active king is a very important theme in knight endings. In the first example White also has a space advantage, which can still be further increased, and a very powerful knight on f5 fixing Black’s kingside pawns. 3.50 V.Hort – N.Ioseliani Copenhagen (Ladies vs Veterans) 1997 1 \text{\textc4 \text{\textf7}

B. Chatalbashev – M. Krasenkow Curo 1999

3.49 =
1...g6?! 2 hxh6+ gxh6 3 gxh5 f5+ 4 hxh5+ gxh5 5 gxf5+ 6 gxf5 ±

2 f4 bd4 3 a4 bxa4 4 bxa4 dc6 5 ed5 db4 6 db4 7 a5 dg6

Or: 7...g6 8 f4+ d7 9 g5 f5 10 h5 e3+ 11 d4 ++ (Hecht in CBM 61); 7...e1 8 c5

d3+ 9 b6 b4 10 d4 g6 11 c6 d5+ 12

d6 xf4 13 b6 d5+ 14 b7 +=.

8 h5+

8...d3 e3 (8...e1 9 h5++ f7 10 h4++)

9 e6 ++.

8...f7 9 e5 g6

9...f8 10 d4 e3 11 b6 ++.

10 d6+ g7 11 e8+ f7 12 c7 f5 13

h6+ f6

13...xg6 14 xf5+ xf5 15 xa6 h5 16

b4 h4 17 a6 ++ (Hecht).

14 xf5 h5 15 e8+ e7 16 g7 f7 17 f6

1-0

At first glance the next position doesn’t look that favourable, but Black’s king can penetrate successfully:

3.52

M. Kamyshov – E. Zagoriansky

Leningrad 1938

1 h4 db7

1...g6 2 h5 (fixing the weakness on h6)

2...gxh5 3 gxh5 db7 4 c4 de4 5 b6 6 c5 6

c4 c6 7 g8 e4 8 xh6 d5 9 xf7

xh5 10 d8+ d7 11 b7 +=.

2 h5 e5 3 g5 d7 4 e4 b6 5 c4 e6

6 f6 c5

6...gxf6 7 gxh6 fxe5 8 fxe5 f6 9 h7 ++.

7 e8

7 gxh6 gxh6 8 g8 also wins for White (see 1...g6).

7...hxg5 8 fxg5 d4 h6 gxh6 10 gxh6 g5

11 f6 h3 12 e4 c5 13 d4 f5

The e-pawn isn’t going to run away, so

White also wins after 13...h7 14 f5 f8

15 h7 g6 16 e4 h8 17 d2 b6 18 c4+

b6 19 c5 +=.

14 exf6 d6 15 e5 h7 16 e4+ d7 f7 e7 18 cxa5 f7 19 c6 g6 20 a5

20 e5+ xh6 21 d7 g5 22 a5 d7 23

c5 ++.

20...f6 21 a6 d5 22 a7 c7 23 e6 24

23 c5 xh6 (23...e8 24 xb4 e5 25 c6

++) 24 b6 e8+ 25 b7 ++.

23...b5+ 24 e5 x7a7 25 c6 e8 26 b4

xh6 27 b5 e5 28 c5 c7 29 d6 f7 30

a7! e7

30...axa7 31 b6 c8 32 b7 ++.

31 b6 g6 32 d6 1-0
Black is slightly better due to his more active pieces and the weaknesses on b3 and especially g3. However, White’s space advantage on the kingside should give him enough resources to draw:

1...h5
1...f5?!.
2 a4 @d4+ 3 @e4 @f5 4 @f3
4 @f1?! @d6 5 b4? (5 a5) 5...b5 6 axb5 (6 a5 f6 7 @d3 @f5 8 @c3 @e4 9 @d2+ @e3 10 @b3 @xg3 11 @e5 @x2+ 12 @b3 @xf4 13 @xg6 @d5 14 @e5 g5++) 6...axb5 7 @f3 (7 @e3? @xe3 8 @xe3 @d5 9 @d3 f5++) 7...@d5 8 @xe5 @d4+ 9 @g3 hxg4 10 @xg4 @e4 ?.
4...@d5 5 @xe4 @d6
5...@d4+ 6 @g3 and then:

a) 6...@ec5 7 f5 @b4 (7...hxg4 8 fxg6 fxg6 9 @xg4 @c6 10 @c4=) 8 fxg6 fxg6 9 @xh5 gxh5 10 @c4 @x3 11 @b3 @x3 12 @g5=.
b) 6...f5 7 gxh5 (7 g5? @e5 8 @c4 @c6 9 @c2 @b4++) 7...gxh5 8 @c2 @e6 (8...@ec5 9 @f1) 9 @c3 @c5 10 @f1 @xb4 11 @g3 @g7 12 @d4 gives White counterplay that should be sufficient to draw.

6 @f1 hxg4+ 7 @xg4 @d4 8 @g3?
After this mistake White’s king can’t become active. 8 a5! is called for:

a) 8...@ec3 9 @cxb3 10 f5 @c4 (after 10...@b4? White can play 11 fxg6 fxg6 12 @g5) 11 @f4 @d2 12 @g5 @f3+ 13 @g4 @c5+ 14 @f4=.
b) 8...f6 9 @g3 f5+? 10 @g5 @d4+ (10...@e3 11 @f1+ @f3 12 @x6 @xf4 13 h5 @d4 14 h6 @g5 15 @g3++) 11 @xg6 @xg6 12 h5 @xh5 13 @xh5+ (due to the spare tempo b3-b4).

c) 8...@d3 9 @g5 @e4+ 10 @h6 @c3 11 @g7 @d6 12 @f6 @xb3 13 @h2 @b4 14 @f3 @xa5 15 @e7 and White is fast enough to hold the position; e.g., 15...@b4 16 @xh6 a5 17 @e7 a4 18 @d4 a3 19 @c2+ @b3 20 @xa3 @xa3 21 @xf7 b5 22 @xg6=.

8...f5+! 9 @f3
9 @g5 @e4+ 10 @xe4 fxe4 11 f5 gxf5 12 h5 e3 13 h6 e2 14 h7 e1= 15 h8=+ @g5 ++,
9...@c3 10 @a5 @xb3 11 @e3 @c4 12 @f1 @e5 13 @d3 @c4 14 @g3 @xa5 0-1

The next two examples deal with the conversion of a material advantage into victory:

W

V.Korchnoi – E.Torre
Bad Homburg 1998

3.54

The material is still equal, but Korchnoi wins one pawn by force:

1 b4!
Fixing the pawn on h5 with the plan of f5 followed by @d4xff5@g7.

1...@d2+ 2 @c3 @f3 3 f5 @c6 4 @f4 @xb4
5 @xh5 g6 6 fxg6 @xg6 7 @xf6

The first step is completed, but the conversion of the extra pawn isn’t easy.

7...@e5 8 @d5 @b3 9 @c4 @a5 10 @c4 @b5 11 @a3+ @c6 12 @d2 @d6 13 @c4+ @c6 14 @a5+ @b5 15 @b3 @e6
15...@xb3+? 16 @xb3 @f4 17 @e5 is of course completely hopeless for Black.

16 @c3 @d8 17 a4+! @c6
17...@xe4?! 18 @c4 @c6 (or 18...@b7 19 @xc5++ ) 19 @xc5++ (Ribli in CBM 66).
18 @c4 @b7
After 18...@c6 19 e5 -- Black loses another pawn due to zugzwang (Ribli).
19 e5 a5 20 d4 cxd4 21 cxd4+ b6 22 e6??
Immobilizing Black's knight.
22...c6 23 d4 b6 24 d5 a7 25 c5 1-0

3.55
J. Benjamin – P. Leko
Horgen 1994

Black's c-pawns are doubled, which causes serious difficulties:
1 c2 c4+ 2 e3
2 xd4? cxd4 3 c3 c5 --.
2...c2+ 2...xf3? 3 xf3 b5 4 e4 = (Leko in CBM 43).
3 d2 b4!!
Provoking a weakness on b3. This is important because the knight will attack it from its strong outpost on d4.
4 a3 c6 5 d3 c6 6 e4 f5+ 7 e3 e6 8 g3??
With 8 h4!? White intends to ease his task by exchanging the h-pawns, but Black's advantage is still quite large; e.g., 8...h6 9 g3 5 10 hgx5+ hxg5 11 c2 c4 12 c3 g4 13 c3 c5 14 c6 15 f1 c6=.
8...g5!! 9 c4 d4 a4 c5 11 d3
11 f4+ gxf4+ 12 gxf4+ c6 13 c2 c6 14 g3 h5 15 h2 h4 16 g2 h6 17 h2 c2+ (Leko).
11...h5 12 e3 f4+ 13 d3
13 gxf4+ gxf4+ 14 c3 f5 15 b4 c6 16 b5 ab5 17 cxb5 c5 g5 18 h4 h7 19 c4 (19 f3 c5+ 20 c2 c6 21...b5)
13...g4!!

13...fxg3?! 14 fg3 h4 15 gxh4 g6 16 e3 f5 = (Leko).
14 hxg4 hxg4 15 gxh4 16 xf4 f3 17 c1 c5 18 c2?
18 c2 c6 19...c4 19...c4 20...c4 h6 21...c4 b5 22...c4 b4+ 23...c4 f5 24...d1 c3 25 c3...c4 c5 26...d6+...d3 27...c7 c4 28 c4 b3 29...c5=...c4=.
18...c4! 19...c4 0-1
White is in zugzwang: 20 c2 c6 21 cxf3+...g3 22 c6 23 c2 b5 24...b5...b5 25...b5 b6 -- (Leko).

The next example was analysed in detail by Hübner in CBM 67 and we have drawn extensively from his annotations:

3.56
G. Kasparov – R. Hübner
Hamburg (4) 1985

1 f4 f6 2 a4 g6?!
2...g5 (Spassky) is much better. Black threatens to close the kingside with...h5, and there's nothing White can do to prevent it:
a) 3 fxg5 fxg5 4 g4 (in the game continuation White's pawn was on h5 and Black's on h6 so White's knight could enter f5 with devastating effect) 4...f7 5 g3 (5...c6 6 c1 c4 7 b5 8 c6 8 h4 9 e7 9 h5 c6 10 c2 c2 d7 11 b4...e8 12 b3 b7 13 bxc5 bxc5 14...c7 15...a4...b6 16...c8=) 5...g6 6 h4 h4 7...e8 8 g6 9...e7 9 b5 cxb5 10 cxb5...g7 11...h5 (11...g5...g6=)
11...h7 12...g6 13...h5...g7=.
b) 3...c3 h5 4 fxe5 fxe5 5...c3...c7 6...d3
c 7 7...c2...c8 8...g4...b7 9...c5 5...c5 10...c5
Black is slightly better due to his more active pieces and the weaknesses on b3 and especially g3. However, White’s space advantage on the kingside should give him enough resources to draw:

1...\(
2 a4 \(d4+ 3 \(c4 \(f5 4 \(f3
3 \(f1?? \(d6 5 b4? (5 a5 \(c5 5...b5 6 axb5 (6 a5 f6 7 \(d3 \(d5 8 \(c4 9 \(d2+ \(e3 10 \(b3 \(xg3 11 \(c5 \(e2+ 12 \(b3 \(xf4 13 \(xg6 \(d5 14 \(c5 g5 ++ 6...axb5 7 \(f3 (7 \(c3? \(xg3 8 \(xh3 \(d5 9 \(d3 f5 ++) 7...\(d5
8 g4 \(d4+ 9 \(g3 hxg4 10 \(xg4 \(e4 ++.

4...\(d5 5 g4 \(d6
5...\(d4+ 6 \(g3 and then:

a) 6...\(c5 7 f5 \(b4 (7...hxg4 8 fxg6 fxg6 9 \(xg4 \(e6 10 \(c4 = 8 fxg6 fxg6 9 gxf5 gxf5 10 \(xf4 \(xb3 11 \(xb3 \(xh3 12 \(g5 =

b) 6...f5 7 gxf5 (7 g5? \(c5 8 \(c4 8 \(c4 9 \(e2 \(d4 -- 7...\(xh5 8 \(xf6 9 \(c6 8 \(c6 9 \(c1 10 \(d1 \(b1 11 \(g3 \(g7 12 \(d4 gives White counterplay that should be sufficient to draw.

6 \(f1 hxg4 7 \(xg4 \(d4 8 \(g3?

After this mistake White’s king can’t become active. 8 a5! is called for:

a) 8...\(c3 9 \(c3 \(xb3 10 f5 \(e4 (after 10...\(c4?! White can replay 11 fxg6 fxg6 12 \(xg5 11 \(f4 \(c2 12 \(g5 \(c3+ 13 \(g4 \(e5+ 14 \(f4 =

b) 8...f6 9 \(g3 \(f5+ 10 \(g5 \(e4+ (10...\(c3 11 \(f1+ \(f3 12 \(xg6 \(xh4 13 h5 \(c4 14 h6 \(g5 15 \(g3+ -- 11 \(xg6 \(xg3 13 h5 13 \(xh5 ++ (due to the spare tempo b3-b4).

c) 8...\(d3 9 \(g5 \(e4+ 10 \(h6 \(c3 11 \(g7 \(d6 12 \(f6 \(xb3 13 \(h2 \(b4 14 \(f3 \(xa5 15 \(e7 and White is fast enough to hold the position; e.g., 15...\(b4 16 \(xd6 a5 17 \(e7
a4 18 \(d4 a3 19 \(c2+ \(b3 20 \(xa3 \(xa3 21 \(xf7 b5 22 \(xg6 =.

8...f5+! 9 \(f3
9 \(g5 \(c4+ 10 \(xe4 fxe4 11 f5 gxf5 12 h5 e3 13 h6 e2 14 h7 e1+ 15 h8=+ \(e5 --.

9...\(c3 10 a5 \(xb3 11 \(c3 \(c4 12 \(f1 \(c5 13 \(d3 \(d4 14 \(g3 \(xg5 0-1.

The next two deals with the conversion of a material advantage into victory:

V.Korchnoi – E.Torre
Bad Homburg 1998

The material is still equal, but Korchnoi wins one pawn by force:

1 h4!

Fixing the pawn on h5 with the plan of f5 followed by \(f4xh5.

1...\(d2+ 2 \(c3 \(f3 3 f5 \(e6 4 \(f4 \(xh4
5 \(xh5 g6 6 \(f3 \(xg6 7 \(xh6
The first step is completed, but the conversion of the extra pawn isn’t easy.

7...\(e5 8 \(d5 \(f3 9 \(c3 \(d4 10 \(c4
b5 11 \(a3+ \(e6 12 \(d2 \(d6 13 \(c4+ \(e6 14 \(a5+ \(b5 15 \(b3 \(e6
15...\(xb3?? 16 axb3 \(b4 17 e5 is of course completely hopeless for Black.

16 \(c3 \(d8 17 a4+! \(e6
17...\(xh4?! 18 \(c4 \(e6 (or 18...\(b7 19 \(xc5+ ++ 19 \(xe5+++ (Ribli in CBM 66).
18 \(c4 \(b7
After 18...\(e6 19 e5 ++) Black loses another pawn due to zugzwang (Ribli).
19 e5 a5 20 d4 cxd4 21 ¤xd4+ ♂b6 22 ♦e6??

Immobilizing Black's knight.

22...♕c6 23 ♦d4 ♦b6 24 ♦d5 ♦a7 25 ♦c5 1-0

3.55

J. Benjamin – P. Leko
Horgen 1994

Black's c-pawns are doubled, which causes serious difficulties:
1 ♦e2 ♦d4+ 2 ♦e3
2 ♦xd4? cxd4 3 ♦d3 e5 —.
2...♕e2+ 2...♕xf3? 3 ♦xf3 b5 4 ♦e4 = (Leko in CBM 43).
3 ♦d2 ♦b4!

Provoking a weakness on b3. This is important because the knight will attack it from its strong outpost on d4.

4 a3 ♦c6 5 ♦d3 ♦e6 6 ♦e4 f5+ 7 ♦e3 ♦f6
8 g3?!

With 8 h4!? White intends to ease his task by exchanging the h-pawns, but Black's advantage is still quite large; e.g., 8...hx6 9 g3 g5 10 hxg5 hxg5 11 ♦d2 ♦d4 12 ♦d3 g4 13 ♦e3 ♦e5 14 ♦f1 ♦e6 =.

8...g5! 9 ♦d2 ♦d4 10 a4 ♦e5 11 ♦d3
11 f4+ gxf4+ 12 gxf4+ ♦f6 13 ♦f2 ♦g6 14 ♦h3 ♦h5 15 ♦h2 ♦h4 16 ♦g2 h6 17 ♦h2 ♦e2 — (Leko).

11...h5 12 ♦e3 f4+ 13 ♦d3
13 gxh4+ gxh4+ 14 ♦d3 h5 15 b4 ♦e6 16 b5 axb5 17 cxb5 ♦g5 18 b4 ♦f7 19 ♤c4 (19 ♦f3 ♦e5+ 20 ♦e2 ♦g6 —) 19...♕e6 20 ♦d3 ♦d5 21 ♦e2 ♦e5 —.

13...g4?!

13...fxg3?! 14 fxg3 h4 15 gxh4 gxh4 16 ♦e3 ♦f5 = (Leko).

14 hxg4 hxg4 15 gxh4+ ♦xf4 16 ♦e3 ♦f3
17 ♦f1 ♦e5 18 ♦h2?!
18 ♦d2? c6 (18...♕f3 19 ♦f1 ♦g5 20 ♦d3 ♦e4 21 ♦e2 g3? 22 fxg3+ ♦xg3+?? 23 ♦xg3 ♦xg3 24 ♦e3! =) 19 ♦c2 b5 20 axb5 cxb5 21 cxb5 axb5 22 ♦c3 b4+ 23 ♦c2 ♦f5 24 ♦d1 ♦f3 25 ♦e4 ♦e4 26 ♦d6+ ♦d3 27 ♦b7 c4 28 bxec4 b3 29 ♦c5+ ♦xc4 —.

18...♕e4 19 ♦e2 ♦d4 0-1

White is in zugzwang: 20 ♦d2 ♦f3+ 21 ♦xf3+ gxf3 22 ♦c2 ♦c6 23 ♦d2 ♦b5 = (Leko).

The next example was analysed in detail by Hübner in CBM 67 and we have drawn extensively from his annotations:

3.56

G. Kasparov – R. Hübner
Hamburg (4) 1985

1 f4 f6 2 ♦a4 g6?!

2...g5 (Spassky) is much better. Black threatens to close the kingside with ...h5, and there's nothing White can do to prevent it:

a) 3 fxg5 fxg5 4 g4 (in the game continuation White's pawn was on h5 and Black's on h6, so White's knight could enter f5 with devastating effect) 4...♕f7 5 ♦g3 5 ♦c3 ♦c7 6 ♦d1 b5 7 ♦c3 b4 8 ♦f5 ♦e8 =; 5 ♦f3 ♦g6 6 ♦e3 h5 7 h3 hxg4 8 hxg4 ♦f7 9 ♦d3 ♦e7 10 ♦c2 ♦d7 11 b4 ♦e8 12 ♦b3 ♦b7 13 bxex5 bxex5 14 ♦c3 ♦c7 15 ♦a4 ♦b6 16 ♦d1 ♦e8 =. 5...g6 6 h4 gxh4+ 7 ♦xh4 h6 8 ♦c3 ♦c7 9 ♦b5 ♦xb5 10 cxb5 ♦g7 11 ♦h5 (11 g5 ♦g6 =) 11...hxh7 12 g5 hxg5 13 ♦xg5 ♦g7 =.

b) 3 ♦f3 h5 4 fxg5 fxg5 5 ♦e3 ♦c7 6 ♦d3 ♦d7 7 ♦c2 ♦c8 8 ♦b4 ♦b7 9 bxex5 bxex5 10 ♦c3
\( \text{c7 11 d1 e8 12 e3 f6 13 f5 c7 14 d3 d7 =} \)

3 \( \text{a3 f3 f7 4 h4 h6 5 g4 g5?} \)

Black should play \( \_g7 ?? \).

a) \( \text{6 h5 f7 7 fx e5 fxe5 8 g3 f6 9 hgx and then:} \)

\[ \begin{align*}
&\text{a1) 9...g7 10 c3 c7 11 d1 b5 12 e3 bx e4 13 bxc4 14 f5 e8 15 h4 h7 16 g5 hx g5 17 x g5 x g8 18 x e7 (18 x g6 x f8 =) 18...x f7 19 x d8 x g7 =.

&\text{a2) 9...x g6 10 x h4 x h7 11 x h5 x g7 12 g5 x h5 13 x g5 x f7 14 x f5 x e7 15 g6 x 16 x b6 x a6 17 x f8 (17 x a4 x b4 18 x c3 x d3 19 x a2 x f7 =) 17...x d7 18 x a7 x b4 19 x f6 (the pawn ending arising after 19 x c6 x c6 20 x c6 x b6 is drawn because Black has the distant opposition: 21 x f6 x b6! 22 x f5 x b7 =) 19...x d3 20 x e6 x c1 21 b4 x b4 22 x b4 x f3 23 x f5 (23 x d3 x d2 =) 23...x c5 =.

&\text{b) 6 g5 x h5 7 x h5 x f7 8 g4 x f4 (8...x g7 9 f5 x f7 10 x f6 x g6 11 gxf6 x f6 12 x h5 x e7 13 x g6 x c7 14 x x b6 x a6 =) 9 x f4 x e7 10 x b2 x c7 11 x d3 x e8 (11...x b5 12 x g6 x f6 13 x e5+ x d4 14 x e5 x c4 15 x b4 x a4 16 x e4 x f7 17 x f5 x a8 18 x f4 x e6 19 x c4 x d6 =) 12 x f2 (12 x f6+ x f6 13 x e5+ x c4 14 x x e5? x f5+ 15 x e4 x d6 =+) 12...x g7 13 x g6 x f6 14 x g4+ x e7 15 x g5 x h5 16 x x g6 x g3 17 x f2 (17...x e5 18 x e5 x e2 =) 17...x e2 18 x d3 x g3 and Black should hold the position.

&\text{6 x g5 x f5 7 h5 x e7} \]

7...x f6?! sets a trap since 8 x e3? allows the defence 8...x c7 9 x d1 b5 10 x e3 b4 11 x f4 x e8 =. Instead White’s king should head for the queenside first; then he wins in similar fashion to the game continuation.

8 x c3 x c7 9 x d1 x e8

Now the defence 9...b5 isn’t sufficient any more: 10 x e3 b4 11 x f5+ x d7 (11...x f6 12 x d6 x g7 (12...x a6 13 x f5 ++) 13 x b7 x a6 14 d6 ++) 12 x h6 x e7 (12...x e8 13 x g8 ++) 13 x f5 ++.

10 x e3 x g7 11 x e2 x d7 12 x d3 x c7 13 x e2 x e8 14 b4 x e7 15 x b3 x b7 16 x a4 x b8

Or:

16...x a6 17 x f5 x f5 18 gxf5 g4 19 f6 g3 20 f7 g2 21 f8 g1 22 Wa8#.

16...x b4 17 x x b4 x b8 18 x b5 x b7 19 x f5 x f5 20 x e5 e4 (20...x c7 21 f6 x d7 22 x b6 e2 23 c5 x d5 24 x f7 x e7 25 x e6 ++++) 21 f6 e3 22 f7 e2 23 f8 x f3 24 x f3 x f7+ followed by x c6 and mate.

17 x b5 x b5 18 x a5 x b7

18...x a7 19 x f5 x f5 20 gxf5 x g4 21 f6 g3 22 f7 g2 23 f8 x g1 24 x f7+ x a8 25 x b6 x b1 26 x c6 ++.

19 x a6 x e8

22...x e8 23 x c7 x c7 24 x c6 ++.

23 x f5 x f6 24 x h6 x e4 25 x f5 x f6 26 x h4

26...x h7 27 x g3 x f6 28 x e4 x h7 (28...x f7 29 x c6 x f7 30 x d6+ x g6 31 x f4 x d2 6 +++) 29 x f6 x f8 30 x x g5 ++.

27 x b6 x h7 28 x b5 1-0

Black resigned due to 28...x f6 29 x a4 x e8 (29...x h7 30 x b3 x f6 31 x c2 x h7 32 x d2 x f6 33 x e2 x h7 34 x g3 x f6 35 x e4++) 30 x d6+ x f8 31 x f5 x f7 32 d6 ++.

Sometimes the attacking side can even sacrifice the knight, as in the following very famous example:

\[
\text{W} \quad \text{B} \quad \text{K} \quad \text{O} \quad \text{P} \\
\begin{array}{c}
3.57
\end{array}
\]

L.Alburt – K.Lerner
Kiev 1978

Black threatens to advance his dangerous e-pawn, but White strikes first:

1 x e5!! bx e5 2 b4! axb4

Or:

a) 2...x cxb4 3 c5 x e4 4 d7 b3 + 5 x b2 ++ as the pawn promotes.

b) 2...x d7 3 bx a5 x f2 4 a6 x e4 5 a7 e3 6 a8 x e2 7 x e4 x f1+ x x e1 9 x b8 10 x c3 ++.

c) 2...e4 3 bx c5 x f3 4 c6 e5 5 d7 x d7 6 x d7 e2 7 d8 x e1 8 x d3+ x g4 9 x d1++.
3 a5 e4 4 a6 d2 f2 5 a7 e3 6 a8 w e2 7 w f8
e1 w 8 w x f6+ g3 9 w g5+ h3
9...f3 10 d5+ g3 11 w d3+ h4 12 d7
d2 f2+ b3 ++.
10 w d2 w a1
10...b3+ 11 c3 w a1+ 12 x b3 w b1+ 13
w a4 ++.
11 d7 w a2+ 12 d1 w b3+ 13 c1 w a3+
14 d1 w b3+ 15 e2! w g4 16 w d1!
Not 16 d8 w? w f3+ 17 e1 w h1+ with per-
petual check.
16...w xc4+ 17 w e3+ 1-0

Exercises
(Solutions on pages 369-71)

Rules and Principles: Knight vs
Knight

In summary, we would like to stress the follow-
ing points:

1) Botvinnik’s principle: knight endings are
really pawn endings. The knight is unable to
lose a tempo and an extra pawn usually means a
lot (see, e.g., 3.47, 3.48 and E3.04).

2) Keep the knight as flexible as possible. If
it is stuck on one circuit it can find it extremely
difficult to reach certain squares (study 3.46
and 3.53).

3) The side with the advantage sacrifices the
minor piece more often than in any other type
of ending (compare E3.07, 3.52 and 3.57).

4) Rook’s pawns are extremely dangerous
since the knight has great difficulties stopping
them (see, e.g., 3.02, 3.04, 3.36 and 3.48).

Reference works

Encyclopaedia of Chess Endings (ECE),
Bishop and Knight Endings volume, Nicosia
1993

Läufer- und Springerendspiele (Av), Aver-
bakh, Sportverlag Berlin 1987

Secrets of Minor-Piece Endings, Nunn,
Batsford 1995

The position looks simple, but the solution is
incredibly difficult!

The material is very reduced, which greatly
increases White’s drawing chances. However,
his knight is a long way from the action. How
should Black continue?
4 Basic Structure

The bishop is the only piece on both sides that can only view diagonals of the board. When it moves, the bishop's movement is limited to a single file or rank, so it can fulfill certain functions.

Our chapter will be divided into:
4.1: Bishop's Range
4.2: Same
4.3: Opposite

4.1 Bishop's Range

Our topics so far:
A: Bishop's Range
B: Fortresses
C: Worse
D: Pawn
E: The Importance of Bishop
F: Combinations

A) Bishop's Range

There is usually a danger when reaching a certain position, but trouble remains
4 Bishop Endings

The bishop is a long-range piece and can fight on both sides of the board at the same time, but can only visit half of the squares of the board. When it moves, it retains control over one of the diagonals on which it stood; therefore, if the bishop's important tasks all lie on one diagonal, it can fulfill them without falling into zugzwang.

Our chapter divides naturally into:
4.1: Bishop vs Pawns 93
4.2: Same-Coloured Bishop Endings 107
4.3: Opposite-Coloured Bishop Endings 118

4.1 Bishop vs Pawns

Our topics are:
A: Bishop vs Pawn(s) 93
B: Fortresses 96
C: Wrong Rook’s Pawn 98
D: Pawns on One Wing 100
E: The Principle of One Diagonal 102
F: Complicated Cases 103

A) Bishop vs Pawn(s)

There is usually no problem for the bishop to reach a certain diagonal and stop a single pawn, but trouble may arise if the bishop is obstructed:

1 \( \text{e}4! \text{h}4 2 \text{f}3! +-- \\
\text{Due to the terrible position of Black's king, the bishop is unable to reach the g1-a7 diagonal.}

By the way, the original study is \( \text{w}e4, \text{a}4, g4; \text{b}f6, \text{g}7 \) (Av 18, ECE 141): 1 a5! \( \text{f}8 2 \text{d}5! \text{h}6 3 g5+! \) and after 3...\( \text{x}g5 \) we have reached 4.01.

When facing two pawns, the bishop needs the help of its king to achieve the draw. In most cases a simple division of the tasks is sufficient. The bishop stops one pawn (often the more advanced one), while the king takes care of the other one.

The following position is critical:

\[\text{W} \]

\[\text{L.van Wely – Z.Almasi}
\text{Groningen 1995}\]

Black to move would walk into the h-pawn’s square, drawing. But in the game it was White to play: 1 \text{h}4! 1-0. The bishop is torn in two. It is very important to remember this deflection theme: ‘last stop’. \textbf{Rule: if the bishop has a vital task on one diagonal (last stop c7) it loses all power on the other diagonal – here control of h4. Of course 1 c7?? \text{x}c7!= and 1 \text{e}8? \text{a}5! 2 \text{h}4 \text{e}5 (the attack on c6 wins the missing tempo!) 3 \text{d}7 \text{d}5 4 \text{h}5 \text{e}5!= are insufficient to win.}
The outcome against two connected passed pawns depends on the ability of the defending king to help its bishop:

![Diagram](image)

G. Sax – G. Lijsterink
Amsterdam OHR 1984

4.03

B

W

4.04

B. Gelfand – R. Hübner
Munich 1992

The white pawns supported by their king look menacing, but with Black to move his king is just close enough:

1...\text{\#e}6

1...\text{\#f}2 2 \text{h}5 \text{\#e}3+ 3 \text{\#g}6 \text{\#e}6 4 \text{h}6 \text{\#d}5 5 \\
\text{h}7 \text{\#c}3! =

2 \text{g}5

2 \text{\#g}6 \text{\#e}7 3 \text{g}5 \text{\#f}2! 4 \text{h}5 \text{\#e}3 5 \text{h}6 \text{\#xg}5 =

2...\text{\#e}3?

A pointless move. There were in fact three ways to draw:

a) The surprising 2...\text{\#c}5 3 \text{g}6 \text{\#f}8+! 4 \text{g}7 \\
\text{\#f}7! =

b) The standard method: 2...\text{\#f}5 3 \text{g}6 \text{\#d}4! 4 \text{h}5 \text{\#g}4! (in perfect harmony, the bishop stops the more advanced pawn, and the king the more backward one; we find this principle again in the ending rook vs two connected pawns) 5 \text{g}7 \\
\text{\#xg}7+! =

c) 2...\text{\#d}4 3 \text{h}5 \text{\#e}3 (or 3...\text{\#f}5 = as above) 4 \text{\#g}6 \text{\#xg}5 (an additional possibility with a rook's pawn; 4...\text{\#c}7 5 \text{h}6 \text{\#f}8 6 \text{h}7 \text{\#d}4! =) 5 \\
\text{\#xg}5 \text{\#f}7 =

3 \text{\#h}7! \text{\#f}5 4 \text{g}6! \text{\#d}4 5 \text{h}5! 1-0

Black can't prevent the pawns from advancing by \text{h}6 and \text{g}7.

If White is to move, he wins with 1 \text{g}5! \text{\#e}6

(1...\text{\#f}2 2 \text{g}6! \text{\#xh}4 3 \text{g}7+--; 1...\text{\#e}3 2 \text{\#h}7 +) 2 \text{\#h}7 \text{\#d}4 3 \text{g}6 +–, when Black's king arrives too late.

With three pawns the winning chances increase of course, but if the defending king is in front of the pawns it is usually drawn:

Hübner made a deep analysis in CBM 30, from which we have drawn extensively:

1 \text{\#e}6

Offering the chance to attack the pawns from behind.

1...\text{\#e}5

For 1...\text{\#f}4 2 \text{\#e}8 \text{\#f}6 3 \text{\#d}4 \text{e}5+ 4 \text{\#e}3 see the main line. 1...\text{\#f}4? makes it easy: 2 \text{\#e}8 =.

2 \text{\#d}3 \text{f}5 3 \text{\#e}3 \text{\#f}6 4 \text{\#e}8 \text{e}4

4...\text{g}5 5 \text{\#d}7 \text{g}4 6 \text{\#d}2 (6 \text{\#c}8 =) 6...\text{\#g}5 7 \\
\text{\#c}8 and now:

a) 7...\text{\#f}4 8 \text{\#b}7 \text{\#f}6 (8...\text{\#f}5 9 \text{\#c}8+ =;
8...\text{\#d}4 9 \text{\#g}2 \text{f}3+ 10 \text{\#xf}3 =) 9 \text{\#e}4 \text{\#e}6 10 \\
\text{\#e}2 \text{\#d}6 11 \text{\#f}5 \text{g}3 12 \text{\#f}3 \text{\#d}5 13 \text{\#h}3 =. \\

White has a perfect blockade and as the bishop controls the g-pawn, 13...\text{\#e}4+ can be met by 14
\text{\#xf}4.

b) 7...\text{\#e}4 8 \text{\#b}7 \text{\#h}4 (8...\text{\#f}4 9 \text{\#c}8 =) 9 \\
\text{\#g}2 and here:

b1) 9...\text{\#e}3 10 \text{\#a}6 \text{\#g}5 (10...\text{\#f}4 11 \text{\#e}2 =)

11 \text{\#e}2 (11 \text{\#d}3 \text{\#f}4 12 \text{\#e}2 \text{\#e}4 13 \text{\#g}3 =)

11...\text{\#f}4 12 \text{\#d}3 \text{\#e}5 13 \text{\#g}3 =

b2) 9...\text{\#g}3 10 \text{\#c}6 \text{\#g}4 11 \text{\#d}7 \text{c}3 (11...\text{\#f}4 12 \\
\text{\#xf}5 \text{\#xf}5 13 \text{\#xg}3 =) 12 \text{\#b}5 (12 \\
\text{\#xf}5+? \text{\#xf}5 13 \text{\#f}3 \text{g}2 14 \text{\#xg}2 \text{\#e}4 15 \\
\text{\#f}1 \text{\#f}3++; see 2.03) 12...\text{\#f}4 13 \text{\#e}2+ \text{\#f}5 14 \\
\text{\#f}3 \text{\#e}5 15 \text{\#f}1 \text{\#d}4 16 \text{\#e}2 =.

5 \text{\#d}4 \text{g}5 6 \text{\#b}5 \text{g}4 7 \text{\#f}1 \text{\#g}5 8 \text{\#e}3!

Naturally, White couldn't allow ...\text{\#f}4. With careful play he has finally robbed the pawns of their flexibility.
8...h4
8...g3 9 h3 =.
9 f4 e3 10 xe3 (NC) 10...g3 11 h5 f4+ 12 e2 xg2 13 c6+ f3+ 14 e3! g3 15 d5 f2 16 xg2! 1/2-1/2
Averbakh discusses bishop vs three connected passed pawns in great detail (see Av 23-38).

If the three pawns are not connected, the defending pieces must occupy good positions in order to reach a draw:

4.05A

B xf3? c3 16 e3 a3! 17 xd3 b2 -->.
6 d7 f4 1/2-1/2
A small change in the position might change the result as well:

4.05

S. Skembris – A. Vragoteris
Greek Ch 1993

We see again that the bishop is very useful in attacking from behind, thus limiting the actions of the black king:
1 c4 2 e2?
2 c8! was necessary immediately. 2...e4
3 e4 transposes to the game.

2...e4?
Black misses his chance: 2...g3! 3 b7 d4
4 x d5 c3 5 c4 f4 6 x d3 (6 x d3 f3 7 x d4 c2 -->) 6...f3+ 7 e1 f2 8 e4 f4 -->.
3 c8! e5 4 d7
4 f3 d4 (4...c3 5 x e3 d4+ 6 h3 f4 7 d7 =) 5 a6 x d5 6 x c8 d3 7 c5 f4 (NC) 8 x f2! c3 9 e1! x e3 10 c1 =.
4 e4 5 c8 (D)
5...e5
5 f4 6 g4! d4 7 f3+ e5 8 d2! d6 9 x c2 x e5 10 c2d2! (easier is 10 h5 b4 11 c2d2 =) 10 c4 b4 11 c2d3+! (11 c3 12 d3 b3 13 d1+ b2 14 x d4 =) 12 c2d2 b3 13 c2d5 (13 c4 =) 13 f3 14 c3! (14 xf3? c3+ 15 x d3 c2 -->) 14...b4 15 x f3 = (15...a3 16 b3 a4 17 e4! b4 18 e5 xd4 14 c4 15 c4 b3 16 c1 c3 17 x d3 g2 -->.

4.06

G. Lukasiewicz – D. Gurevich
Geneva 1997

1...c3 0-1
Black’s active king prevents the necessary communication between the white pieces, but the resignation, while objectively justified, is premature. Here are some sample variations:

a) 2 e6 d4 3 c4 f4 4 c4 g4 5 d3 (5 c5 g3 6 x d5 d3 -->) 5...d1 =.

b) 2 c3 d4+ 3 c4 f4 4 c4 d3 (4 c5 d3 5 a6 d2 6 c2 g4 -->) 4...g4 5 c4 e4 6 c7 g3 7 c8 c3 8 d7 (8 d3 x f3 -->) 8...f4 9 c8 c2 10 d2 d3 11 b3 g3 12 c2 e5 13 b7 x d4 14 c6 c4 15 c4 x b3 16 c1 c3 17 x d3 g2 -->.
We end this section with an amusing position. Against four or more healthy pawns the bishop is usually helpless, but what about eight pawns?

\[ \text{\textcopyright xeb8! 2 \textcopyright c6 \textcopyright c8 =; see 2.03) 1...\textcopyright a8! 2 \textcopyright c6 stalemate!} \]

The most important case is with a wrong rook’s pawn:

With a light-squared bishop White would give check and queen the pawn. However, the dark-squared bishop can’t control the queening square. Thus it’s a positional draw as Black’s king can’t be driven out of the corner: 1 \textcopyright c5 \textcopyright b8 2 \textcopyright c6 \textcopyright a8! (just stay in the corner!) 3 \textcopyright b6 \textcopyright b8 4 \textcopyright d6+ \textcopyright a8! =.

**Rule:** with the defending king on the queening square, king, bishop and rook’s pawn only win if the bishop controls the corner square. Or shorter: bishop and wrong rook’s pawn only draw. This rule is the foundation of the play in many other positions and is therefore of crucial importance. We deal with the resulting problems in various ways throughout the book.

The following fortresses are worth remembering (diagrams 4.10A-4.10F):

**Diagram 4.10A:** Nothing would be changed if the blocked pawns were the base of a longer pawn-chain; e.g., add white pawns on b5 and c4 and black pawns on b6 and c5.

**Diagram 4.10C:** The pawns could be the base of a longer pawn-chain; e.g., add white pawns on c5 and d4 and black pawns on c6 and d5.

**Diagram 4.10D:** 1 \textcopyright c6?! \textcopyright b8! 2 \textcopyright d7 bxc6! =. The initial position is also drawn with \textcopyright a5 and b\textcopyright a6 added due to 2.31H.

**Diagram 4.10F:** 1 \textcopyright c7 \textcopyright a7! 2 \textcopyright c8 \textcopyright a8! 3 \textcopyright b8 b5 4 axb6 stalemate.

**B) Fortresses**

As the bishop can only visit half of the squares on the board, it is more likely that the defender can construct a fortress when fighting against a bishop than when facing a knight. We start with a real exception:

The unfortunate position of White’s bishop makes progress impossible: 1 \textcopyright b5 (1 \textcopyright b8
C) Wrong Rook's Pawn

We shall now discuss the problems caused by the presence of a wrong rook's pawn (remember 4.09) in more detail.

Rauzer's drawing zone

With a pair of blocked rook's pawns there is one very special situation, analysed by Rauzer in 1928:

\[
\begin{array}{c}
\begin{tikzpicture}
  \draw (0,0) grid (8,8);
  \draw[black] (1,1) -- (7,7);
  \draw[black] (1,7) -- (7,1);
  \fill[red] (1,1) circle (0.1);
  \fill[red] (7,7) circle (0.1);
  \fill[blue] (2,2) circle (0.1);
  \fill[blue] (6,6) circle (0.1);
\end{tikzpicture}
\end{array}
\]

4.11

N.Short – A.Yermolinsky
Wijk aan Zee 1997

It is easy to see that the position is drawn if White's king reaches the h1-corner and stays there. If White's king can't manage to get there it is much more difficult. The area below the line in the above diagram is called 'Rauzer's drawing zone'.

Averbakh gave the following guidelines:

1) It is not enough for White to be inside the zone – he has to reach the corner in time.

2) With the bishop controlling the a7-g1 diagonal, White has to be able to answer ...\(g4\) with \(c2\).

Sometimes it is possible for the defender to leave the zone if he can make sure that he will return to it (see the game after 20...\(c3\)).

The game went:

1\(c1\) \(c2\) 2\(c2\) \(c2\) \(d2\) 3\(h3\) \(h3\) 4\(b2\)
\(a5\) 5\(b3\) \(d2\) 6\(b2\) \(c3\) 7\(b3\) \(g7\) 8\(a3\) \(c2\) \(a2\)

If White leaves the drawing zone here then he loses: 9\(a4\) \(f8\) 10\(a5\) \(h3\) 11\(h5\) \(b4\) (a key manoeuvre to drive the king back)
12\(c6\) \(c4\) 13\(b6\) \(d2\) 14\(c6\) \(c3\) 15\(d6\) \(g7\)!

With an additional knight's pawn, the drawing zone changes considerably:

\[
\begin{array}{c}
\begin{tikzpicture}
  \draw (0,0) grid (8,8);
  \draw[black] (1,1) -- (7,7);
  \draw[black] (1,7) -- (7,1);
  \fill[red] (1,1) circle (0.1);
  \fill[red] (7,7) circle (0.1);
  \fill[blue] (2,2) circle (0.1);
  \fill[blue] (6,6) circle (0.1);
  \fill[red] (1,5) circle (0.1);
  \fill[blue] (5,1) circle (0.1);
\end{tikzpicture}
\end{array}
\]

4.11A

M.Euwe – Baay
Amsterdam 1921

Averbakh, including Black's ...\(h6\) winning move.

With a knight's pawn on the same square, the next move may get handy. The square \(a2\) is to be considered carefully, e.g., \(h3\) \(g5\), in which case the whole idea was probably more of an example than a serious threat.
Averbakh gave the zone (ECE 176, Av 93, including h6, but if White’s king can move to f6 Black loses if the bishop can control f8 or h6 on the next move) in 1978. Black loses if he can’t get back inside the zone. He has always to be careful not to allow White’s bishop to cage him; e.g., wxe6, xd7; bxe8 and Black to move, which can also happen on h7 or h5. White, on the other hand, has to watch out for...b4, especially if Black’s king is near b5.

1 2e5 xe5 2 2d6+ xe6 3 2g3 e7!
3...b4? 4 axb4 a3 5 xe3 a2 6 xe3 =-. 
4 2d5 xe7 5 xe6 xe6 6 xe6 7 xe7 7 xe5 e7 = (not 9...xe8?? 10 xe7 =-).
7...xe6?
7...b4! is correct: 8 axb4 xa8 = or 8 axb4 xe6 =.
8 xe6 a7 9 xe7 1-0
Due to 9...xe8 10 xe6 b4 11 axb4 a3 12 e5 a2 13 b5 a1= 14 xa1 =-

The next position is a little bit easier:

4.12 R.Dautov – D.Sermek
Dresden Z 1998

White has a wrong rook’s pawn so care is required. However, the doubled g-pawns allow the following winning plan:
1) Pick up the a-pawn.
2) Stalemate Black’s king in the h8-corner, which forces ...g5.
3) Stalemate the king again, forcing ...g6.
4) The same procedure ultimately forces the transformation of the rook’s pawn into a winning knight’s pawn.

1...xe5 2 e8

2 2xg6?? is only drawn due to the fortress of 4.10F.
2...a3 3 h3 d4 4 xa3 e5 5 h3 f6 6 xe4 g5 7 d5 h6 8 e6 h7 9 f7 h8 10 f8 h7 11 f7 h8
11...h6 loses normally since Black’s king doesn’t get back into the corner: 12 g8 g5 13 xg7 h4 14 xe6 =-

12 g8 1-0
Sermek resigned, not waiting for the procedure to be finished:

12...g5 13 xe6
13 f7?? is the wrong way to do it: 13...g4! 14 hgxg4 g5 15 f6 xg8 16 xg5 g7 = (see 2.06).

13...h7 14 f7 h8
14...h6 15 g8 =-
15 g8 g6 16 f7 h7 17 e6 h8 18 g8 g4 19 hgxg4 g5 20 e6 =-

A similar ending occurred in 4.12A N.Short-G.Kasparov, Belgrade 1989: wxd2, h2, b4; b3g1, b5, A6. 1 e1 g2 2 d1 e3 3 d2 e4 d3 e3 5 c2 e6 c1 d3 7 b3 e1 8 b2 d2 9 a1 c2 10 a2 c1 11 a1 b1 0-1.

In the next example Black’s king is just in time to prevent White’s from reaching the saving corner:

4.13 I.Ibragimov – S.Rublevsky
Elista 1998

1 d3
1 f4 xh4 2 f5 h5 3 f6 g5 4 d3 f4 5 e2 (5 e5 b2 6 e2 g3 7 f1 h2 8 f7 a3 9 f2 h4 10 f1 c5 =) 5...g3 6 f1

\textbf{D) Pawns on One Wing}

In general there are no problems winning if the attacker can preserve at least one pawn from the defender's attempts to exchange all the pawns:

\begin{center}
\textbf{4.14} \hspace{1cm} MChess Pro 3.85 – A.Yermolinsky
\textit{Boston Harvard Cup 1994}
\end{center}

With the right rook's pawn and the defender's pawns safely blockaded, there are no real problems:

1...\texttt{d5} 2 \texttt{d3} \texttt{e6} 3 \texttt{e3} \texttt{f5} 4 \texttt{f3} \texttt{d4}
5 \texttt{f2} \texttt{g4} 6 \texttt{f1} \texttt{e3} 7 \texttt{g2} \texttt{e2} 8 \texttt{f5}
9 \texttt{xg1} \texttt{f3} 9 \texttt{h2} \texttt{xf2} 10 \texttt{h1} \texttt{xg3} ++.
8...\texttt{xf5} 9 \texttt{g4}!!?
The computer sets a last desperate trap.
9...\texttt{g4}?
9...\texttt{hxg4}? 10 \texttt{g3} \texttt{e3} 11 \texttt{h5} \texttt{e4} 12 \texttt{h6} =.
10 \texttt{g3} \texttt{e3} 11 \texttt{g2} \texttt{f4} 12 \texttt{f2} \texttt{f3} 13
\texttt{f1} \texttt{g3} 14 \texttt{e1} \texttt{xh4} 15 \texttt{f2} \texttt{g4} 16 \texttt{e3}
\texttt{g3} 17 \texttt{d4} \texttt{h4} 0-1

In the next example a bit of care is required as White has a wrong rook’s pawn and his king is far away:

\begin{center}
\textbf{4.16} \hspace{1cm} V>Loginov – O.Loskutov
\textit{St Petersburg 1996}
\end{center}

1 \texttt{h6} \texttt{d3} 2 \texttt{g7} \texttt{g6} 3 \texttt{f4} \texttt{b2} 4 \texttt{f6}

\begin{center}
\textbf{4.15} \hspace{1cm} I.Sokolov – R.Dautov
\textit{Ter Apel 1995}
\end{center}

1...\texttt{e5}
1...\texttt{h5} 2 \texttt{f3} \texttt{h4} 3 \texttt{b6} \texttt{e5} 4 \texttt{c5} ++.
2 \texttt{f3} \texttt{d4} 3 \texttt{b5} \texttt{e3} 4 \texttt{c4} \texttt{f2} 5 \texttt{d4}
\texttt{h5} 6 \texttt{e4}
6 \texttt{xh5}?? \texttt{xg4} 7 \texttt{g4} \texttt{f3} =.
6...\texttt{g3}
6...\texttt{g4} 7 \texttt{hxg4} \texttt{hxg4} 8 \texttt{xf4} ++ (Dautov in
\textit{CBM 47}).
7 \texttt{e5} \texttt{g4} 8 \texttt{hxg4} \texttt{hxg4} 9 \texttt{e4}! 1-0
Dautov resigned as he is in a fatal zugzwang
after 9...\texttt{gxh3} 10 \texttt{gxh3} ++.

The following example serves as a warning: when you sacrifice your bishop, you have to be sure that it works.
4 f5 ♞xf5 5 ♞xf7 ♜c3 and Black wins without difficulty as he has the right rook's pawn.

4...♜c3 5 f5 ♞d4??
5...♘h5!? was called for: 6 ♞g7 (6 g6 ♞xg6 7 fxg6 hXg6 —+) 6...♗d4! (6...♖g4? 7 g6 fxg6 8 fxg6 h5 9 ♚f6! ♜d1 10 ♜g5 =) 7 ♞xh7 ♞e5 8 ♞h6 (8 g6 f6 9 ♞h6 ♜d1 10 g7 ♞b3 11 ♞g6 ♞g8 =) 8...♗e2 9 ♞g7 ♜c4 10 f6 ♞xf5 11 ♞h6 ♞b3 (zugzwang — these little waiting moves occur quite often; not, of course, 11...♗d3?? 12 g6! =) 12 ♞h5 ♛c2 13 ♞h6 (now after 13 g6, 13...fxg6+ is check!) 13...♩g4 14 ♛g7 ♛g6 =.

6 fxg6 fxg6 7 ♞g7 1-0
Loskutov resigned due to 7...♗e5 8 ♞xh7 ♞f5 9 ♞h6 —+ (2.16).

A wrong rook’s pawn again causes a lot of trouble in the next example:

4...♜f6!!
Brilliantly dealing with White's threat of ♞h3 (protecting h4), g3-g4-g5 and h5, resulting in the wrong rook’s pawn. 4...♜e4? allows White to draw by 5 h5 g5 6 h6 = or 5 ♞h3 ♜f3 6 g4 ♜c7 7 g5 ♜d8 8 h5 =.
5 ♞h3 ♞g7! 6 ♞g4
6 ♞g4 ♞h6 7 ♞h3 ♞h5 8 g4+ ♞h6 transposes to the game.
6...♜h6! 7 ♞g3
Now 7 g5+ can be answered with 7...♖h5 8 ♞g3 ♜c7+ (8...♗xg5 9 hxg5 ♞xg5 —+ also wins) 9 ♞h3 ♜d6 =.
7...♗e7 8 ♞h3
8 h5 g5! 9 ♞f3 ♞g7 10 ♞e4 ♞f6 11 ♞d5 ♞f8 12 ♞e4 ♞e6 13 ♞d4 ♞h6 14 ♞e4 ♞g7 =.
8...♗d4 0-1
Due to 9 ♞g3 ♕e1+ 10 ♞h3 ♘f2 (zugzwang) 11 h5 ♘g5 =.

Similar problems occurred in Portisch-Stein and Shirov-Mastriana (ECE 222 and 234 respectively).

With very few pawns left, one has to watch out carefully for possibilities to reach a fortress:

The pawns are blockaded, but there is still a trick:
1...♗e3?!
1...♗d6 2 ♞b8+ ♞e6 (2...♗c6 3 ♞f4 ♞h5 4 ♞e5 —+) 3 ♞f4 ♞d7 4 ♞d5 ♞e7 5 ♞e5 ♘f7 6 ♞d6 =.
2 ♞xe3?
After this mistake, Black’s active king secures the draw. White should play 2. \( \text{e}5! \text{e}2 \text{e}4 \text{b}4, \) and now:

a) 3. \( \text{f}4 \text{e}4 \text{f}3 \text{e}1! + (5 \text{e}e3?? \text{e}f5 \text{d}2 \text{e}f5) = \).

b) 3. \( \text{d}7 \text{e}5 \text{e}6 \text{f}6 \text{d}5 \text{e}x \text{e}6 \text{e}4 \text{h}5 \text{f}4 \text{g}4 \text{f}3 \text{e}c1 \text{e}e3 (9... \text{c}5 \text{f}2 \text{c}6 \text{e}11 \text{h}5 +) - 10 \text{g}3 \text{d}5 \text{--} wins by one tempo.

2... \( \text{d}5 \text{b}8 \text{e}4 \text{f}4 \text{e}5 \)

4. \( \text{e}4 \text{e}4 \text{d}5 \text{c}7 \text{d}5 \text{b}6 \text{d}6 =. \)

4. \( \text{d}5 \text{b}2 \text{e}4 \text{d}4 \text{c}4 \text{d}5 \)

Not 6... \( \text{f}4 ? 7 \text{e}e4 \text{f}3 \text{d}8 \text{e}3 \text{d}5 = \) and the pawns fall.

7. \( \text{d}3 \text{e}6 \text{c}4 \text{f}4! \)

The point: Black’s king can’t stay on \( c4 \) or \( d5 \) any longer, but for a moment White has left the kingside open and the bishop has to protect his pawn from the \( f6-d8 \) diagonal, and so is unable to deal with the \( f \)-pawn as well. \( 8... \text{d}6? \) is bad due to \( 9 \text{d}3 \text{e}5 \text{c}5 \text{d}4 \text{d}4 \text{d}6 \text{b}4 \text{d}4 \text{d}12 \text{d}e5 +. \)

9. \( \text{f}6 \text{f}5 \text{c}3 \text{g}3 \text{c}12 \text{f}1 \text{f}3 \text{f}3 \text{g}3 \text{i}4 \text{g}1 \text{f}3 \text{a}5 \text{f}2+ \text{h}1 \text{h}3 \text{b}6 \text{d}3 \text{g}3 \text{f}3 \text{f}3 \text{f}3 \text{f}4 \text{g}4 \text{d}4 =. \)

17. 18... \( \text{f}4 \text{d}8 \text{f}3 \text{f}3 \text{a}5 \text{g}4 \text{f}4 1/2-1/2 \)

There follow two examples on the theme ‘Averbakh’s Barrier’ (Av 85):

\[ \]
F) Complicated Cases

We end the discussion of bishop + pawns vs pawns with four complicated battles:

1. \( \text{d4!} \)

1. \( \text{f3?? \text{g6} 2 \text{g7 c5 =}. The bishop is badly placed on g7. It cannot protect the h-pawn while also dealing with Black's pawns.} \)

1. \( \text{g6} \)

1. \( \text{f4 2 h7 +-} \)

2. \( \text{c3 d5 3 f3 d4 4 f4 c5 5 e2 c4 6 d2 f7 7 c2 f6 8 b2 1-0} \)

In view of \( \text{a3-b4}, \ e.g., 8...\text{g6 9 a3 c3 10 b3 h7 11 c4 c2 12 xd4 +-}. \)

Black's pawns are harmless, while White's b-pawn is a hero:

1. \( b4 \text{d7} \)

1. \( b8 2 c6 \text{c8 3 b5 b8 4 b6 c8 5 b7+ b8 6 h1 +-}. \)

2. \( b5 \text{c6 3 b6 f3 4 xf3 e5 5 b7 e4 6 x e4+ e4 7 b8+ 1-0} \)

Due to 7...\( \text{h1} 8 \text{a8+ +-}. \)

Sometimes one has to choose the right diagonal first:

Black has to act very precisely in order to win. His main weapons are waiting moves with the bishop, which step by step force Black's king back or provoke a fatal pawn move:

1. \( \text{f6} 2 \text{d6 e4 3 d7 g2} \)

3. \( \text{f5} \) wins as in the note to White's 7th move. Gipslis probably wanted to gain some time on the clock.

4. \( \text{d6 f3 5 d7 d5 6 d6 c4 7 d5} \)

The first step: White has been forced to move his d-pawn. 7 \( \text{d7} \) is no better: 7...\( \text{f5}! 8 \text{d6 xf4 9 e6 g5 10 d5 g4 11 d6 f5+ 12 f6 c8 +-}. \)

7. \( \text{g2} 8 \text{c5 c7!} 9 h4 \)

9...\( \text{f3} 10 \text{c6 f6 11 e5} \)

11...\( \text{f5} 12 \text{d6} \)

12 d6 \( \text{c6 13 f5+ gxf5 +-}. \)
FUNDAMENTAL CHESS ENDINGS

12...g2 13 c5 xf4 0-1
Djurhuus resigned due to 14 d6 h3 15 c6 g3 16 d7 xxd7+ 17 xd7 xh4 ++.

If White were to move, he could draw with 1...e6! f5+ 2 e7 e4 3 e6 h6 (3...f8 4 f6 =) 4 d5 f5+ 5 e7 h5 6 d6 g4 7 f6 =.

We don't give too many variations in the next example as there are a lot of pawns left on the board:

In the game continuation Suba left his king too passive, but Black can draw this position by denying White's king an entry.
1...h5 2 g2 g6 3 f8 f6 4 f3 f7 5 a3 g5?

The desire to exchange pawns is understandable, but it is now more difficult to keep the position closed. 5...e5 followed by...e6 was called for; e.g., 6 e4 e6 7 f4 exf4 8 gxf4 (8 xf4 a4 =) 8...g6 9 e5 a4 10 a3 g5 11 fg5 fg5 12 hxg5 h4 13 f4 h3 14 g3 f5 15 e7 a3 =.
6 e4 g6?!
6...g4?! is tougher.
7 f4! a4
Or:
a) 7...gxh4 8 gxh4 a4 9 f5+ f7 10 c5 exf5+ (10...e5 11 d3 +- ) 11 xxf5 g7 12 e6 g6 13 e7 ++.
b) 7...g4 8 f5+ f7 (8...exf5+ 9 f4 a4 10 c5 g7 11 xf5 f7 12 a3 g7 13 e7 +) 9 c5 a4 10 a3 e5 11 d3 e8 12 c4 xd7 13 c5 ++.

8 fxg5 fxg5 9 e5 gxh4 10 gxh4 1-0
Suba resigned as his kingside pawns are doomed:
10...f7 11 c5 g6
11...e8 12 xxe6 d8 13 d6 e8 14 xc6 f7 15 b5 e6 16 a4 f5 17 e7 ++.
12 xe6 g7 13 f5
d6? f6 14 xc6 f5 15 b5 g4 16 e7 a3 =.
13 f7 14 a3 g7 15 g5 ++

The next two games were won by the side with the pawns. The first is almost an endgame study:

4.22

I.Sokolov – M.Suba
Antwerp 1996

4.23

A.Gershon – A.Rotshtein
Tel-Aviv 1997

Note how severely the pawns on b5 and d5 hamper the bishop.
1 b6! (NC) 1...d7 2 a6! c8+ 3 a7! g3 4 b8!!
Not 4 b6? f4 5 b8 (5 b7?? xb7! 6 xb7 e4! 7 c6 e5! ++) 5...a6! 6 a7! c8! =.
4...g4 5 c7
5 b6? f3! 6 c7 xd5! 7 b7 xb7! 8 xd6! =.
5...e2 6 b6! a6 7 b7
White could also have won by 7 xd6 f4 8 c7 ++.
7...xb7 8 xb7! f4 (2.17) 9 c7! 1-0
Ducet 9...e5 10 c61 ++.

The last example in this chapter should be drawn, but it is so difficult to play over the board that even a super-grandmaster such as Kamsky blundered.
The black pawns look threatening, but with careful play it would have been possible to deny Black's king access:

1...a3 2 b4 a2 3 c3 b4 4 a1 d6 5 c4?

White should play 5 h4! (Van der Sterren):

a) 5...b3 6 c4 and now:

a1) 6...f4? it is suddenly White who wins: 7 d4! (7 xb3? f3 --) 7...f3 8 c3 d5 9 xf3 c6 10 c4 d6?! 11 h2 c5 (11...e6 12 e5! ++) 12 d3 b4 13 d4 a4 (D).

6 h3

Wolff showed in CBM 39 that the alternatives also lose:

a) 6 d4 b5 7 d3 a4 8 c2 f4 ++.

b) 6 d4 f4 7 b3 d5 --.

c) 6 h4 f4 7 d3 d5 8 h8 f3 9 c3 c4 --.

b) 6 d4 h5 7 c3 (7 b3 f4 --) 7...e4 8 d2 f3 9 c2 g2 10 b3 f4 11 xa2 f3 12 d4 f2 13 xf2 xf2 14 b2 g3 15 c2 xb3 16 d2 g2 ++.

6...d5 7 xa2 f4 8 f6 f3 9 h4 d4 10 b3 e3 11 b4 f2 12 xf2+ xf2 0-1

The white king doesn't reach the saving square f1 in time.

Rules and Principles: Bishop vs Pawns

1) The principle of one diagonal (4.19, 4.20).
2) The bishop is a long-range piece and can fight on both wings. Loyd's position 4.08 demonstrates this in a superb way.
3) Be aware of the important draw with bishop and wrong rook's pawn vs king (4.09, 4.11, 4.12).
Reference works

*Encyclopaedia of Chess Endings* (ECE), Bishop and Knight Endings volume, Nicosia 1993

*Läufer- und Springerendspiele* (Av), Averbakh, Sportverlag Berlin 1987

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Exercises

*(Solutions on pages 371-3)*

**How can White avoid the known fortresses?**

In the game Black didn't manage to coordinate his pieces and soon resigned. Can you do better?

With you as the shepherd and the bishop as your dog, let's drive the sheep out of the corner! Give some sample variations.

True, you have the wrong rook's pawn, but nobody said that you have to let the black king into the saving corner!

White has just played g4, threatening to leave you with the wrong rook's pawn! How do you react, ...hxg4 or ...h4?

---

It's once again left.
We now move on to positions where both sides have a bishop. Endings with same- or opposite-coloured bishops are so different in evaluation and play that a strict separation is useful. We start with...

### 4.2 Same-Coloured Bishop Endings

A few thoughts first. As the bishops have the same colour, they often fight for the same squares. The stronger side can usually offer a bishop exchange to gain control over certain diagonals. The fight on the 32 uncontrolled squares is left to the kings and pawns. It is important to know that it can be very difficult to drive a defending king away from an uncontrolled square, especially if a check with a pawn isn’t available and the defending bishop is free, so that zugzwang is unlikely.

Let us think about the pawn-structure. There are pros and cons and a general rule could easily be misunderstood, but in most cases your pawn-chains are clearly better placed on the opposite colour to your bishop. This has the obvious advantage that they can’t be attacked by the opponent’s bishop and that they restrict the opponent’s king. You can then protect the ‘holes’ in between with your bishop or (in closed structures) attack the opponent’s pawn-chain yourself. A pawn-chain on your bishop’s colour can be protected by your bishop and sometimes severely restricts the opponent’s bishop in its actions, but there is a big disadvantage. The pawns are open to attack from both the opponent’s bishop and king, which can invade through the holes unprotected by the bishop and the pawns. You can then only deny the entrance with your own king, which often leads to zugzwang positions.

The topic is discussed as follows, as always starting with the most basic positions:

- **A:** Bishop + Pawn(s) vs Bishop
- **B:** Pawns on One Wing
- **C:** Pawns on Both Wings
- **D:** Important Motifs and Resources

#### A) Bishop + Pawn(s) vs Bishop

There are two basic defensive resources as the bishop can sacrifice itself for the pawn:
1) If the defending king reaches a square in front of the pawn opposite to the bishop’s colour, it is an ironclad draw.

2) If the defender’s king gets to the rear of the pawn as in 4.26, he can draw according to Centurini’s Rule.

We start with the case when the defender tries to get in front of the pawn:

4.26

\[ \text{V. Ivanchuk – B. Gelfand} \quad \text{Novgorod 1996} \]

1. \( \text{g}\text{7} \)

After 1. \( \text{g}\text{6} \) \( \text{e}\text{7} \) 2. \( \text{c}\text{4} \) \( \text{f}\text{8} \) = Black’s king gets in front of the pawn and no progress can be made whatsoever.

1...\( \text{c}\text{2} \)??

1...\( \text{c}\text{7} \)?? runs into 2. \( \text{f}\text{5} \) ! \( \text{g}\text{4} \) (2...\( \text{h}\text{5} \) 3. \( \text{b}\text{3} \) \( \text{e}\text{8} \) 4. \( \text{f}\text{6} \) ! \( \text{d}\text{6} \) 5. \( \text{c}\text{2} \) \( \text{e}\text{5} \) 6. \( \text{g}\text{6} \) !++) 3. \( \text{f}\text{6} \) ! \( \text{e}\text{6} \) 4. \( \text{f}\text{7} \) !++)

2. \( \text{f}\text{7} \) !

From \( \text{f}5 \) the bishop can escape on both diagonals if it is challenged. Not 2...\( \text{e}\text{4} \) ? 3. \( \text{g}\text{6} \) \( \text{d}\text{5} \) 4. \( \text{f}\text{5} \) !++.

3. \( \text{g}\text{6} \) \( \text{g}\text{4} \) 4. \( \text{f}\text{7} \) \( \text{h}\text{3} \) 5. \( \text{c}\text{2} \) \( \text{g}\text{4} \) 6. \( \text{b}\text{3} \) \( \text{f}\text{5} \) \( \frac{1}{2} \)-\( \frac{1}{2} \)

If the defending king can’t get in front of the pawn, the other principal method of defence is to go to the rear of the pawn. We deal with dark-squared bishops but Centurini’s Rule is valid analogously for light-squared bishops.

The next position illustrates Centurini’s Rule with the kings in vertical opposition. The black king controls the important \( \text{f6} \)-square and Black can’t fall into zugzwang as both the diagonals from \( \text{e7} \) are long enough (at least four squares).

4.25

1. \( \text{e}\text{7} \)

Blocking the pawn, so Black has time to change the bishop’s diagonal. This is why Black’s control of \( \text{f6} \) is so important – if White were able to play \( \text{f}\text{6} \) then he would win.

1...\( \text{e}\text{3} \) 2. \( \text{f}\text{6} \) \( \text{e}\text{5} \) !

Centurini’s Rule: if the passed pawn has advanced beyond the line, the attacker is winning as one of the diagonals is shorter than four squares and therefore not long enough to avoid a zugzwang position.

There are two exceptions to this rule, both given by Centurini in 1856: \( \text{w}\text{c}\text{e8} \), \( \text{h}\text{h6} \), \( \text{f7} \); \( \text{b}\text{c6} \), \( \text{d6} \) and \( \text{w}\text{g8} \), \( \text{e3} \), \( \text{h7} \); \( \text{b}\text{g6} \), \( \text{e5} \) are drawn whoever moves first (\text{Av} 169, \text{Av} 167). If the edge is near, the attacker has problems winning (see, e.g., Centurini’s position 0.01).

Halberstadt illustrated the fight of the kings to reach the opposition as in 4.26 with the following masterpiece (see next diagram):

1. \( \text{e}\text{4} \)!!

1...\( \text{d}\text{6} \) ? 2. \( \text{d}\text{5} \) ! \( \text{c}\text{4} \) 3...\( \text{c}\text{8} \) \( \text{d}\text{5} \) 4. \( \text{g}\text{5} \) \( \text{a}\text{5} \) 5. \( \text{f}\text{4} \) \( \text{c}\text{6} \) ! = draws by Centurini’s Rule.

1...\( \text{b}\text{4} \)

Or: 1...\( \text{f}\text{2} \) 2. \( \text{d}\text{5} \) ! \( \text{d}\text{3} \) \( \text{c}\text{6} \) !++; 1...\( \text{d}\text{2} \) 2. \( \text{f}\text{5} \) ! \( \text{e}\text{1} \) 3. \( \text{g}\text{5} \) ! \( \text{b}\text{4} \) 4. \( \text{g}\text{6} \) \( \text{d}\text{3} \) 5. \( \text{f}\text{7} \) ! \( \text{e}\text{1} \) 6. \( \text{c}\text{7} \) !++.

2. \( \text{d}\text{4} \)

White gains several tempi by using the route \( \text{c}\text{4}-\text{b}\text{5}-\text{b}\text{6}-\text{b}\text{7} \), because Black’s bishop always needs access to the \( \text{a5}-\text{d8} \) diagonal to parry White’s threat to free the queening square.

2...\( \text{f}\text{3} \) 3. \( \text{c}\text{4} \) ! \( \text{e}\text{1} \) 4. \( \text{b}\text{5} \) ! \( \text{g}\text{3} \) 5. \( \text{c}\text{6} \) 6. \( \text{b}\text{6} \) ! \( \text{f}\text{2} \) 7. \( \text{b}\text{7} \) ! \( \text{e}\text{1} \) 8. \( \text{e}\text{7} \) \( \text{a}\text{5} \) ! 9. \( \text{c}\text{8} \) \( \text{e}\text{4} \) 10. \( \text{d}\text{6} \) \( \text{d}\text{5} \) 11. \( \text{c}\text{7} \) ! --
Nunn deals with the subject of bishop and pawn vs bishop in much more detail in *Secrets of Minor-Piece Endings* (pp. 151-205).

With two extra pawns, the winning chances are very high. In the following two examples the presence of wrong rook’s pawns causes difficulties:

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1 h5 g4 2 h6+ g8 3 f5
```

First White forces the black bishop to the h3-c8 diagonal.

```
3...d5 4 g6 e6 5 f6
```

Not, of course, 5 f5?? xf5! 6 xf5 = (4.09).

```
5...c4 6 g5 e7 h5 h7 8 g4
```

That's it: Black can't stop f5!

```
8...c4
```

With careful manoeuvring Gyimesi doesn't allow Ruf to sacrifice his bishop for the g-pawn until he has advanced far enough:

```
1 f2 e5 2 e3 e6 3 g2 g4 4 f3 h3 5 h5
```

```
5 g4?? xg4! 6 xg4 f6 = (4.09).
```

```
5...d7 6 f3 e6
```

```
6...a4 7 g4 d6 8 f4 d7 9 g4 a4 10 h5 g7 11 g5 h7 12 f5+ g7 13 h6+ h8 14 f6 d1 15 e4 g8 16 g5 e2 17 f4 f7 (17...h8 18 f3 +-) 18 h7 +.
```

```
7 g4 d5+ 8 e3 h3 9 h5 e6 10 f3 d7 11 e4 g4 12 d3 a6
```

```
12...d1 13 e2 h3 14 g4 e6 15 g5 f5 16 f3 d5+ 17 g3 h4 18 g4+ e5 19 h5 d3 20 h6 e2 21 h4 d3 (21...d6 22 g6 xg6 23 g5 h7 24 f5 g8 25 f6 +) 22 h5 +.
```

```
13 h5 g4 14 h6 f6 15 f4 d4 16 h4 f7
```

```
16...xg4 17 xg4 f7 18 h7 +.
```

```
17 h7 e2 18 g5 c4 19 e5 e7 20 e4 f8 1-0
```

We should note two exceptions to the rule that two connected passed pawns win. The first shows a nice bishop-hunt:

\[ W \]

4.28A

J. Moravec, 1927

1 \( \text{a1!} \) (NC) 1...d5 2 e4! e6 3 f5! f7 4 g6: g8 5 h7! a2 6 e2! b3 7 xb3! axb3 stalemate.

The second is a fortress:

\[ W \]

4.28B

R. Fine, 1941

The pawns are blockaded on squares opposite to the bishop’s colour and there is no chance of zugzwang. Therefore, White can’t make real progress:

1 b2 f4 2 a3 g5 3 a4 d8! 4 b5 c7 =

This diagram is an example of the following general rule for bishop endings: connected passed pawns should be on squares opposite to your bishop’s colour to avoid a blockade.

**B) Pawns on One Wing**

With pawns only on one wing the drawish tendency is very high as it is very difficult to dislodge a defending king from a square opposite to the bishop’s colour. Therefore, most positions with two pawns vs one pawn and three pawns vs two pawns are drawn. Even with four vs three, a draw is a very likely outcome:

\[ B \]

G. Stähler – R. Fine
Kemeri 1937

1...f6?? 2 c5 d7 3 g8 h6 4 d5 a4 5 d4 d7 6 c4 a4 7 d3 e8 8 h4 g5

The game was soon agreed drawn. Black has put all his pawns on dark squares and the bishop will be able to prevent any penetration by the white king.

The next example is very complicated (see following diagram).

White has to sacrifice two pawns in order to win:

1 f5+! gx5
2 xe5 2 fxg6 fxg6 3 xg6! +–.
3 c4 g4 3 c4+
4 c2 d7 (3..h3?? 4 h3+ e7 5 xf7 +–) 4 xf5+? is not good as the pawn ending is drawn; 4 xf5 5 xf5 e7 =.
3 e7 4 xf7?
4 g6! fxg6 5 g8 f8 6 xh7 d1 7 xg6 b3 8 xg5 g8 9 xh6 h8 10 xg7 a4 11 e6 h7 12 g5 b3 13 g6+ g8 14 e7 a4 15 f6 and White brings his king to d8 and finishes with f5-d7 +– (B. Rosen in *Fit im Endspiel*).

4 xf7 5 e6+ xe6?
BISHOP ENDINGS

4.30 +/-
G.Timoshchenko – M.Stephenson
Hastings 1966/7

5...$g8!! 6 $g6 $h5 7 $g7 $g6 8 e7 $c8
(8...$f7?? 9 $e8$+ +--) 9 $xf5 $h5 = (Rosen).
6 g6 1-0

C) Pawns on Both Wings

We start with an isolated central pawn:

4.31 +/-
L.Polugaevsky – H.Mecking
Mar del Plata 1971

Black’s pawns on the queenside have already been frozen on the wrong colour. White’s next step is to fix Black’s kingside pawns on light squares as well:

1 $h4 $f3 2 $b4 $h1
2...$g4 3 $f1 $f5 4 $g2 $e6 5 e4 $xe4
(5...$f7 6 $e5+ $c6 7 $h5 $e6 8 $h6 $g8 9 $h3 +--) 6 $xe4 $c8 7 $f3 $c7 8 $e5 $f5 9 $d5
b6 10 $h5 +--.

3 $e2 $g2 4 $g4 $e4 5 $c8
In order to gain access to $g8.
5...
6 $e6 $d6 7 $g8 $h6 8 $f7
Zugzwang.
8...
8...$c6?! 9 $e5 +--.
9 $e8 $c2 10 $f7 $e4 (D)

4.31A +/-

How can White make progress now? Polugaevsky finds a convincing solution:

11 $f5! $xf5
11...$gx5 12 $xh5 $e6 13 $d1 $g2 14
$h3 $f3 15 $h5 $xh5 16 $xd5+ $d6 17
$xb7 $c2 18 $c8 +=.
12 $xd5 $c8 13 $e4 $e7
13...$f7 14 $c5 $c7 (14...$e7 15 $e5 $d7
16 $b6 +--) 15 $f7 $g5 16 $hxg5 $h4 17 $g6 +--.
14 $c5 $g5 15 $hxg5 $h4 16 $g6 $h3 17 $g7 $h2 18
$g8$ h1$# 19 $f7+ $d8 20 $f8+ 1-0

The next two examples are very similar. In both cases the attacker uses his bishop to bring about a decisive zugzwang situation.

In the following diagram, Black has a lot of weak pawns on light squares and $d4 must be constantly guarded by the black king. Petel’s bishop manoeuvres are very instructive and should be studied in detail:

1 $g6 $f6 2 $c2 $e5 3 $d3 $e8 4 $e2
$d7 5 $d1

Thanks to zugzwang, White manages to play $a4 and thereby creates a new weakness on b5.

5...
6 $bxa4 7 $xa4 $f5 8 $d1 $d7 9 $c2
$e8 10 $h5 $f5 11 $d4 $b7 12 $f1 $wg5 13
$e5 +--.
7 $axb5 $xb5 8 $e2
Zugzwang again. Black has to play ...h5 with a further weakness.

8...h5 9 f1 c6 10 d3 e8 11 c2 f7
12 h7! e8 13 d3

The third decisive zugzwang. Since Black doesn’t want to lose the b-pawn or allow g6, the king has to retreat.

13...e6
13...d4+ 14 cxd4+ d5 15 f1 d7 16 d3 f5+ 17 c3 d7 18 g2+ e6 19 e4+-
14 d4 d6 15 f5 h7

The final zugzwang; again Black retreats:
16 e8
16...e6 17 c5 e5 18 d3+-
17 g8 1-0

Shabalov’s bishop manoeuvres in the next example are even more impressive (see following diagram).

When looking at this position you should ask yourself the important question: “What would Black do if it were his turn to move?” Shabalov certainly did, and the first five moves were his answer:

1 d2 d8 2 e1 b6 3 h4 e3
3...d7 4 g3 d6 5 c1 c7 6 c3+-
4 g3 d4

4...f4 5 e1 b6 6 c3 g5 7 d5 b5 8 xc5 b4 9 f6 xb3 10 e5+-
5 h2 b2 6 g1 a3 7 f2 c7 8 g3 d6 9 c1 c7 10 c3

Now Shabalov has reached the starting position with Black to move and Varavin has to make a concession and move a pawn. After that the same idea starts again:

10...h5
10...g5?? 11 d2 d8 (11...h6 12 c3 puts Black in zugzwang immediately) 12 c3 f6 (12...e7 13 c1 f6 14 b2++) 13 c5 d8 14 a3 b6 (14...e7 15 c7+) 15 b2 c7 16 c3+-
11 d2 hxg4 12 hxg4 d8 13 e1 b6 14 b4 c3 15 d4 d4 16 h2 dB 17 g1 a3 18 f2 c7 19 g3 f6 20 h2 g7 21 g5!

Restricting the bishop’s space.
21...f8
21...h8 22 g1 g7 23 c5 h8 24 f8+-
22 xe5 c7

White has won a pawn, but the reduced material still poses severe technical difficulties.

23 f6 b4 24 c3 e7 25 xa5 xg5 26 b4 f4 27 b5+ d6 28 c3 g5 29 e5+ c7
29...xe5 30 xe5+ xe5 31 b6! w6 d6 32 b5! g4 33 a6! +-.
30 a5+ c8

Or 30...d7 31 d5 g4 32 b6 c8, and now:
a) 33 e6? g3 34 b4 g2 35 c5 d8 36 b7 c7 37 b6 c7 38 c7 39 c7 40 b8 c2+ but since the king has problems finding shelter and the e6-pawn is doomed, the result is a draw (see Chapter 10).
b) 33 c3 is correct:
   b1) 33...b7 34 d4 g3 (34...g5 35 e6 d8 36 d7 b6 37 c6 d4 38 c7++) 35 e6 g5 36 d6+-
   b2) 33...g3 34 c6 g2 35 b7+ b8 36 a4 g1 a7 c6 c5 38 c6 d4 39 c8 a5 40 b6 f2 41 a6 c1 42 c6 h2 43
In the last three examples the defending king was already busy defending entry squares. Even if you have played through the difficult bishop manoeuvres, you will find Kramnik's king-march in the next example very exciting:

\[
\begin{array}{c}
\text{B} \\
\text{B} \\
4.34
\end{array}
\]

L. van Wely – V. Kramnik
Arnhem jr Ecch 1990/1

If it were White's move, he would draw with \( \text{xf3} \) and \( g4 \), so Kramnik first fixes the kingside to penetrate successfully on the other wing:

\[
\begin{align*}
1...g5 & 2 \text{xf3} g4+ 3 \text{hxg4}+ \text{hxg4} + 4 \text{e3} \text{e7} \\
5 \text{c3} & 6 \text{d6} \text{e1} \text{e6} 7 \text{d3} \\
7 \text{b4}! & a6 8 \text{d3} \text{d7} 9 \text{c3} \text{c6} 10 \text{e2} \text{b5} 11 \text{b3} \text{c7} 12 \text{f2} \text{b8} 13 \text{e1} \text{d6} +.
\end{align*}
\]

The idea of bringing the bishop to \( f4 \) also loses: 7 \( \text{f2} \) \( \text{c7} \) (winning a tempo) 8 \( \text{e2} \) \( \text{d7} \) 9 \( \text{f2} \text{c6} 10 \text{d2} \text{b5} 11 \text{f4} \text{b6} +.

\[
\begin{align*}
7...d7 & 8 \text{e2} \text{c6} 9 \text{d3} \text{b5} 10 \text{c2} \text{a5} \\
11 \text{d3} & a4 12 \text{bxa4}+ \\
12 \text{e2} & a3 13 \text{b1} (13 \text{d2} \text{a5} 14 \text{h1} \text{b4} 15 \text{e2} 16 \text{b2} \text{a1} \text{+ 17} \text{a1} \text{b3} \text{+}) 13...\text{b4} 14 \text{f2} (14 \text{xb4} \text{bxb4} 15 \text{a2} \text{c3} 16 \text{a3} \text{e4d} 17 \text{b2} \text{d3} 18 \text{b4} \text{c4} \text{+}) 14...\text{d2} 15 \text{a1} \text{b4} 16 \text{a2} \text{c3} 17 \text{a3} \text{d3} 18 \text{b4} \text{c2} 19 \text{g1} \text{f1} +.
\end{align*}
\]

12...\text{xa4} 13 \text{f2}.

For 13 \( \text{e2} \text{a3} 14 \text{d2} \text{b4} 15 \text{d3} \text{b3} \) see the game after 13...\text{b3}.

13...\text{b2} 14 \text{e1} \text{b2} 15 \text{d2} \text{c1} 16 \text{e3}+ 16 \text{e2} \text{e2} 17 \text{e1} \text{c7} 18 \text{f2} (18 \text{e3} \text{d1} 19 \text{f2} \text{d6} 20 \text{d3} \text{a3} 21 \text{e3} \text{c1}+

22 \text{d3} \text{d2} +) 18...\text{a5} 19 \text{c3} \text{c3} 20 \text{f2} \text{d2} 21 \text{g1} \text{c3} 22 \text{f2} \text{g5} 23 \text{g1} \text{f6} +.

16...\text{d1} 17 \text{f2}.

17 \text{f4} \text{a3} 18 \text{d2} \text{e7} 19 \text{h6} \text{e1} 20 \text{e3} \text{d6} 21 \text{f4} \text{a3} +.

17...\text{a3} 18 \text{e3} \text{c1+} 19 \text{d3} \text{d2} 20 \text{e3}

20 \text{g1} \text{e1} 21 \text{h2} \text{f2} +.

20...\text{e1} 21 \text{f4} \text{f2} 22 \text{e5} \text{e1} 23 \text{c3} \text{e2} 24 \text{b4} \text{f3} 25 \text{e5} \text{e4} 0-1

Amazing stuff! e4 was a key square right from the start, but who would have thought that Kramnik's king would eventually come from f3 to get there?

\[
\begin{array}{c}
\text{B} \\
\text{B} \\
4.35
\end{array}
\]

M. Adams – V. Kramnik
Linares 1999

The position is too closed, so Black's advantage (the pawns are blocked on the right colour from his viewpoint) is only symbolic.

1...\text{f4}!

Otherwise White would play \( f4 \) himself, closing everything.

2 \( \text{d2}! \\
2 \text{gxf4?} \text{xf4} 3 \text{f4} \text{f4} 4 \text{xf4} \text{xf4} 5 \text{f4} \text{f4} \text{a5} \\
6 \text{f2} \text{c5} 7 \text{dxc5} \\
Or 7 \text{e3}, and then:
1. After 7...\text{b4} 8 \text{xa4} \text{cxb4} 9 \text{cxb4} \text{axb4} 10 \text{d3} \text{f5} the white bishop is more active than in the next example (the pawn formation on the queenside is slightly different as well), which should be sufficient to reach the draw.
b) 7...c4 8 8e2 8f5 9 8c3 8d8 10 8h6 8c7 11 8f4 8xf4+ 12 gx4 8g3 13 8f3 g2 14 8xg2 8xf4 15 8f2 = (Hecht).
7... 8xe5+ 8 8e3 8d6
8... 8xe3+? 9 8xe3 8f5 10 8d4 8e6 11 8e5 ±.
9 8f4 8c5+
9... 8xf4 10 gx4 8f6 11 8g2 =.
10 8e3 8f8 11 8f4 8f5 12 8e3 8g7 13 8d3 8f6 14 8b8 8e6 15 8f4 8g7 16 8b8
As he hasn’t made progress by normal means, Kramnik makes a final winning attempt:
16...d4!? 17 cxd4
17 c4? bxc4+ 18 8xc4 d3 19 8xd3 8xb2 =.
17... 8d5 18 8a7
18 8e5 8xe5 19 dxe5 8xe5 20 8e3 8d5 21 8d3! 8e5 22 8c3 b4+ 23 axb4+ 8b5 24 8c2 8xb4 25 8bl 8b3 26 8al a3 27 8bl! axb2 is stalemate.
18... 8h6 19 8b8 8g7 20 8a7 8f5 21 8b8
b4 22 axb4 8xb4 23 8f4 8e1 24 8e5 8f2 25 8c3 8e1 + ½-½

We end this section with two examples involving different pawn-majorities. Both show that the general rule 'the king must be activated' is certainly valid in bishop endings.

\[
\text{S. Ivanov – B. Avrukh}
\]

St Petersburg tt 1999

\[
\text{4.36}
\]

\[
\text{K. Müller – E. Abel}
\]

\[
\text{German Individual Cup 2000}
\]

White temporarily sacrifices a pawn to bring his king to a dominant position:
1 g3?! 8xc2 2 8e3 8f7
2... 8d1 3 8d4 8f7 4 8d7 8f3 5 8c5 ±-
3 8d4 8e7 4 8c5 8a4 5 8xg4 8g5 6 8f5 8h5
6... 8b5 7 8c2 8d7 8a4 8a6 9 8e4 8b7 10
b5 ±-
7 8e4 8d7 8h4!
Fixing Black's h-pawn on the vulnerable colour.
8...gxh4 9 8xh4 8e6 10 8f3 8f5 1-0
Black loses two pawns: 11 8xh5 8f4 12
8f7 8g4 13 8h5 8g5 14 8b3 8b5 15 8d1
8h6 16 8a4 ±-

D) Important Motifs and Resources

The following examples demonstrate motifs and methods that are worth knowing.

In the diagram on the following page, it looks pretty grim for White, but a well-known motif saves him:

\[
\text{1...hxg4}
\]

1...h4+ 2 8f2 8g6 3 8e3 8f6 4 8d2 8b3 5
8c3 and now:

a) 5... 8c6 6 8d4 8c8 7 8d5 (7 8c5? 8e5
8 8b6 8f4 9 8g2 8g3 10 8f1 8f2 =) 7... 8a6
8 8b5 8b7+ 9 8c6 =,

b) 5... 8a2 6 8d4 8e6 and then:

b1) 7 8c5? 8c5 8 8b6 8f4 9 8xa5 8c4 =
(not 9... 8g3? 10 8b4 =).

\[
\text{4.37}
\]

\[
\text{If there is heard, one bishop sacrifice.}
\text{1... 8e3?...}
\]

\[
\text{White checks his hopes on}
\]

12 2 8b4
13 8c5 8h6 14 8xh3 8e6 15 8d1
16...

\[
\text{1...gxh5 6 8a5 b4}
\]

\[
\text{2... 8c6}
\]

\[
\text{8d4 8b8}
\]

\[
\text{2... 8h5 3 a4 and}
\]

\[
\text{a) Not 3...}
\]

\[
\text{gxb4!}
\]

\[
\text{430}
\]
K. Müller – Z. Hraček
Lippstadt 2000

b2) 7 ♛b5 ♜d6 8 ♗c4 ♘b1 9 ♗f1 ♘g6
(9...♘c2 10 ♛b5 ♖d1 11 ♗e4 =) 10 ♗c4 ♘e8
11 ♛b5 =.

2 h4!

Closing the kingside with 2 hgx4? is fatal:
2...♗g6 3 ♖d7 ♗f6 4 ♖f2 ♗e7 5 ♖e1 ♘b5 6 ♘b5 ♗d6 7 ♖d2 ♗f7! 8 ♖d3 (8 ♖e2 ♗e8 9 ♖d1 ♘c5 10 ♖c3 ♖d7 +) 8...♗e8 9 ♖c2 ♖d5
10 ♖c3 ♖d7 11 ♖b3+ ♗e4 12 ♖d1 ♖f4 13 ♖d4 ♗xg4 14 ♖b3 ♗f3 15 ♖c5 (15 ♖e6 ♗c6 +) 15...g4 16 ♗e6 ♗g3 17 ♖h3 ♗e3 18 ♖b6 ♗f2 19 ♖xa5 ♗g4 ++.

2...♗xh4+

2...♗g6 3 ♖d7 ♖h5 4 ♖e8+ =.

3 ♖xb4 ♗g6 4 ♖d7 ♖f6 5 ♖xg4 ♖xa4 6 ♗g3 ♗e5 7 ♖f2 ♖d4 8 ♖e1 ♗c3 9 ♖f5 ♗h5
10 ♖d1 ♖b2 11 ♖c2 ½–½

If there are only a few pawns left on the board, one has to be very careful not to allow a bishop sacrifice (see following diagram):

1 ♖e3?

White chooses the wrong plan. He had to pin his hopes on the advance of his a-pawn: 1 ♖a5!
♖f2 2 ♖b4 ♖f4 (2...♖d5 3 a5 g6 4 a6 ♖a7 5 ♖a5 h5 6 ♖b6 ♖b8 7 ♗g1 h4 8 ♖b6 ++) 3 a5 ♖xf4 4 a6 ♖a7 5 ♖c5 ♖b8 6 ♖c6 ♖xg4 7 ♖b7 +–.

1...♖g6! 2 ♖xg5
2 ♗b5 ♖xa5 3 ♖xa5 h5 4 ♖xg5 hxg4 5 fxg4
♗e4 6 ♖d8 g5 7 ♖xg5 ♖f3 =.

2...h5 3 ♖a5
3 ♖f4+ and then:

a) Not 3...♗e6? 4 f5+ ♖xf5 (4...♗xf7 5 gxh5 gxh5 6 a5 h4 7 a6 ♖f2 8 ♖xh4 ++) 5 gxh5 ♖d7

(5...♖g3 6 h6 ♖f7 7 a5 f4 8 h7 ♖g7 9 a6 f3 10 ♖h8 ++) 6 a5 ♖c7 7 ♖f4+ ♖b7 8 h6 ♖c3 9
a6+ ♖a8 10 ♖c4 ++.

b) 3...♖d5 4 gxh5 gxh5 5 f5 h4 6 a5 ♖xa5 7 ♖xa5 ♖e5! 8 f6 h3 9 f7 h2 10 ♖f4+ ♖e6! 11
♖f8 ♕h1 =.

3...♖xa5 ½–½

If the pawns are on squares opposite to the bishop's colour, a fortress can sometimes be created:

D. Navara – L. Klima
Olomouc 1999

There is no way for Black's king to enter into the white position:

1...♖b6 2 ♖b8 ♖d7 3 ♖f4 ♖e6 4 g4 ♖c5 5
♖g3 ♖d6 6 ♖f2 ♖e5 7 ♖c5 ♖h2 8 ♖a7 f5 9
♖b6 ♖e5 10 ♖c5 ♖f6 11 ♖e3 h5 12 ♖d2 f4
12...hxg4 13 hxg4 fxg4 14 fxg4 3g3 15 
3c3+ 3g5 16 3d4 3xg4 17 3xd5 =
13 3e1 3g5 14 3f2 3c7 15 3a5+ 16 
3d3 3f6 17 3d4+ 3e6 18 3c5 3e1 19 3e2
3c3 20 3d3

A draw was soon agreed.

With Black’s king on c4 it is different:

4.40A

J. Donner – V. Smyslov
Havana 1964

Black’s control of d3 is of major importance and so White is lost:
1...3h6+ 2 3c2 3d3+ 3 3d1 3d4 4 3f2+
3c5 3b6 d2 6 3f2 3d3 7 3b6 3f4 8 3f2
3e5 9 3g1 h4 10 3f2 3c3 11 3g1 3d4 12 
3xd4
12...3h2 3e3 13 3g1+ 3xf3 14 3xd4 3g3
15 3xd2 3xh3 16 3g5 3g2 =+
12...3xd4 13 3xd2 3e5 14 3e3 3g5 0-1

There follows a good example of the fact that piece activity and positional considerations can be more important than material (see following diagram):
1 3d2:

Ivanov could have saved himself by sacrificing the e-pawn to block the black king’s path: 1 3d3! 3c3 2 e4+! (2 3d2? 3xd2 3 3xd2 3d4 4 
3d3 g5 5 3e2 3e4 6 3d2 3f4 —-) 2...3xe4+ 3 
3e2 $ (Soltis in Grandmaster Secrets: Endings).

1...3e4 2 3e1 3g5 3 h4

After 3 3f2 Black restricts the bishop further: 3...h4 4 3e1 3c7 and now:

a) 5 3d2 3g3 6 3c1 3e5 7 3d2 3c3 8 
3c1 g4 =+

Rules and Principles:
Same-Coloured Bishop Endings

The following rules are worth memorizing:

1) Centurini’s Rule (4.26).

2) Fix the pawns on the opposite colour to your bishop (Capablanca’s Rule) or shut your opponent’s bishop out (see Black’s strategy in 4.41 or solve E4.02).

3) As defender, watch out for blockading squares for your king (4.28B and 4.40) and don’t let your opponent penetrate as in 4.31-4.34.

4) A two-pawn advantage is in most cases decisive, but one extra pawn might not be sufficient, especially if all the pawns are on one wing and there are no further weaknesses.

5) Subtle bishop manoeuvres may be needed to win once you have fixed your opponent’s pawns on the right colour (4.31-4.33 again).

Study the important motifs and resources carefully!
Reference works
*Encyclopaedia of Chess Endings* (ECE), Bishop and Knight Endings volume, Nicosia 1993
*Läufer- und Springerendspiele* (Av), Averbakh, Sportverlag Berlin 1987

Exercises
(Solutions on pages 373-4)

White has an astonishing way to push his h-pawn through. Can you find it?

Black resigned here in a well-known game. Can you find the drawing manoeuvre that Averbakh later discovered?

Kasparov found an easy way to break down Black’s defence. Can you spot it?

With only a few minutes left for the 40th move, White made the wrong choice. Can you do better?

Black has only one move to secure the draw. Which one?
4.3 Opposite-Coloured Bishop Endings

Opposite-coloured bishop endings are totally different from same-coloured bishop endings, so before we start, some general thoughts are very useful. First, endgame theory suggests that this type of ending is rather drawish and our database statistics underline this. Most positions with equal material are clear draws and even positions with two extra pawns might offer no chance to play for a win at all. The reason for this is the big influence both sides have on the squares their bishop moves on, which very often allows a blockade. Therefore the fortress theme is always of crucial importance. This leads to general advice that is somewhat different from that stated earlier for same-coloured bishops:

Rule 1: the defender should place his pawns on his own bishop’s colour and force the attacker’s pawns to the opposite colour.

Rule 2: the attacker should, as always, place his pawns on the opposite colour to his own bishop.

By following this Rule 1, the defender can easily protect the pawns with his bishop, unhindered by the opponent’s pawns. The second rule is especially important to prevent a blockade of connected passed pawns. Also, the principle of one diagonal is again very important, since the opponent can’t challenge our bishop with his counterpart. Finally, we will learn that positional considerations, especially dangerous passed pawns, often outweigh material deficits. Therefore, we should bear in mind the possibility of breakthroughs by the attacker or freeing pawn sacrifices by the defender.

In this section we discuss the following topics:

A: Bishop + Pawns vs Bishop 118
B: Fortresses 121
C: Siege Techniques 123

A) Bishop + Pawns vs Bishop

The defender’s drawing chances increase dramatically with opposite-coloured bishops. With only one pawn it is essentially trivial: if the bishop can permanently guard one square in front of the pawn it is an ironclad draw. If the passed pawn is very far advanced, a fight similar to bishop vs pawn arises; e.g., Berger 1922 (ECE 1328): w\f2, \h2, \a5; b\e6, \g4; 1 \a6 \f5! 2 \f3 \d3 3 \a7 \e4! 4 \a8=\d5+! =. Even two connected passed pawns don’t assure the win. The following defensive set-up is very important:

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4.42

H. Wolf – P. Leonhardt
Barmen 1905

The bishop ties Black’s king down to the defence of the g4-pawn and prevents ...f3+, so Black can’t make any progress:

1 \d1!
1 \f2? \h3 2 \g1 f3 3 \f1+ \g3 4 \c4 \e5 5 \f1 \f4 6 \e6 g3 7 \h3 \b6 --.
1... \g5 2 \e2 \f3 1/2-1/2

If the pawns have already advanced to the sixth rank, they win with the exception of w\f1, \a8 (or even w\h1, \f1); b\f4, \a7, \g3, h3, when White will always be able to take the pawn after ...g2+.

The next example shows what happens if the defender can’t reach the above defensive set-up (see following diagram):

1 \g5+!
Not: 1 e6? \xe6 =; 1 f6+? \f7 =; 1 \b4+?! \f7 2 \e1! ++ (2 \d4? \c2 e6+ \f6 4 \e7 \a5 \e4 \f7 =).
1... \d7

After 1... \f7 White’s king penetrates on the queenside: 2 \d4 \a2 3 \c5 \b3 (3... \b1 4 e6+ \f8 f6 ++) 4 \d6 \c2 5 e6+ \e8 6 \f6 \g6 7 \h6 \h5 8 \e5 ++.
2 \h4 \c4 3 \f4 \f7 4 \g5 \e7 5 \h6+ \d7 6 \g7 \c4 7 \f6 ++
14 b8\wedge x b8 15 \wedge b7 +-.  
14...\wedge b8 15 \wedge f1 1-0  
Black is in zugzwang.

Now we deal with isolated pawns. The first example is well known:

1 \wedge e2 b3 2 \wedge d1 \wedge b4 3 \wedge b7 \wedge a3 4 \wedge g6  
\wedge b2 5 \wedge f7!  
Black threatened ...\wedge a1, which White prevents by binding the king to the defence of the b-pawn. This is an often-recurring motif and worth remembering!  
Not 5 \wedge f5? \wedge a1! 6 \wedge e4 b2 +-.  
5...\wedge a2 6 \wedge e6 \wedge a3  
Again threatening ...b2.  
7 \wedge f5! \frac{1}{2}-\frac{1}{2}  
White’s fortress is impregnable after 7...b2 8  
\wedge b1 \wedge b3 9 \wedge e2 =.

The next example shows a case where the pawns win although there are only two files separating them (see following diagram).  
White’s pawns are already very far advanced. The black bishop has to stop the c-pawn on c7, so it can be diverted by the f-pawn:  
1 \wedge c5  
Right now it’s impossible to support the f-pawn. After 1 \wedge e4 \wedge f6 2 \wedge f3 \wedge g5 White has to return.  
1...\wedge d8 2 \wedge c8!  
Thanks to this tempo move, the white king gains access to b7. 2 \wedge b5 \wedge d6 3 \wedge a6 \wedge c7 is a return ticket again.

2...\wedge c7 3 \wedge b5 \wedge d8
3...d6 4 f6 d8 5 f7 e7 6 e6 ++
4 d7 e7 5 a6 e5 6 b7 d8 f6! ++

The win with Black's king on c7 and the bishop on e7 was shown by Salvioli back in 1887 (ECE 1340): White's king easily pushes the f-pawn to f7 and then the king marches to g8. It is this ability to penetrate from both sides with the king that means that the two bishop's pawns win—if they can't be stopped on one and the same diagonal of course: w/c4, d7, c6, f3; b/g5, c7 is drawn whoever moves first (Averbakh 1950, ECE 1342).

If there are more than two files separating the pawns, they usually win:

D.Sadvakasov – R.Ponomariov
Lausanne jr 1999

1 g3 c6 2 d8 d7 3 h4 e8 4 c7
h5 f4
5 c6?? e8! =.

5...e8 6 f3 a4 7 e3 e8 8 g3 c6
9 c7

Now the winning plan involves walking with the king to b6: 9 d4 f3 10 e4 e6 11 b5 d7 12 c6 +-. After some moving around, White returns to this plan.

9...b5 10 d4 c6 11 d8 f3 12 a5
c6 13 c1 f3 14 d2 g4 15 g5 f5 16
d8 f4
16...e6 17 c3 c6 18 f4 e8 19 g5 ++; 16...c6 17 h5 f3 18 h6 g6 19 g5 +-
17 c4 e5
17...c6 18 h5 f5 19 h6 g6 20 g5 h7
21 d4 ++.

18 b5 e6 19 c6 d6 20 c7 d7 21 c5
g4 22 d5 e8 23 e5 f7 24 h5 c8 25
g5 g4 26 h6 c8 27 d6 f5 28 c6 e8
1-0

In view of 29 h7

There are of course exceptions involving a wrong rook's pawn:

L.Paulsen – A.Anderssen
London (2) 1862

1 f5+ h2 2 c2 h4 3 e4 h5 1/2-1/2
Black can't make progress; e.g., 3...h3 4 g4
c3 5 c2 g2 6 c4+.

The next example shows how difficult it can be to win even when three pawns ahead (see following diagram):

1...c4 2 d2 d7 3 a5 b5 4 e3 x a5
5 d4 = b5 6 f4?

This is a big mistake, as now Black can coordinate his pieces and eventually defend according to the one diagonal (a2-g8) principle. After
BISHOP ENDINGS

M. Womacka – J. Maiwald
Munich 1993

6 c4+! one sample line runs 6...æc6 7 c5 æf5 8 f4 æc2 9 æc3 æb1 10 æe5 æd7 11 f5 æa2 12 æf6 æb1 13 æg5 æe4 14 æd4 æe7 15 f6+ æe6 16 æc3 æf7 17 æf4 =.

6...æe6! 7 æe5 æb3 8 æd6
8 f5 æc6 9 æd4 æb5 10 æe5 æc6 11 æf6 æd7 12 æg7 æe8 13 f6 æf7 =.

8...æe4?
8...æe2! 9 æe6 (9 æe5 æh3 10 f5 æc6 =) 9...æb3+ 10 æf6 æc6 11 æe7 æc2 12 æe3 æd5 13 æf6 æh7 =.
9 f5 æd3 (D)

Black thought he could win a tempo with...

4.48

B) Fortresses

The main theme of opposite-coloured bishop endings is the fortress. In most cases the weaker side tries to put all his pawns on the same colour as his bishop and to use his king to block enemy passed pawns. It is also possible for the bishop to stop the passed pawns, while the king keeps its enemy counterpart out. In this case the principle of one diagonal is usually crucially important for the defender in order to avoid zugzwang or deflection of the bishop. If this strategy succeeds, then usually nothing can be done.

4.48A

There is nothing to say: White oscillates between f4 and b8 or d6 and Black cannot make progress.
A. Nemec – J. Listiak
Slovakian Chl 1998

1...c8 2 a7 a6 3 d8 b7 4 c4 a6 5 e3 b7 ½-½

This pawn offer breaks the fortress, but White soon forms a new one.
21 x e2+ x c3 22 a4 d3 23 e1 e3 24 d1 e4 25 f1 ½-½

S. Smagin – M. Sorokin
Norilsk 1987

1 g1 h5 2 b8 h4 3 c7 ½-½
White will simply take the g-pawn if it advances to g3, leading to stalemate.

The following diagram is basically a one-diagonal draw. White’s king supports his bishop from f3 or d1:

1...a5 2 c2 b4 3 f3 a3 4 e2 b2 5 d1 b6 6 e4 b3 7 c2+ c4 8 e2 c5 9 e4 b3 10 d1 e3 11 c2+ b2 12 e4 f4 13 e2 g5 14 e4 b3 15 c2+ c4 16 e2 d4 17 f3 c4 18 e2 b4 19 e4 b3 20 d1 e2+!!

V. Kramnik – G. Kasparov
London BGN Wch (8) 2000

The game was drawn now as Kramnik’s fortress is impregnable: e.g., 1...g6 2 c7 f5 3 d4 g4 4 e3 d5 5 b8 h3 6 f2 =.

The following example from Technique for the Tournament Player shows another important defensive method (see diagram on following page):

1...f6 2 d2
The immediate 2 d5!? comes strongly into consideration: 2...xd5 3 b6 e4 4 d8 f5
5 \(d2\), when the bishop eyes the f6-pawn and ties Black’s king to its defence.

2...\(\text{d5} 3 \text{f4}?!\)

Dvoretsky gives two possibilities to hold on much more easily: 3 \(\text{b6} g5 4 \text{g7} =\) and 3 d5 \(\text{x}d5 4 \text{d}d4 =\). In both variations the bishop alone hinders Black’s efforts to create a passed pawn on the kingside and White’s king is free to stop advances on the queenside.

3...g5 4 \(\text{c}7 \text{g}4 5 \text{d}8 \text{x}h4 6 \text{g}xh4 \text{x}h4 7 \text{xf}6+ \text{g}4 8 \text{e}3?\)

Active defence with 8 \(\text{c}3!\) was called for now; e.g., 8...h4 9 \(\text{c}4 h3 10 \text{e}5 \text{f}3 11 d5 \text{xf}2 12 \text{c}5 \text{f}3 13 d6 \text{e}6 14 \text{b}6 g2 15 d7 =.

8...\(\text{d}5 9 \text{e}7 b5 0-1\)

A possible finish is 10 \(\text{d}8 h4 11 \text{c}7\) (Black also wins after 11 f3+ \(\text{g}3 =\)++) 11...h3 12 f3+ \(\text{xf}3 13 \text{f}2 a5 14 \text{d}6 b4 15 axb4 axb4 =.

C) Siege Techniques

The rest of the chapter deals with the question of whether it is possible to storm a fortress. In sharp contrast to other endings, material considerations often play a minor role compared to positional factors. The main weapons are zugzwang, the creation of two passed pawns on different wings and breaking through with the king to support a passed pawn or attack the enemy pawns. The principle of one diagonal is very important again – for both the attacker and the defender, as we will see. We will start with zugzwang:

1 \(\text{b}4 \text{c}3 2 \text{d}3 \text{d}6 3 \text{d}d3 \text{c}1?\)

3...\(\text{xd}5?\) also loses, to 4 c7 ++. However, there is a study-like defence: 3...\(\text{a}7!\) 4 \(\text{e}4 \text{b}8 5 a6 \text{c}7 6 \text{xf}4 \text{b}6+ 7 \text{f}5 \text{xa}6 8 e4\) (8...\(\text{e}6 \text{b}6 9 \text{d}7 \text{g}3 =\) 8...\(\text{b}6 9 e5 \text{c}7 10 e6 (10 \text{f}3 \text{d}8 =) 10...\text{d}8 11 \text{g}6 \text{c}7 12 \text{f}7 \text{d}6 =.\)

4 \(\text{e}4 \text{d}2 5 a6 \text{e}3 6 \text{f}5 \text{c}7 7 \text{e}5!\)

Putting Black in a fatal zugzwang.

7...\(\text{g}1 8 \text{xf}4 \text{b}6 9 \text{f}5 \text{h}2 10 \text{c}4 10 \text{e}4 \text{xa}6 11 e5 \text{b}6 12 e6 \text{d}6 13 \text{f}6 +=\) wins even more quickly.

10...\(\text{xc}6 11 \text{e}4 \text{g}1 12 \text{f}6 \text{d}4+ 13 \text{e}5 \text{c}7 14 \text{e}6 \text{c}3 15 \text{d}5 \text{b}4 16 \text{b}5 \text{b}6 17 \text{e}6! \text{c}5 18 \text{d}3 \text{d}4 19 \text{d}6 \text{c}5+ 20 \text{d}7 1-0

W

4.51 +/-

G.von Bülow – D.Ortmann
Pardubice 2000
Some twenty moves ago this ending had been a simple draw. Black could have had his king on either e7 or g7 (with the white king on h5) with a typical fortress. Maybe it was Black’s careless play or my own (Frank Lamprecht) long fight some boards away which motivated my friend and team-mate Georg von Bülow to make some more ‘fruitless’ moves. The result was astonishing and the reward (beer) afterwards well deserved. After the typical breakthrough to create a passed pawn, Black’s seemingly active king will soon become his main problem:

1 g5! fxg5
2 hxg5+.

1...hxg5? 2 h5 ++.

2 h5 g4!

Otherwise the bishop is useless:

a) 2...xf4 3 f6 g4 4 xg4 (4 xh6 g3 5 f1
   f3 6 g7 g2 7 xg2+ xg2 8 f7++
   -- von Bülow) 4...xg4 5 f7 b4 6 xh6++.

b) 2...b4 also doesn’t help as the f8-h6 diagonal is too short: 3 f6 xh4 4 xf7 d6 5 g7
   f5 6 f4 g4 7 xg4+! (7 f8=+? xh8+ 8
   exf8 g3 9 f3 xh4 10 g2 xg4=) 7...xg4 8
   xh6 f5 9 g7 e5+ 10 xg8 d6 11 h6++.

3 xg4

Not 3 f6? g3 4 xf1 g5 (4...b4 5 h3 xh8
   6 xh7 xh4 7 g7 xh6 8 f7 b4 9 f8=+ xh8+ 10
   xh8++ xh6 leads to similar positions) 5 f7
   xg5 6 h2 6 g7 (6 g7 f5=) 6...f8 7 h7 xh4
   8 xg8 b4 9 f8=+ xh8 10 xh8 g4 11
   xh7 xh5 12 xh6 g4 13 e5 (D).

4.51A /=

Now:

a) 13...h5? 14 xh4 h4 15 c3 h3 16 xh3+
   f5 17 xh7 (17 c4? xh5 18 c5 g2 19 h2 xh6
   =) 17...xh5 18 e8 g2 (18...h2 19 xh7 =++) 19
   h2 xh4 20 xh3++.

b) 13...d3!! Black’s d-pawn is lost anyway,
   but this draws White’s passed pawn closer to
   Black’s king and that will soon make the difference! 14 cxd4 h5 15 c4 h4 16 c3 h3 17
   xh3+ f5 18 c6 g2 19 xh2 xh2 20 xh2
   d4 21 xh5 xh5 31= Here is the point: White’s
   bishop is bound to defend the last pawn!

3 xg4 4 xe2 h4 5 c4 xg5 6 a6

Or 6 d3 immediately.

6 xh4 7 xh8 8 xg5 9 a6

But not 8 f6? xh6 d6 10 h7
   e7 11 xh8 12 xh8 13 xh6 xg6 14 h6 f8=.

8 xh4 9 c4 xg5
9 xh8 10 e6 xg5 11 c8 wins the h6-
   pawn too.

10 d3

After some time-gaining moves with the
   bishop, White forces Black to give up the
   h-pawn, as f6 certainly can’t be allowed.

10 xh4 11 xh6 xh6

Suddenly there is a new problem. How to get
   out of the corner?

12 xh7 xg5 13 xg8 xh6 14 e4

That’s it: Black is in zugzwang again!

14...xg5?!

Or:

14...xh7 15 xh7 xh8 16 xh6 c5 17 c4

That’s it: Black is in zugzwang again!

14...xg5?!

Or:

14...xh7 15 xh7 xh8 16 xh6 c5 17 c4

15 xh6+ 16 xh6 xg5

One might at first think that 16...xf4 17 xh7
   xh5 draws, but 18 xh5? (18...e5? 19 e6
   xg6 xg6 is nothing) 18...xe4 19 f6 xg5 20
   e6 xh3 21 f7 xh6 22 xh6 xh6 23 xg6 xh8
   24 h6++ wins.

17 xh7 xh7

17...e5 18 d3 xh6 19 c6 d6++; compare
   note ‘b1’ to Black’s 18th move.

18 d3 (D)

Zugzwang!

18...xg5?!

Or:

18...xg5? and now:

a) 19 e6 xh5 20 f6 xh6 21 f7 xg7 22
   xh7++.
a2) More subtle is 19 h6 axh6 20 f6  c4 21 e8! b4 22 f7! (22 f7?? g7 =) 22...a3 (22...g5 23 g7 ++ 23 g8 ++.

b) 18...f7? 19 e6! and then:

b1) 19...e6 20 d5 e3 (20...g5 21 xd4 xhx5 22 d5 ++ will lead to 4.46) 21 e4! g5 22 c4! xhx5 23 c5 ++.

b2) 19...h6 20 d5 g7 21 h6 xhx6 (or 21...f6 22 d6 e7+ 23 d7 f8 24 h7 g7 25 c4+ f6 26 e8 ++) 22 xd4 and White will soon reach 4.46 again; e.g., 22...e7 23 d5 f4 24 c4 g3 25 c5 ++.

19 h6! f7 20 c4+ f6

20...f8 21 e6 h8 22 f6 e8 23 f7+ f8 24 d3 f6 25 c4! ++.

21 xg8

Or 21 h7 g7 (21...xf5 22 d3+! g5 23 e6 h8 24 f7 ++) 22 xe6 d6 23 h8++ +

21...d6

21...xf5 22 f7 ++ and 21...g5 22 h7 h6 23 f6! xf6 24 f7 ++ are both winning for White.

22 d3 e5

22...b4 23 h7 g7 24 f6+ h8 25 f7 e5 26 c4 (never be careless! It is still possible to spoil the win with 26 f8?? xf8 27 xf8 stalemate!) 26...g7 27 h8++ +. 23 f8 g5 24 h7 1-0

In the next example, zugzwang is used to create a second passed pawn (see following diagram):

1 4f6 4h4 2 4f5 4d6 3 g3!! fxg3

3...xg3 4 4xg5 4e1 5 h4 4a5 6 h5 4e7 7 4g6 4f8 8 d5 (...g8 must of course be prevented) 8...f3 9 h6 f2 10 h7 f1 11 h8++ +e7
2...\textit{b5} 3 \textit{c3} \textit{f1} 4 \textit{d4} \textit{e2} 5 \textit{e5} \textit{f3} (5...\textit{c4} 6 \textit{d6} \textit{b5} 7 \textit{c7} \textit{+-} was given by Lukacs in CBM 71) 6 \textit{d6} \textit{e4} 7 \textit{c7} \textit{f3} 8 \textit{b6} \textit{c4} 9 \textit{a5} \textit{c2} 10 \textit{b5} \textit{cxb5} 11 \textit{b5} \textit{e4} 12 \textit{xa4} (12 \textit{c6}?? \textit{xe6}+-) 12...\textit{c6}+ 13 \textit{a5} \textit{d5} 14 \textit{b6} \textit{e4} 15 \textit{h8}+-.

3 \textit{c3} \textit{e6} 4 \textit{d5} 5 a5 \textit{c4} 6 \textit{b2} 1-0

Now one example where the king penetrates using zugzwang:

\begin{center}
\textbf{B}
\end{center}

W

\begin{center}
\textbf{4.53} +/-
\end{center}

L. van Wely – R. Janssen
Dutch Ch (Rotterdam) 1999

1 \textit{f3} \textit{f6} 2 \textit{e4}  
Black must now give up his fortress due to zugzwang:

2...\textit{f8}  
2...\textit{g7} 3 \textit{f5} \textit{g3} 4 \textit{e6} +-.  
3 \textit{d6}!  
Opening a path for the king.

3...\textit{xd6} 4 \textit{d5} 1-0  
White’s king will penetrate with devastating effect: 4...\textit{f8} 5 \textit{e6} \textit{e5} (5...\textit{e7} 6 \textit{b6} +-) 6 \textit{b6} \textit{f4} (6...\textit{d6} 7 \textit{xa5} \textit{e6} 8 \textit{d5}+ \textit{c7} 9 \textit{b5}+-) 7 \textit{xa5} \textit{e3} 8 \textit{h5} \textit{xd3} 9 \textit{a5} \textit{c2} 10 \textit{d5}+-.

The next three examples deal with the creation of passed pawns.

In the next diagram, Karpov fixes White’s kingside pawns on squares of his bishop’s colour in order to win the h5-pawn. After that, he can create a second passed pawn on the kingside:

1...\textit{f4}! 2 \textit{h2} \textit{e8} 3 \textit{c1} a4 4 \textit{xf4} a3 5 \textit{e3} \textit{hx5} 6 \textit{f2} \textit{e8} 7 \textit{d4} \textit{e6} 8 \textit{c3} a2 9 \textit{g3}??

\begin{center}
\textbf{4.54} V. Anand – A. Karpov  
Lausanne FIDE Wch (4) 1998
\end{center}

Accelerating the decline, as now Black will be able to create a passed h-pawn. A policy of ‘sit and wait’ was more stubborn, but Black should win by moving the king to the queenside. Then the white king has to prevent an invasion, when...\textit{f1} forces the g-pawn to move anyway.

9...\textit{h5} 10 \textit{g4} 
Or:

a) 10 \textit{g2} g5 11 \textit{f2} \textit{g6} 12 \textit{g4} (or 12 \textit{e3} \textit{f5} 13 \textit{b2} h4 +-) 12...\textit{h4} 13 \textit{g2} \textit{h3}+ (13...\textit{xf3}+! +-) is cruel) 14 \textit{hxh3} \textit{xf3} 15 \textit{g3} \textit{d1} 16 \textit{b2} \textit{f7}+-.

b) 10 \textit{f4} \textit{g6} 11 \textit{e3} \textit{f5} 12 \textit{b2} \textit{g4} 13 \textit{xf2} h4 14 \textit{g3} \textit{xf4} ++ (Solozhenkin).

10...\textit{h4} 0-1  
Anand had seen enough. A possible finish is 11 \textit{f4} \textit{g5}! (Karpov surely would have played 11...\textit{e4} 12 \textit{d4} \textit{g5} 12 \textit{f5} (12 \textit{fxg5} \textit{g6} 13 \textit{a1} \textit{h5} ++) 12...\textit{xf5} 13 \textit{gxh5} \textit{g} + (Solozhenkin).

In the following diagram, it looks as if White has everything under control, but a typical break shatters him:

1...\textit{b4}!! 2 \textit{f8}!!  
Very inventive! 2 \textit{xb4} \textit{d3} 3 \textit{g7} c3 4 \textit{xc3} a3 5 \textit{d3} \textit{e6}+---.

2...\textit{bxc3}??  
2...\textit{a3}+! (Ljubojević) 3 \textit{a2} (3 \textit{c1} a2 4 \textit{h2} b3 5 \textit{d6} \textit{d3} and the threat of ...\textit{a1}+- decides) 3...\textit{bxh3} 4 \textit{xa3} \textit{xf4} 5 \textit{b4} g5++.

3 \textit{xc3} \textit{e6} 4 \textit{d6} \textit{f7}  
4...\textit{g5}! is a much better attempt to play for a win. 5 \textit{fxg5} (5 \textit{hgx5}? \textit{h4} ++) 5...\textit{xf3} 6 \textit{g6} \textit{g7} \textit{e7} and then:
a) 8 g7? a2 9 b2 c3+ 10 a1 c2! (now the white king can never get further than b2) 11 g5 and Black wins as follows: pick up the g-pawn with the king; march with the king to d1; remove the bishop from the a2-g8 diagonal, so that ...c1W will win a piece. For example: 11...fxf5 12 b2 g6 13 a1 xg7 14 b2 g6 15 a1 f5 16 b2 c4 17 a1 d3 18 b2 e2 19 a1 d1 20 b2 g4 21 xxa2 c1W 22 xc1 xc1 +=.

b) 8 xa3! xb4 9 xd2 g3 10 d6+ g4 11 g7 h4 12 e2 and White should still hold the position (von Bülow).

5 e7 xf4?!

Black should backtrack with 5...e6:

a) 6 b4? d3 7 xa4 c3 (without the pawn on f4 this would be a draw; see the game) 8 f5 gxf5 →.

b) 6 d6 transposes to the position after White’s 4th move, so Black has 6...g5!

6 b4 c4 7 xa4 c3 8 b4 d3 9 f6 c2 10 g5 h6 11 f7 12 g5 e6 13 h6 d5 14 g5 g8 15 h6 h2 1/2-1/2

In the following diagram, White is three pawns up, but to win he has to sacrifice a lot of them:

1 h5+ axb5 2 a5 b7 3 b4 e2 4 e5 c4 5 g4! hxg4 6 f5 gxf5

Now the material is equal, but White’s h-pawn decides, while his bishop stops Black’s connected passed pawns on one diagonal:

7 h5 f4 8 xf4 d3 9 h6 c6 10 a6 e4 11 a7 b7 12 xb5 12 b8 g3 13 c6+ a8 14 c7 f5 15 c8W +=.

1 c5! d3

Not 1...dxc5?? 2 a6 ++.

2 xd6 xc4 3 a6 c5 4 xc5 h5 5 f2 d3!

An important technique: the bishop forces the pawn to a dark square, where it is easier to erect a blockade.

6 a7 e4 7 g3 e6 8 c3 g2?

It looks unlikely, but this innocent-looking move is a decisive mistake. 8...f5! was called
for, e.g., 9.\( \texttt{f8}\) g6 10.\( \texttt{d4}\) a8 11.\( \texttt{c5}\) e6 12 b6.\( \texttt{f7}\) = (Averbakh). You see the big difference to the game. Black flexibly supports his bishop on the d7-f5 diagonal, preventing the invasion of White’s king. In the game White is able to prevent this defense with the beautiful 17.\( \texttt{f6!}\) and 18.\( \texttt{h5!}\).

9.\( \texttt{f4!}\) g6 10.\( \texttt{g4!}\) hxg4 11.\( \texttt{hxg4}\) h1 12.\( \texttt{g5}\) f7

12...\( \texttt{e4}\) 13.\( \texttt{a8}\)\( \texttt{xa8}\) 14.\( \texttt{xa6}\) +--.

13.\( \texttt{d4}\) g2 14.\( \texttt{h4}\) h1 15.\( \texttt{b4}\) g2 16.\( \texttt{b5}\) h1 17.\( \texttt{f6}\) g2

17...\( \texttt{e4}\) 18.\( \texttt{f4}\) b7 19.\( \texttt{e5}\) +--.

18.\( \texttt{h5!}\) gxh5 19.\( \texttt{f5!}\) 1-0

Nothing can stop the white king-march to the queenside.

Before studying the next example you should recall fortress 4.10A and 4.42.

1.\( \texttt{c4!}\)

Otherwise Black can play ...c4 himself to free his bishop.

\( \texttt{...e7?}\)!

Vorotnikov showed that 1...\( \texttt{a5!}\) leads to a draw: 2.\( \texttt{xc5}\) b6+ 3.\( \texttt{c6}\) e3 4.\( \texttt{c5}\) f2 5 d6 g3 6 d5 c7 7 c4 e5 8 d4 e6 9 d5 e7 and Black has established a defensive set-up analogous to 4.42. White can’t break through as 10 d6+ \( \texttt{xd6}\) 11 \( \texttt{xd6}\) +\( \texttt{xd6}\) only leads to fortress 4.10A.

2 d3

2 d4 e4 3 c5 e5 4 b7 d8 5 f5 d3! = (but not 5...\( \texttt{b4}\)! 6 c6 a5 7 d3!, which leads to the game).

2...\( \texttt{d8}\) 3 f5 e7? 

3...\( \texttt{a5}\) was called for.

4 d4! cxd4

4...\( \texttt{d8}\) 5 dxc5 a5 6 b7 b4 7 c6 d6 8 c7+ xc7 9 xa7 +--.

5 e5 a5 6 b7 d8 7 d3! d7

After 7...\( \texttt{d4}\) 8 c6 a5 9 c7+! xc7 10 xa7 it becomes clear that the d4-pawn is just an obstacle for Black: 10...\( \texttt{d6}\) 11 b6 a8 12 b7 +--.

8 c6+\( \texttt{d6}\)

8...\( \texttt{d8}\) 9 c7+! +--.

9.\( \texttt{b5?!}\)

Otherwise:

a) 9 c7? is premature: 9...\( \texttt{xc7}\) 10 \( \texttt{xa7}\) c6! 11 e4+ b5 12 b7 b6 13 a3 +--.

b) 9 e4! is the right way to guard the e6-square:

b1) 9...d3 10 \( \texttt{xd3}\) b6 11 e4 a5 12 c7 +--.

b2) 9...d8 10 c7 \( \texttt{xc7}\) 11 \( \texttt{xa7}\) +--.

b3) 9 c5 10 f3 c6 11 c7 \( \texttt{xc7}\) 12 axa7 a5 13 b7 b6 14 c2 +--.

9...\( \texttt{b6?!}\)

9...c5?! 10 d3 (10 \( \texttt{xa7}\) ? \( \texttt{xb5}\) 11 b7 d3 =) 10...\( \texttt{xd6}\) 11 c4! +--.

10 c7! \( \texttt{xc7}\) 11 \( \texttt{xa7}\) c5 12 b7 b6 13 a3 1-0

4.58

Vorotnikov – Kaminsky
Leningrad 1973

1 c4!

Otherwise Black can play ...c4 himself to free his bishop.

\( \texttt{...e7?}\)!

Vorotnikov showed that 1...\( \texttt{a5!}\) leads to a draw: 2 \( \texttt{xc5}\) b6+ 3 \( \texttt{c6}\) e3 4 c5 f2 5 d6 g3 6 d5 c7 7 c4 e5 8 d4 e6 9 d5 e7 and Black has established a defensive set-up analogous to 4.42. White can’t break through as 10 d6+ \( \texttt{xd6}\) 11 \( \texttt{xd6}\) +\( \texttt{xd6}\) only leads to fortress 4.10A.

4.59

A. Kotov – M. Botvinnik
USSR Ch (Moscow) 1955

It looks like an ironclad fortress as White's king blocks the passed b-pawn and his bishop defends the other pawns.

1...g5!!
However, after this blow the creation of a second black passed pawn can’t be prevented.

2 fxg5
Or:

a) 2 âxb3 gxh4 3 f5 âxf5 4 âd6 h3 —+

b) 2 hxg5 h4 3 âd6 (3 f5 âxf5 4 âxb3 h3 5 âd6 âxe3 —+ 3...âf5 4 g6 âxg6 5 f5 âxf5 6 âxb3 âg2 —+.

2...d4+!

Keeping the b-pawn is of crucial importance as 2...âg3? 3 âxb3 âxh4 4 âc3 âxg5 5 âd4 âf5 6 âe7 = only leads to a draw.

3 exd4 âg3

Not 3...âg4? 4 d5 âxd5 5 âf2 =; the e1-h4 diagonal is long enough.

4 âa3

4 âc7 âxh4 5 g6+ âg4 —+; Black’s bishop can stop both passed pawns on one diagonal, while Black’s advancing h-pawn will cost White his bishop.

4...âxb4 5 âd3 âxg5 6 âe4 h4 7 âf3 âd5+ 0–1

A possible finish is 8 âf2 âf4 9 âg1 h3 10 âh2 âe6 11 d5 âd7 12 âb2 âe4 —+.

The final example inspired the British Chess Magazine to start a search for the ‘Most Amazing Move’ of all time and the panel of judges voted for Shirov’s 47...âh3!!:

Bishop Endings

V.Topalov – A.Shirov
Linares 1998

Black has only one move to win:

1...âh3!!

‘Shirovs Geniestreich’ they call it in the April issue of Schach. It’s a very sharp way of highlighting the bishop’s relative value in endgames with opposite-coloured bishops.” (Timman in NiC Magazine 4/98). Black frees the route for his king via f5-e4 without loss of time. Other moves do not win:

a) 1...âd6? 2 âf2 âc5 3 âe3 =

b) 1...âe4? allows White an unbreakable defensive set-up: 2 g3 âf5 (2...f5 3 âf2 f4 4 gxf4 âxf5 5 âc3 âg4 6 âf6 âg3 7 âf3 âe1 8 âd6 âf1 9 âd4 =) 3 âf2 âa3, and now:

b1) 4 âa1 âh1 5 âe3 âg4 and then:

b11) Not 6 âf2? f5 7 âe5 a5 8 âb2 f4 9 gxf4 âxh4 10 âe3 âe4 11 âf2 (D).

4.60A

B

4.60

V.Topalov – A.Shirov
Linares 1998

Black’s king can then creep slowly but surely into the position: 11...âg4 12 âe3 (12 âe5 âf5 13 âe3 g5 —+ 12...âg3 13 âa1 âg2 14 âe5 (14 âe2 âf5 15 âd4 âg4+ 16 âe3 âf1 17 âd2 âe2 18 âc1 âg2 19 âb2 âc4 —+) 14...âf1 15 âc3 âf5 16 âd2 16...âf3 d4 17 âxd4 âc1 18 âe3 âd1 —+ 16...âf2 17 âb2 âf3 18 âe5 âb1 19 âc1 âe4 20 âb2 g5 —+.

b12) 6 âxf6 âxg3 7 âe2 a2 (7...d4 8 âxd4 âxh4 9 âf6+ g5 10 âd2 =; White can simply sacrifice his bishop for the g-pawn when his king has reached the a1-corner) 8 âe3 âg4 9 âe2 âf5 10 âa1 âe4 11 âd4 d4 12 âb2 âf3 13 âa1 d3 14 âf6 âg4 15 âa1 âf5 16 âb2 âsf4 17 âc3 âg4 18 âf6 âa1 19 âxa1 âxh4 20 âf6+ g5 21 âe3 =.

b2) 4 âxe3 âg4 5 âxf6 âxg3 6 âe2 d4 (6...a2 7 âe3 âf3 8 âd2 d4 9 âxh4 10 âc1 =) 7 âxd4 âxh4 8 âg2 d5 9 âe3 =.

2 gxh3

Refusing the gift with 2 âf2 doesn’t help as the bishop offers itself again after 2...âf5 3 âf3 âxg2+ 4 âxg2 âe4 —+, as Shirov points out in Inf 72/415.)
2...\textbf{xf5!}
Not 2...\textbf{f5}? 3 \textbf{xf2} \textbf{d6} 4 \textbf{e3} \textbf{c5}:
\begin{itemize}
\item a) 5 \textbf{d4}+? \textbf{e4} 6 \textbf{xb2} \textbf{d4}+ 7 \textbf{xd4} (7 \textbf{xf4}
\textbf{d3} \rightarrow) 7...\textbf{f4}+ 8 \textbf{xf4} \textbf{f3} 9 \textbf{xe3} a3 10 \textbf{xf3} a2 ++.
\item b) 5 \textbf{d3} a3 6 \textbf{f6} a2 7 \textbf{c5} f4 8 \textbf{a1} \textbf{b4}
9 \textbf{e2} \textbf{c4} 10 \textbf{fxf3} d4 11 \textbf{xf4} \textbf{d5} =.
\end{itemize}
\textbf{3 \textbf{xf2} \textbf{xe4!} 4 \textbf{xf6}}
4 \textbf{xe2} \textbf{f5} = (Shirov).
\textbf{4...d4!} 5 \textbf{e7}
Or: 5 \textbf{e2}? a3 ++ (Ftačnik in CBM 64); 5
\textbf{g5} \textbf{d3} 6 \textbf{e1} \textbf{c2} =.
\textbf{5...d3!} 6 \textbf{c5} \textbf{xe4!}
6...\textbf{c3} 7 \textbf{e2} =.
\textbf{7 \textbf{e7}}
Until now all of Black's moves were unique, which adds considerably to the value of the combination. Now he has a choice:
\textbf{7...\textbf{b3}}
7...\textbf{c3} also wins.
\textbf{0-1}
Topalov resigned due to \textbf{8 \textbf{c5} d3} 9 \textbf{e3}
\textbf{c2} 10 \textbf{b4} a3 ++ (Ftačnik).

\textbf{Exercises}
(Solutions on pages 374-5)

\textbf{Rule and Principles:}
\textbf{Opposite-Coloured Bishops}

1) Most of the time, material is not as important as positional considerations (4.59).
2) The defender's aim is to construct an impenetrable fortress of one of the following types:
   Type 1: the king stops the passed pawn while the bishop protects the other pawns (see 4.49A
   and B).
   Type 2: the bishop stops the passed pawns while the king assists it and stops the attacking
   king breaking through (see 4.49E).
3) If a fortress of the second type can be broken, then the attacker usually creates two
   passed pawns on different wings and his king helps one pawn to advance, eventually winning
   the bishop (compare, e.g., 4.53 and 4.58).
4) If the attacker sacrifices material himself to create passed pawns, his bishop must be able
   to halt the resulting enemy passed pawns on one diagonal. The principle of one diagonal
   is important for the attacker and the defender as a method to avoid falling into zugzwang
   or being diverted (see 4.46).
5) As defender, attack your opponent's pawns with your bishop to force them onto
   squares of the opposite colour to your bishop. It is then easier to create a safe blockade.
Can Black hold the position?

White's counterplay on the kingside appears to be fast enough. Can you do something about that?
5 Bishop vs Knight

The question of whether a bishop is stronger than a knight is very old. Although the two pieces move in completely different ways, their value seems to be almost equal on an 8 x 8 board. However, each piece has its advantages and disadvantages.

The bishop tends to be better when the position is open and there is play on both wings. It is also much more difficult to put the side with a bishop in zugzwang as it can usually lose a tempo much more easily than a knight. On the other hand, the bishop’s main weakness is of course that it can only visit half of the squares on the board. Therefore, if a firm blockade can be created on squares of the other colour, this is usually the end of the matter. Also, if a lot of pawns are blocked on squares of the bishop’s colour, its possibilities can be very restricted and in extreme cases it can even start to look like an overgrown pawn.

We have divided the material in this chapter into positions favourable for either the bishop or the knight, and conclude with a brief section on situations with more minor pieces:

5.1: The Side with the Bishop has the Advantage

5.2: The Side with the Knight has the Advantage

5.3: The Bishop-Pair

5.1 The Side with the Bishop has the Advantage

We focus on the following topics:

A: Bishop + Pawn(s) vs Knight 132
B: Extra Pawn for the Bishop 135
C: Fortresses 138
D: Open Positions 140
E: Space Advantage / Active King 143

A) Bishop + Pawn(s) vs Knight

If the defender’s king can’t get in front of the pawn it is usually quite tricky to stop the pawn, because the knight can easily fall into zugzwang:

White wins as follows: 1. b4+! e6 2. c5 d5 3. a3 a7+ 4. b7 (losing a tempo to put Black in a fatal zugzwang) 4... c6 5. c7 ++.

If Black is to move, he can reach a fundamental defensive position:

1... e7+ 2. d8 c6+ 3. e8 e6 (D)

The king will return to e6 next move because 5 f7 allows 5... e5+ 6. e8 xd7 =.
If the defending king gets in front of the pawn, this usually secures the draw. Only a very unfavourable position of the knight leads to disaster:

\[
\text{W/B} \\
\begin{array}{|c|c|c|c|c|c|c|c|}
\hline
& & & & & & & \\
& & & & & & & \\
& & & & & & & \\
& & & & & & & \\
& & & & & & & \\
& & & & & & & \\
& & & & & & & \\
& & & & & & & \\
\hline
\end{array}
\]

5.02

The reader should memorize the following coralling motif as it is important not only in the endgame: 1...\text{c}e5! (the bishop completely dominates the knight) 1...\text{d}7 2 \text{c}e5! \text{e}6 3 \text{c}e6! \text{xe}5 4 \text{d}7! +=.

If Black is to move, he draws easily by bringing the knight back home: 1...\text{f}6+ 2 \text{e}6 \text{d}7! 3 \text{xe}7 \text{e}5 4 \text{e}8 \text{d}7 =.

The next example is very famous:

\[
\text{W} \\
\begin{array}{|c|c|c|c|c|c|c|c|}
\hline
& & & & & & & \\
& & & & & & & \\
& & & & & & & \\
& & & & & & & \\
& & & & & \text{e}4 & & \\
& & & & \text{h}4 & & & \\
& & & \text{g}3 & & & & \\
\hline
\end{array}
\]

5.02B

G.Zakhodiakyn
1st Pr. ‘64’, 1931

1 \text{c}5! \text{d}7 2 \text{f}6! \text{e}8+ 3 \text{e}7! \text{g}7 4 \text{g}6! \text{h}5 5 \text{f}7+! \text{h}6 6 \text{f}6! \text{h}8 7 \text{e}5! \text{h}7 8 \text{e}4! \text{h}8 9 \text{f}4! \text{h}7 10 \text{g}4! \text{h}8 11 \text{g}6! +=

A real masterpiece!

John Nunn deals with the subject of bishop + pawn vs knight much more extensively in his book *Secrets of Minor-Piece Endings* (pp. 206-64).

With two connected passed pawns, there are two different cases. If the knight has managed to set up a blockade on squares opposite to the bishop’s colour, the position is drawn (see following diagram).

King and bishop can’t take all seven squares away from Black’s knight:

1 \text{g}4 \text{d}3 2 \text{f}3 \text{f}4

Not, of course, 2...\text{xe}6?? 3 \text{e}3 \text{b}4 (or 3...\text{d}e1 4 \text{h}3 \text{c}e2+ 5 \text{d}2 \text{d}4 6 \text{f}4 ++) 4 \text{f}4 \text{c}e2+ 5 \text{d}2 \text{d}4 6 \text{g}4, when the blockade is broken. A possible follow-up would be 6...\text{xe}6 7 \text{xe}3 \text{d}e7 8 \text{e}5+ \text{f}7 9 \text{xe}4 \text{g}8 10 \text{f}5 \text{c}7 11 \text{e}2 \text{h}6 12 \text{e}4 +=.
3 f4
3 gxh6?? hxg6 = (4.09).
3...f7 4 c4 d6 5 e6
Corralling the knight.
5...g6 6 e5 g7
6...h5 7 f6 += (Hecht).
7 h5 h6 8 h6 h7 9 g6+ h8 10 g5
g7 11 d5 h8 12 c4 g7 13 e6 1-0
In anticipation of 13...h8 14 f6 f7 15
gxf7 +=.

Two isolated pawns also offer good winning chances, but care is required:

1 d4 c3 2 d3
The pawn endgame arising after 2 xc3?!!
c3+ 3 xc3 is lost: 3...f6 4 d4 f5 5
e3 g4 --.
2...e6?
This runs into a nasty check. The immediate
2...g5 was called for:
   a) 3 xc7 g4 4 d5 g3 5 d4 e5 6 g2
d6 7 h4 e5 8 g2 c2 9 xc2 e4 10
d1 e3 11 h4+ f2 ++.
   b) 3 d4 d6 4 d2 4 xc3 5 d3
dx4 6 d6 d3 7 e3 h5 8 f3 h4 +)
4...e5 5 d3 f6 6 e4 g4 7 d3 g3 8 e2
d4 9 g2 f5 10 e1 e4 ++.
3 d4++
f6
Or 3...d5 4 f3, and now:
   a) 4 a5 g4+ (this nice tactical trick saves the day) 5...g5 6 f3 g7 7 h2 g8 8 f1
g2 9 e3+=.
   b) 4 d6 d5 d4 g5 6 e4 a5 7 d3 g4 8
c4 c5 9 e2 c2 10 d3 =.

Even the wrong rook's pawn doesn't spoil it, but White has to be careful:
1...g4+ 2 g3 h6
2...f6 3 f4 h5+ 4 g4 f6+ 5 f5
dh7 (5...g8 6 c4 d7+ 7 g4 g6 8 d5
d5+ 9 e5 g6 10 h5 e7+ 11 e5 ++;
5...e8 6 e5 f7 7 h5 g7 8 g6+ g7 9 h6
e6 10 h7 e8 11 f5 ++) 6 e6 f8+ 7 e7
g8 8 h5 g7 9 h6+ g8 10 f5 h8 11 f7
++ and White uses zugzwang to win (Hecht
in CBM 53).
4 \text{"e"}c6 \text{"e"}c5 5 \text{"e"}xc3 g5 6 \text{"e"}c4 \text{"d"}b6 7 \text{"d"}d3 g4
8 \text{"e"}c4 \text{"g"}g5 9 \text{"e"}e5 g3 10 \text{"f"}f3!
Blocking the pawn with the king secures the draw. Not 10 \text{"f"}f3+? \text{"g"}g4 11 \text{"e"}e1 \text{"a"}a5 12 \text{"g"}g2 \text{"d"}d2 --.
10...\text{"h"}h4 11 \text{"g"}g2 \text{"c"}c7 \frac{1}{2}-\frac{1}{2}

B) Extra Pawn for the Bishop

We start with pawns on one wing. The knight has good chances to defend even with four against three pawns:

1...\text{"d"}d6 2 \text{"d"}d5+?
2 \text{"e"}e6! (Spielman and Tisdall in BCE)
2...\text{"f"}f2 3 \text{"g"}g5 h6 4 \text{"d"}d7 \text{"x"}xg3 5 \text{"x"}h6 f4 (or
5...\text{"e"}e7 6 h5 \text{"f"}f4 7 \text{"g"}g8 g5 8 \text{"h"}h6 \text{"f"}f3 9 \text{"x"}xf5
= ) 6 h5 \text{"f"}f6 7 \text{"f"}f5 h4 8 \text{"d"}d4 \text{"e"}e3 9 \text{"f"}f3 \text{"d"}d2
10 \text{"g"}g5 \text{"e"}e1 11 \text{"g"}g4 =.
2...\text{"d"}d3 3 \text{"f"}f6 h5?
Missing 3...\text{"h"}h6! (Knoch) 4 \text{"g"}g8 (4 \text{"g"}g4 \text{"f"}f4 5
\text{"h"}h2 \text{"f"}f2 --+) 4...g5 5 \text{"x"}h6 g4+ 6 \text{"h"}h2 \text{"f"}f4 7
\text{"x"}xg4 fxg4+ 8 \text{"f"}f3 g2 9 \text{"h"}h2+ \text{"x"}xh2 10 \text{"x"}xh2
\text{"f"}f2 --.
4 \text{"d"}d5 \text{"f"}f2
4...\text{"x"}xg3 5 \text{"e"}e7 \text{"f"}f2 6 \text{"x"}xg6 \text{"c"}c5 7 \text{"h"}h8 =.
5 \text{"f"}f6 \text{"x"}xg3 6 \text{"e"}e4+ \text{"x"}xe4 (stalemate) \frac{1}{2}-\frac{1}{2}

With pawns on both wings, an extra outside passed pawn is usually enough to win:

The knight can draw even the following quite unfavourable position. Again the presence of a wrong rook’s pawn plays a key role:

5.06A
/==
A.Nimzowitsch – J.Davidson
Semmering 1926

5.07
+/=
A.Nimzowitsch – D.Janowski
Karlsbad 1907
First White improves the position of his king:
1 \(\text{f}3\) \(\text{e}7\) 2 \(\text{e}3\) \(\text{f}6\) 3 \(\text{d}4\) \(\text{d}6\)
Then the position of his bishop:
4 \(\text{d}1\) \(\text{b}6\) 5 \(\text{f}3\) \(\text{e}8\)
Next he prepares to break open an entry for his king on the kingside, so he can create threats on both wings:
6 \(\text{h}4\) \(\text{e}7\)
After 6...\(\text{b}6\) the blockade is broken by 7 \(\text{e}4\) \(g5\) (7...f5 8 \(\text{c}6\) +++) 8 \(\text{fxg}5\) \(\text{fxg}5\):
a) 9 \(\text{hxg}5\)? makes things unnecessarily difficult for White; e.g., 9...\(\text{hxg}5\) 10 \(\text{f}3\) \(\text{a}4\) 11 \(\text{g}4\) \(\text{b}6\) (11...\(\text{ac}7\) 12 \(\text{d}1\) \(\text{b}6\) 13 \(\text{e}4\) \(\text{d}6\) 14 \(\text{f}5\) ++) 12 \(\text{e}4\) \(\text{d}5\)\(+\).
b) 9 \(\text{h}5!\) \(\text{d}7\) 10 \(\text{f}3\) \(\text{b}6\) 11 \(\text{e}4\) \(\text{e}6\) 12 \(\text{g}4+\) \(\text{f}6\) 13 \(\text{d}4\) ++ (Averbakh).
7 \(\text{e}4!\) \(\text{g}5\)
7...f5 8 \(\text{c}6\) \(\text{e}8\) 9 \(\text{e}7\) 10 b6 +--.
8 \(\text{fxg}5\) \(\text{fxg}5\) 9 \(\text{hxg}5\)
9 \(\text{h}5\) also wins (compare 6...\(\text{b}6\)), but this time it is more difficult than taking on g5; 9...\(\text{g}8\) 10 \(\text{b}6\) \(\text{f}6\) 11 \(\text{b}7\) \(\text{c}7\) (11...\(\text{d}7\) 12 \(\text{f}3\) \(\text{c}7\) 13 \(\text{e}4\) \(\text{x}b7\) 14 \(\text{f}5+\) \(\text{c}7\) 15 \(\text{g}6\) \(\text{x}d6\) 16 \(\text{x}h6\) \(\text{e}e6\) 17 \(\text{g}7\) ++) 12 \(\text{f}3\) \(\text{g}4\) 13 \(\text{c}6\) \(\text{x}h5\) 14 \(\text{e}5\) \(\text{x}b8\) 15 \(\text{f}5\) \(g3\) 16 \(\text{f}3\) \(\text{g}7+\) 17 \(\text{f}6\) \(\text{e}e8\) + 18 \(\text{g}6\) +--.
9...\(\text{hxg}5\)
Now that a path on the kingside is open, the pawn finally advances:
10 \(\text{b}6\) \(\text{g}4\) 11 \(\text{b}7\) \(\text{c}7\) 12 \(\text{e}5\) \(\text{g}3\) 13 \(\text{f}4\) \(\text{g}8\)
14 \(\text{g}3\) \(\text{f}6\) 15 \(\text{f}3\) \(\text{d}7\) 16 \(\text{f}4\) \(\text{d}6\) 17 \(\text{f}5\) \(\text{e}e7\) 18 \(\text{c}6\) \(\text{b}8\) 19 \(\text{h}5\) 1-0

In the next example White has to be careful because of the limited number of pawns:

W

5.08
A.Onishchuk – V.Salov
Elista 1998

The e5-pawn is weak, the kingside pawns are blocked on light squares and the knight has problems finding an anchor square. This all adds up to very good winning prospects for Black.
1...\(\text{d}5\) 2 \(\text{e}3\) \(\text{c}4\) 3 \(\text{h}4\)
Or:
a) 3 \(\text{f}2\) \(\text{e}4\) 4 \(\text{d}2+\) \(\text{d}3\)\text{+} (Ribli in CBM 65).
b) 3 \( \text{c}d2 \text{c}6 4 \text{c}f3 \text{f}1 5 \text{h}4 (5 \text{f}2 \text{c}d3 6 \text{c}e3 \text{b}5 \text{f} and White has to give way due to zugzwang – Hecht) 5...gxh4 6 \text{x}h4 \text{x}e5 \text{f}; see the game.

3...gxh4 4 \text{x}h4 \text{xe}5 5 \text{f}3+ \text{d}5 6 \text{d}2 \text{h}5? \text{f}3 \text{d}4 8 \text{g}5?!

White should try 8 \text{d}3?! \text{d}1 9 \text{h}2 (9 c4+?! \text{d}6 10 \text{h}2 \text{e}5 11 \text{c}e4 \text{e}2 12 \text{e}5 \text{xc}4 13 \text{f}3 \text{c}6 14 \text{d}2 \text{d}5 15 \text{f}1 \text{d}7
16 \text{e}3 \text{e}7 \text{f}).

8...h5!
Black keeps his h-pawn on the board. The pawn exchange would reduce his winning potential.
9 \text{f}4 \text{c}2 (D)

Before capturing the a-pawn, White has to make one important move first:
1 a6!
After 1 \text{xc}5?! a6 Black's a-pawn is safe and he has much better chances to defend.

1...\text{d}7
2 c3 c5 \text{b}7 \text{c}6 4 \text{c}5 ++,
2 \text{xc}5 \text{c}6 3 \text{xa}7 \text{b}5 4 \text{e}5 \text{xa}6 5 \text{f}8 \text{g}4
5...h5 6 \text{e}7 ++ (Wedberg in CBM 72).
6 \text{xc}6 \text{f}5 7 \text{g}5 \text{b}5 8 \text{f}6 \text{d}4 9 \text{f}1 \text{d}5 10 \text{e}2 \text{e}4 (D)

10 \text{e}5
After 10 \text{h}4 \text{e}4 the knight is temporarily corralled so that Black can improve his position and win:
a) 11 c4+ \text{d}4 ++,
b) 11 \text{e}3 \text{e}5 12 c4 \text{b}7 13 c5 \text{e}4 14 c6 \text{xc}6 15 \text{g}6+ \text{d}6 ++,
c) 11 g6 c5+ 12 \text{g}5 (12 \text{e}3 \text{b}1 13 \text{e}2 \text{e}4++) 12...\text{c}e4 13 \text{xc}x5 \text{xc}x3 14 \text{g}4 \text{d}4
15 \text{g}3 \text{d}5 16 \text{f}2 \text{e}6 17 \text{c}3 \text{b}7 ++.

10...\text{f}5 11 \text{f}3
Black also wins after 11 g6 h4 12 \text{f}3 h3 13 \text{g}3 \text{c}4 ++.

11...\text{c}4 12 \text{h}4 \text{g}4
12...\text{xc}3? 13 \text{xf}5 \text{xf}5 14 \text{xf}5 \text{d}4 15 g6! = (Ribli).
13 g6 \text{xc}3 14 \text{e}5
14 \text{g}2 \text{d}4 15 \text{e}3++? e5++ (Ribli).
14...\text{d}3 15 \text{d}6 \text{e}4 16 \text{e}7 \text{f}4 0-1
White's counterattack comes too late: 17 \text{f}8 \text{g}5 18 \text{g}7 (18 \text{g}2 \text{x}g6 ++) 18...\text{xf}4

11 \text{f}3 \text{gxf}3+ 12 \text{xf}3 \text{d}5 13 g4 \text{d}6 14 \text{f}4 \text{e}6 15 \text{d}4 1-0
C) Fortresses

As with opposite-coloured bishops, fortresses are possible for the knight, especially if the pawns are blocked on squares of opposite colour to the bishop. In most cases it is important that the king has no entry route and that the fortress can't be destroyed by zugzwang (remember that it is more likely that a knight will fall into zugzwang than a bishop). The classic example is the following:

The players agreed a draw in this position and Averbakh proved that this result was correct:

After 2...g6 3 g3 h5 4 g2 g5

Averbakh stops here, claiming equality. We analyse a bit further:

We continue with another classic (see following diagram).

At first sight Black's king seems able to penetrate on the queenside successfully. However,
with precise play White can blockade the e-pawn with the knight and defend with the king on the queenside.

1 ©c4?
1 ©h1! allows 1...c3 2 a3 ©c5 --, coralling the knight.

1 ©f1! was the right move to swap the roles of king and knight, as Averbakh demonstrated:
1...©c7 (1...©c3 2 ©g3 ©e3 3 ©d1 ©b2 4 ©e2 ©xa2 5 ©c2 =) 2 ©e3 ©f4 3 ©g4 ©g5 (3...©c3 4 ©e6 ©b2 5 ©d5 ©d6 6 ©d1 ©xa2 7 ©e2 ©a3 8 ©e3 ©f4 9 ©f5 ©e3 10 ©d4 =) 4 ©f2 ©e5 5 ©g4+ ©f5 6 ©f2 ©c1 7 ©h3 ©b2 8 ©e3 ©e5 9 ©e2 ©d4 10 ©g5 ©f5 11 ©f7 =.

1...©c3 2 ©d1
2 ©d2 ©c3 3 ©c4 ©d4 -- (zugzwang).

2...©d4 3 ©e2 ©e3 4 ©a5 ©b2 5 ©c6 ©c5 6 ©e5 ©xa2 7 ©d3 ©e7 0-1

The b-pawn costs White his knight: 8 ©xe3 ©xb3 9 ©d2 ©g5+ 10 ©d1 ©c3 11 ©e5 ©e3 12 ©e4+ ©d3 --.

The next game will most probably not become a classic (see following diagram).

All Black's pieces are on light squares, but the knight is very restricted. It is true that White's king is almost imprisoned as well, but he still has a pathway on the queenside.

1 ©e1?
Correct is 1 ©c5! ©d2 2 ©b4+ ©d3 3 ©c3 ©g5 4 ©e1 ©h7 5 ©d1 ©g5 6 ©c1 ©h7 7 ©b1 ©e3 (7...©g5 8 ©a2 ©c4 9 ©d2 ©h7 10 ©a3 ©xd1 ©b4 ++) 8 ©e2 ©f2 9 ©b3 ©xg3 10 ©e1+ ©f3 11 ©b4, and now:

a) 11...©c3 12 ©c5 ©e4 13 b4 ++.

b) 11...©g3 12 ©xg3 ©xg3 13 ©xb5 +--.

c) 11...©e4 12 ©c5 b4 13 ©d4 ©g5 14 ©b4 ©h7 15 ©xb4 ©xd4 16 ©e2+ ©e4 17 ©e5 ©f8 18 b4 ©d7+ 19 ©d6 ©f6 20 ©b5 ©d4 21 ©xd4 ©xd4 22 b6 +--.

1...©e3? 
Both players disregard the fact that the d4-pawn is crucially important.

2 ©d1?
2 ©c5! ©f3 3 ©d6 (3 ©d2? ©xg3 4 ©e3 ©h3 5 ©b4 ©g3 6 ©e1 ©g4 =) 3...©e3 4 ©e5 b4 (D).

Now:

a) 5 ©d1? b3 = completes Black's fortress. There is absolutely no way out for White's king and Black doesn't fall into zugzwang because the knight has the squares f8, f6 and g5 and the king d2, d3 and c3. White can't deprive him of them all.
D) Open Positions

In open positions with pawns on both wings, the bishop is usually superior to the knight.

White’s winning potential consists of his powerful bishop, kingside majority and a-pawn together with the vulnerability of Black’s pawns (especially the g- and a-pawns). Averbakh’s evaluation that White is winning was commonly accepted until very recently, when Dvoretsky cast doubt on it by pointing out a hole in an important line which was discovered by Zviagintsev.

1...\( \text{e}2 \)!

1...\( \text{f}2 \) is more precise according to Averbakh.

1...\( \text{e}5 \)

1...\( \text{h}6 \)!!

2\( \text{e}3 \) \( \text{f}6 \) 3 \( \text{f}4 \) \( \text{f}7 \) 4 \( \text{e}3 \) \( g5 \)?

4...\( \text{h}6 \)! 5 \( \text{d}3 \) \( \text{f}5 \) 6 \( \text{c}4 \) \( \text{h}4 \) 7 \( \text{e}c5 \) \( \text{e}5 \) 8 \( \text{b}7 \) \( \text{f}5 \)!! (Zviagintsev; 8...\( \text{f}4 ? \) 9 \( \text{b}5 \) \( \text{g}3 \) 10 \( \text{a}6 \) \( \text{xg}2 \) 11 \( \text{xa}7 \) and Averbakh stops here with +++) 9 \( \text{b}5 \) \( \text{d}6 \) 10 \( \text{a}6 \) \( \text{c}5 \) 11 \( \text{xa}7 \) \( \text{b}4 \) =.

5\( \text{b}5 \) \( \text{h}6 \) 6 \( \text{d}3 \) \( \text{e}5 \) 7 \( \text{a}8 \) \( \text{d}6 \) 8 \( \text{c}4 \) \( g4 \)

9 \( \text{a}4 \) \( \text{g}8 \) 10 \( \text{a}5 \) \( \text{h}6 \) 11 \( \text{e}4 \) \( g3 \) 12 \( \text{h}5 \) \( \text{g}8 \)

13 \( \text{b}1 \) \( \text{h}6 \) 14 \( \text{a}6 \) \( \text{c}6 \) 15 \( \text{a}2 \) 1-0

The next example is very difficult to assess. Averbakh (Av 295) says that Black is winning, but we think that although White’s task is very hard, he should be able to hold on.

[Diagram]

5.16

G.Stoltz – I.Kashdan
The Hague 1928

1...\( \text{f}8 \) 2 \( \text{f}1 \) \( \text{e}7 \) 3 \( \text{e}2 \) \( \text{d}6 \) 4 \( \text{d}3 \) \( \text{d}5 \)

5 \( \text{h}4 \) \( \text{c}8 \)

Black plans to check with the bishop, forcing White’s king away from d3 so that he can penetrate on the other wing with his own king.

6 \( \text{f}3 \)

6 \( \text{f}3 \) \( \text{a}6 \) + 7 \( \text{e}3 \) \( \text{c}5 \) 8 \( \text{c}2 \) \( \text{f}1 \) 9 \( \text{g}3 \) \( \text{a}6 \)

10 \( \text{d}4 \) \( \text{b}7 \) 11 \( \text{d}3 \) \( \text{b}4 \) 12 \( \text{c}2 \) \( \text{d}3 \) 13 \( \text{b}2 \) \( \text{g}6 \) 14 \( \text{c}2 \) \( \text{a}6 \) 15 \( \text{c}2 \) and Black is still far away from victory (Averbakh). We even believe
that White has enough resources to hold the position.

6...a6+ 7 c3 h6 8 d4 g6 9 c2?
After 9 f3! e5 10 g3 we can’t see a way to break through.

9...e4 10 e3 f5 11 d2
11 c4?? xxc4 12 xxe4 (12 bxc4 a5 +)
12...f4 13 b5 g5 14 hxg5 hxg5 15 b6 d4 16
f3 c3 17 axa5 c4 18 a4 a6 19 ca5 c3 20
a4 b2 21 a5 b3 +.

11...f4 12 g4 h5 13 g6+
Black also wins after 13 f3+ g5 14 f2 g5!
15 hxg5 hxf1 +.

13...f5 14 d7?!
14 h7?? g4 (14...f1? can be met by 15
f3! with the idea of meeting 15...xg2? with
16 c2) 15 f8 xh4 16 xg6+ g5 17 d5
f5 (17...b7?? 18 g3 xg5 19 d3 fxg3 20
fxg3 g4 21 f4 h4 22 gxh4 =) and now:

(a) The pawn endgame after 18 d3 xxd3
19 xxd3 is surprisingly difficult to win: 19...g4
20 xg8 h4! (20...a5?? 21 d3 h4 22 xg4 =;
20...f3+? 21 gxh3 xh4 b4! =) 21 b4 a6 22
f1 f5 23 e1 e5! +.

(b) 18 f3 xh7 19 e2 (19 e1 g4 20
xg2 a5 21 d4+ e4 21 f3
a4 22 d3 e5 +)

14...e8 15 f8 g5 16 g3
Or 16 hxg5 xg5 17 c2 g4+ 18 f3 a4
f5 +.

16...gxh4 17 xh4 xg4 18 g6 f5 19 e7
a6 20 b4 xh4 21 d3 g4 22 e4 h4 23
f5+ 24 d5 f3 25 b5 h3 26 xh7 h2 27
b6 h1 w 28 c6 wb1 29 c5 e4 0-1

At first sight White’s connected passed pawns
look very menacing, but at second glance it becomes
clear that they are actually very weak.

1...e6 2 d4 e6 3 a3 d7?
Now White loses the pride of his position
due to zugzwang.

4 f2
4 c3 c5 5 c3 b5+ +.

4...d6 5 h4 cxe7 6 hxg5 xg5 7 e5
7 e4 xg4 8 xg4 9 f6 9 g4+ e6 +.

7...e6 8 e4 cxe4 9 xg5 f3 10 e4
h5 11 f4 e6 12 c3
12 g3 f2 13 e3 d5 14 xf2 e4 15
d1 f4 16 c3 d7 17 e2 e3 +.

12...e5 13 c3 a6 14 c4 b5 15 e5 a5
16 c7+ e6 17 c5+ d5 18 b3 a4 19
d2 c5 20 d4+ d5 21 d2 b4 22 axb4
xg6 23 c3
23 c3 a3 24 b5 c2 25 b6 f6 +.

23...a3 24 d2 c2 25 f1 a2 26 d2 a6
27 c3+ e6 0-1

5.18
K. Müller – F. Lamprecht
Hamburg 1986

White is slightly better but with precise play
Black should be able to hold on:

1 f1 e7 2 e2 e6 3 d2 e5
Grabbing space on the kingside with 3...f5 or
3...g5 was better.

4 b3 d7 5 c4 a5 6 a3 b6 7 b4 abx4 8 abx4
f6 9 e3 e5 10 f4+ d6 11 d4 h5
11...d7?? 12 a4 f6 13 xxd7 xd7 14 c5
+

12 e5+ bxc5 13 bxc5 c7 14 f5 exf5 15
xf5 f4 16 e4 d6+ 17 d4 f4 18 f3
d7??

5.17
D. Sadvakasov – V. Permiakov
Omsk 1996
Missing the last chance to seize space on the kingside with 18...g5 19 d4 f6 20 e4 c6 21 f5+ e5 22 xh6 d6 23 b7 d7 24 g7 c7 25 h6 f6 =.

19 g3 g6

Or:

a) 19...xh3? 20 g4+ ++.

b) 19...e6 20 g4 and White wins by simplifying into a won pawn ending; for example, 20...g6 21 xe6+ xe6 22 h5 d7 23 b6 c8 24 c6 h5 25 h4 f6 26 d6 g5 27 e6 ++.

20 h5 e5+ 21 d5 f6 22 e2 f7 23 g4+ c7 24 a6 g5+

24...e5 25 d5 f7 (25...xg4 26 h4++ 27 c6+ c7 28 e5 ++) 26 h4++.

25 d5

Not 25 f5? e6 26 g6 (26 h4 f7 27 f3+ xe5 28 g6 e5+ =) 26...xe5 27 f5 d4 28 xg7 e5 29 g6 d4 30 g4 f2 31 h4 f4 32 h5 g3 =.

25...f7 26 h4 e5 27 e2 g6

27...e6 28 h5 d8 (28...e5 29 h6 f3 30 xe4 e5 31 f5 e8 32 f6+ 33 h5 f3 30 a8 e3 31 g3 32 g6 c5+ 33 f7 d6 34 xg7 c7 35 xh6 f8 36 b1 ++).

28 e6 d7 29 f7 g5 30 h5 c5 31 g6 d6

31...e4 32 g4 ++.

32 xh6 e5

32...e7 33 g7 d6+ 34 g8 f5 35 h6 g8 and now we mention two false paths for White to avoid:

a) 36 h7? xh7 37 xh7 f6 38 xh6 g4 39 h5 f4 40 gxf4 f5 =.

b) 36 g7 g4! 37 c4 f4 38 gxf4 g3 (D).

It seems that White can’t win here – although that sounds unbelievable.

c) 36 d3 does the trick: 36...f4 37 g4 f3 38 h7 xh7 39 xh7 f6 40 h6 ++.

33 g6 g4

33...f5 34 h6 d7 35 d3 g4 (35...f4 36 xg5 fxg3 37 h7 g2 38 h8+ 39 e5 f8 37 g5 +).

34 xg4 e4 35 h6 g5 36 h7 xh7 37 xh7 f5 38 f3 f3 1-0

Karsten’s play and analysis were quite instructive, but to be honest this is clearly not my (FL) favourite example!

5.19

A.Lesieze – U.Andersson
Elstoa OL 1998

Black’s king is more active and White is always in danger of falling into zugzwang:

1...e5 2 e3 a5 3 d3 e5 4 e4 g7 5 d3

Active defence with 5 g5 b4 6 d5 also fails: 6...a3 7 c5 b4 8 b5 xa2 9 a4 b2 10 d4 e3 11 a2 d4 12 xh4 e3 13 f4

5...b4 6 c2 a3 7 b1 a4 8 bxa4 bxa4 9 b4 b4 10 e2

After 10 g2 Black must choose carefully:

a) Not 10...c3? 11 xh4 d2 12 f4 c3 13 f5 g5 14 f6 xf6 15 f5 f3 16 d6 g2 17 xh7 xh7 18 xg5+ xg5 19 c2 c7 20 g5 =.

b) 10...g5! 11 f4 f6 12 c2 b8 13 fxg5 fxg5 14 c3 e7 15 f5 c7 16 d6 e6 17 c5 18 b2 b4 19 c2 d8 20 c2 21 c4 22 d5 e5 23 c3 e5
E) Space Advantage / Active King

A closed or semi-closed position does not automatically favour the knight, especially if the bishop has weak pawns to target and the king can become active:

```
24...c4 d4 25 a5 (25 d4 e4 26 e6 e7 27 d4 e6 28 d5 e5 29 d4 f2
d5 25...a3 26 c4 d4 27 d5 e3 28 e5 b4 29 b6 30 d6 e5 31 e4 xh3
d2 32 d2 g2 g2 g5 (Tsesarsky).
10...c4 11 e2 c5 12 d2 c7 13 c2 a5
Putting White in zugzwang.
14 f4 b4 15 g4 d4 16 f3+ e4 17 g5+
Or:
a) 17 xh4 xf4 18 g2+ f3 19 a3 a5 20 h4+ g3 ++.
b) 17 c5 d7 (17...xf4 18 d3+ g3
19 xb4 e5 20 g6+ g3 21 xg7 xh3 22 d2 g2 ++.
17...xf4 18 xf7 g3 0-1
```

The next example was analysed in detail by Christopher Lutz in *Endgame Secrets* and we have drawn extensively from his analysis.

```
R. Fischer – M. Taimanov
Vancouver Ct (4) 1971

1 d3 e7
After 1...c7 White can win immediately by simplifying into a pawn endgame: 2 xce6 xce6 3 xce4 d6 4 b5 c7 5 a6 xc6 6 c4
d7 7 d7 e6 8 b6+.
2 e8!
Tying the knight down to passive defence.
2...d5 3 f7+ d6 4 c4 c6 5 e8+ b7 6 b5 c8 7 c6+

5.20 +/

C. Lutz – P. Schlosser
Dresden 1995

Black’s knight is on a bad circuit. If it were on c5, Black’s prospects would be much improved. As it is, White’s space advantage on the kingside is decisive:
1 h3 a8
Other moves are not better:
a) 1...c7 2 b4 b7 3 a4 a7 (3...c7 4
e2 b7 5 a5 ++) 4 f5 gxf5 5 xf5 b7 6
a5 a8 (6...c8 7 e6 ++) 7 e6 ++.

5.21 +/
```
b) 1...a5 2 ꝏe2 ꝏc7 (2...兑d7 3 ꝏb5兑c5+ 4兑e4兑xe4 5兑e8兑g3 6兑x7兑e7 f5 ++) 3兑b5兑d5 4兑c3兑e6 (4...兑f6 5兑f5 ++) 4...兑e8 5兑f5兑b6 6兑c6 ++ and White wins thanks to zugzwang) 5兑e6兑x6 6兑d4兑e7 (6...兑d7 7兑x7兑x7 8兑e4兑c6 9兑f5 ++) 7兑c6兑c8兑e5兑d5 9兑b5兑d8 10兑d3兑e7 11兑c5兑c7 12兑a4兑d7 13兑b5兑d4 14兑c4 ++.
2兑d7兑c7 3兑f5兑b6
3...兑xf5? 4兑c6+兑b6 5兑xf5 ++.
4兑c4兑b7 5兑d兑b6 6兑c6兑a7
6...兑a5 7兑b3兑b6 8兑b4兑a7 9兑a5兑b8
10兑b6 ++.
7兑c3?!
With the following triangulation White provokes ...a5 so that Black's king can't become active via a5.
7...兑b6 8兑b4 a5+ 9兑c4兑a6 10兑d4兑b6 11兑d7兑b7
11...兑a6 12兑xg6兑xg6 13兑e5兑b7 14兑xd6兑x6+ 16兑xe6兑c8 17兑d5兑c7 18兑e7兑d7 19兑c8+兑xe8 20兑xd6 ++.
12兑xg6兑xg6 13兑e5兑xe5+ 14兑xe5兑b6 15兑c6 1-0

5.2 The Side with the Knight has the Advantage

We consider the following advantageous situations for the knight:
A: Knight + Pawn(s) vs Bishop
B: Extra Pawn for the Knight
C: Closed Positions

A) Knight + Pawn(s) vs Bishop

If both stopping diagonals consist of more than four squares, the bishop can halt the pawn all on its own. The defending king is only needed to avoid zugzwang. Therefore Black can draw in the following diagram:
1兑e6兑b5 2兑e7兑e6 3兑d8兑b5 4兑c7兑e8 5兑d3兑b5 6兑e5兑e8!
6...兑g1? 7兑c6+ ++.
7兑b7兑g1 8兑b6兑b1 9兑c7兑g1 10兑d8兑b5=

If one of the stopping diagonals is shorter than five squares, the king must help the bishop. Therefore drawing zones arise, which were investigated in great depth by Averbakh and later by Nunn, who found some inaccuracies using a computer database.

With White to play, Black's king is just too far away: 1兑c6兑f2 2兑d6! (threatening to block the diagonal with兑e7) 2...兑g3+ 3兑c5兑c7 4兑b5兑e3兑a6兑e4兑b7! ++. White controls all four squares of the stopping diagonal, so Black's bishop has to relinquish control of d8.
If Black is to move, he can enter the drawing zone with his king:
1...兑f2!
Not 1...兑g2? 2兑c6兑f3 3兑d6兑g3+ 4兑e5+ ++.
2兑d6
2兑c6兑e3! 3兑d6兑g3+! 4兑c5兑c7! =.
2...兑d8? 3兑c6兑f6 4兑d4兑d8! 5兑c6兑b6! 6兑d5兑e7兑c4兑e4兑b5兑c7! 9兑a6兑d5! 10兑b7兑d6! =
Averbakh’s drawing zone shows that Fine had put up an interesting position:

![Diagram of chessboard with marked squares]

5.23A

**Drawing Zone**

Black only loses if his king starts on one of the marked squares and White is to move.

With a rook’s pawn, matters are different because there is only one stopping diagonal:

![Diagram of chessboard with marked squares]

5.24

B. Horwitz, 1885 (version by J. Nunn)

The so-called ‘Horwitz win’ can easily be overlooked over the board:

1. $\text{c5}$

    Threatening to block the diagonal with $\text{b7}$.  

2...$\text{c8} 2. \text{e8?}$  

    spoils the win as Black’s king is in time and the knight in the wrong parity: 3...$\text{d7!}$  

    4...$\text{c8} 5. \text{c4!}$  

    $\text{d8}$

Or:

a) 6...$\text{d7?!}$ is not possible now (this is the point of White’s manoeuvre) due to 7 $\text{b6+!}$  

    $\text{d8} 8. \text{xa8! ++) }$

b) 6...$\text{g2} 7. \text{a5 }$

7 $\text{e5} \text{d7} 8. \text{b7! e6} 9. \text{xa8! c7} 10$  

$d6 $$

The next study shows an unusual zugzwang, where the knight paradoxically dominates the bishop on an open board:

![Diagram of chessboard with marked squares]

5.24A

R. Réti, 1922

1 $\text{d4! e5}$  

1...$\text{b7} 2. \text{xh2 a6 3 b3 }$

2 $\text{h1!!}$  

2 $\text{b3+?} \text{b5 3 xh2 f4+ 4 h3 b4 5}$  

$a6 \text{b8} 6. \text{d4 c5 }$

The amazing text-move puts Black in zugzwang:

2...$\text{xd4}$

2...$\text{c1}$ and 2...$\text{d2}$ lose to 3 $\text{b3}$, while

2...$\text{f4, 2...g5, 2...g7 and 2...f8 would all be met by 3 e6+ }$

3 $\text{a6}$

Followed by $\text{a7}$ and $\text{a8= }$

Two extra pawns usually win, but there are important exceptional cases. If two connected passed pawns are blockaded, the win may be very difficult and sometimes even impossible. Chéron and Averbakh made deep investigations of the subject.

In the following diagram, Chéron proved that White wins even if the bishop tries to stick to the $\text{d1-h5}$ diagonal:

1 $\text{d5} \text{d1}$
The next example shows how to advance connected passed pawns.

\begin{align*}
1. & \text{a6} 2 \text{f5} (2 \text{f6+} \emptyset \text{g6} 3 \emptyset \text{e8} \emptyset \text{h5} 4 \\
& \emptyset \text{g7+} \emptyset \text{g6} 5 \text{f5 --+ Averbakh}) \\
2. & \text{f6+} \emptyset \text{g6} 3 \text{e5} \text{f3} 4 \text{d5} \text{h5} 5 \text{e3} \\
& \text{f4} 6 \text{b5} 7 \text{f5} \text{c2} 8 \emptyset \text{g7+} \emptyset \text{g6} (D)
\end{align*}

\begin{align*}
1 & \text{c2} \text{e6} 2 \text{d3} \text{g8} 3 \text{b2} \text{e6} 4 \text{a3} \\
& \text{g8} 5 \text{b2} 6 \text{b4} \text{e8} 7 \text{c4+} \text{xc4} 8 \text{xc4} \text{xc4} 9 \text{a4} \\
& 7 \text{c4+} \text{a6} 8 \text{b3} \text{b6} 9 \text{c3} \text{d7} 10 \text{d4} \\
& \text{e6} 11 \text{d1} \text{e8} 12 \text{c3} \text{e6} 13 \text{e5} \text{d7} 14 \\
& \text{h5+} \text{b7} 15 \text{c4} \text{c7} 16 \text{d5+} \text{b7} 17 \text{b4} \\
& \text{e8} 18 \text{a5} \text{d7} 19 \text{b4} \text{e8} 20 \text{b6} \text{h5} 21 \\
& \text{c6+ -- (Averbakh)}
\end{align*}

If the pawns are separated, the drawing prospects increase. The battle with f- and h-pawns was analysed in great depth by Beliavsky and Mikhalevishin in their book *Winning Endgame Technique*.

\begin{align*}
9 & \text{e6} \text{h5} 10 \text{f5} \text{d3+} \\
10 & \text{g4+} 11 \text{f6} \text{h6} 12 \text{f4} \text{d7} 13 \text{e5} \\
& \text{g4} 14 \text{e4} \text{c8} 15 \text{d5} \text{h5} 16 \text{e5} \text{f5} \text{f4} +-
\end{align*}

\begin{align*}
11 & \text{h6} 17 \text{f4} \text{h5} 18 \text{e6} \text{a6} (or 18 \text{e6} 19 \text{f5+ --}) 19 \text{g4+} \text{hxh4} 20 \text{f5+!} \\
& \text{h3} 21 \text{g5+--}
\end{align*}

\begin{align*}
11 & \text{e2} 12 \text{f4+} \text{h6} 13 \text{g4+--} \\
12 & \text{f4} \text{e3} 13 \text{g5} \text{h7} 14 \text{h5} \text{f3} 15 \\
& \text{g6} \text{g3} 16 \text{h6} \text{g8} 17 \text{f6} \text{g4} 18 \text{g7} \text{g5} \\
19 & \text{e7+--}
\end{align*}
If the bishop controls the queening square and the attacking king hasn’t penetrated too far, the defender can hold:

1...c6
1...f2 4f4 2f1 d4+ 3g1 g3 =+
1...g6 2f3 f6 3f1 e6 5b5 4c4 5d4 1...d7 6e6 6c8 g5+ 7e3 e4 8f3 g5+ 9e3 h3 10b7 f4+
10...e4 11f3 d4 12c8 d6 13d7 e5 14g3 =
11f2 d4 12a8?
White voluntarily gives up access to the e8-h3 diagonal. 12...c6! is correct; e.g., 12...h2 (12...e4+ 13f3 e5 14d7! g5+ 15f2 e4 16c6+ =) 13g2 f3+ and even 14xf3 is possible: 14...xf3 15h1 = (3.14).
12...e4+ 13f3 e5
Now the bishop would like to attack the h3-pawn but it’s impossible!
14b7
14xe4 h2 15g2 xexe4 16xh2 e3 =+
14...g3 0-1

B) Extra Pawn for the Knight

With pawns on one wing, the knight has better chances to convert an extra pawn against the bishop than the other way round, especially if one of the defender’s pawns is blocked on the bishop’s colour. Even the following position, which was analysed deeply by Yusupov in Technique for the Tournament Player, is won:

1...c6
Or 1...h3 2h4:
2...g4 2f3+ 3g5 2g2 5f5 5d6 4f4 1...f1 7f5 e2 8g6 f3 9f4 g2 9...c2 10e5 d3 11d7 e6 12c5+ 1...d5 13e4 e4 14b6+ e5 15d7+ d6 16f6 ++)
10f4 f1 11f5 g2 12e3 5 (reciprocal zugzwang with Black to move) 12f3 13f1 f1 d1 14h2 c2 15f5 f4 16f1 f5 17g3 1d3 18h5 c2 19f6+ --.

b) 2...c8 3h5 d7 4g6 g4 4...c8 5h5 h3 6f4 c8 7g5 a6 8g6+ d5 9f4 f1 10e7+ e6 11g8 1...d3 12b6 e2 13e4 d5 14d2 15f5 ++) 5h5 f3 6f4 h1 17g5 1f3 8g6+ d5 9f4 h1 10h4 e4 11g3 ++.

2f5 e8 3e7 d6
3...b7 4g6+ d5 5f5! (5...f4! 1c4 6e5+ c3 7d7 c4 =) 5...c6 6e5+ c3 7f4 + is reciprocal zugzwang with Black to move.

4g6 d5 5f4 e5
5...e4 6d6+ c3 7d7 d2 8c5 e2 9xe4 +--

6e5 b7 f7 1-0

With all the pawns on one wing, the knight is the stronger piece:

5.28

A.Yusupov – Li Zunian
Lucerne, Weih 1985

White has to act very precisely because of the many reciprocal zugzwangs lurking around:

1...f4 2f2 f5 3b7 d6 4d5 e4+ 5g1

5.29

I.Lyskov – M.Belin
Moscow 1949

The defender’s pawns are fixed on squares of the bishop’s colour and Black’s king has an entry route, so he is winning:
5...e2? runs into the fork 5...c3+ --.

5...f6 6 c6 e3 7 e8 g5

Now White can neither attack nor exchange pawns. He must simply sit and await his fate.

8 d7

8 f1 f4 9 c6 c5 10 f2 d3+ 11 e2 e5 12 b7 g3 13 e4 f5 14 xf5 (14 b7 f4 15 d5 f3+ 16 gxf3 d6 ++) 14...xg2 15 e3 g3 16 e2 (16 e4 f3 17 g4 g1 ++) 16...c6 17 e3 e7 18 e6 d6 ++.

8...e2 9 c8 g3 10 d7 e1 11 c8 e2+ 12 h2 f2

After bringing his king to the optimum square, Black now uses his f-pawn as a battering-ram — a typical procedure.

13 d7 d4 14 h1 f5 15 e8 f4 16 d7 f3 17 gxf3 dxf3 18 g4 g3

White can’t prevent the knight from reaching f4, so he is lost.

19 f5 d4 20 g4 e2 21 g1 e1 22 c2 g2 0-1

Black can’t afford to ignore the threat of f6:

2...g7? is wrong due to 3 f6+ f8 4 fxe6+ 5 xe6 ++.

3 f6+ g7 4 xh5+ g6 5 f6 g5 6 e8 f2 7 d6 g6 8 e6

Or 8 e6 fxe6 9 xxe6 f4 10 e5, and now:

a) 10...g3? 11 f5 h2 12 h4+ h5 13 f3 g3 14 f5 ++ (Beliavsky and Mikhailchishin).

b) 10...e3 11 f5 g5 12 h4 e4 c1 13 d4 h4 is given by Serper as ±, while Lutz assesses the position as =.

8...d4 9 e4 c3 10 d5 g5 11 d6 g6 12 h5 h2 13 d4 g4 14 g3

Putting the pawn on a dark square prevents...f4 (see the line 8 e6) but also makes it more vulnerable to attack from the bishop.

14...c3 15 f3+ g6 16 d6 b4+ 17 d7 c3 18 e7 g7 19 d7 g6 20 e6 fxe6 21 xe6 (D)

White’s pieces are excellently placed and he can play against the h5-pawn, but on the other hand Black’s position is quite solid and his pawns are on squares of opposite colour to the bishop, thus complementing it. So it is no wonder that the evaluation of the position differs: Beliavsky and Mikhailchishin in Winning Endgame Technique and Serper (ECE 1051) claim that White wins, while Lutz cast doubt on this in his book Endgame Secrets.

1 c4 b6 2 f5!? gxf5

5.30

L.Yurtsev – G.Serper
USSR 1988

White's pieces are excellently placed and he can play against the h5-pawn, but on the other hand Black's position is quite solid and his pawns are on squares of opposite colour to the bishop, thus complementing it. So it is no wonder that the evaluation of the position differs: Beliavsky and Mikhailchishin in Winning Endgame Technique and Serper (ECE 1051) claim that White wins, while Lutz cast doubt on this in his book Endgame Secrets.

1 c4 b6 2 f5!? gxf5

21 f6?

21...a5 is better:

a) 22 h4+ g5 23 xf5 e1 24 g4 a3 and then:

a1) 25 f7 c1 (25...b2 26 h4+ xg4 27 g6 =) 26 d4 h4 27 f3+ xh3 28 g5 g4 29 g6 c3 =.

a2) 25 d5 f4 26 c4 f6 was given by Serper without evaluation. He probably didn’t see a way for White to win; neither did Lutz and nor do we.

b) 22 e5+ x5 23 h4+ h5 24 xf5 c7! = (Lutz).

22 e5+ x5

22...g5 23 h4+ ++.

23 xf5 g5 24 h4+ g4 25 h5 1-0

C) C4

The knight on d5 is an obvious candidate for promotion; many think that this is the best square for it. But in fact, the knight on d5 is no better than any other position. The idea is that the pawn on the c-file would allow a fork on d7, and that it would lose to ...e4+.

The king on a5 is a good choice: d1, e1 and f1 are also considered. The idea is so position the king on the same file as the opposing king.

1 g5?
The next example with pawns on both wings is much easier:

White’s powerful knight controls the game.

1 g4??

Fixing the vulnerable h6-pawn on a dark square.

1...dh5
2 c4 de7
3.bxc4+ 3 dxec4 a5 a3 de7 5 b4 axb4 6 axb4 dh8 7 f5+ db6 8 dhc3 dh4 9 f3 df2 10 dh5+ db7 11 dh3 +-

3 f3 dh4 4 dhc3 dhc5 5 exb5 axb5 6 dhc4 dhg3 7 dhc2 dhc8 8 dhc1 1-0

White creates an outside passed pawn; e.g.,

8...dhg3 9 dhc3+ dhd6 10 h3 dhc2 11 a4 bxa4 12 bxa4 dhg3 13 a5 dhc2 14 dhxe5 +-

C) Closed Positions

The knight’s superiority in positions with many pawns is well-known. However, the presence of many pawns doesn’t automatically favour the knight. It is especially important that many pawns are blocked on the bishop’s colour and that the bishop can’t become active, i.e. that it has no real targets. The following position is typical (see next diagram).

The protected passed pawn on e5 is in fact a disadvantage, because the blockading e4-knight is so powerful. This situation is typical of a King’s Indian gone wrong for Black.

1 g5!

Creating an entry road for the king.

5.32

Y.Averbakh – V.Panov
Moscow 1950

1...dh7 2 dhf6+ de6 3 dhg8 de5 4 f3 +-

5...dhg7 6 h6+ dh8 7 de6 +-

6 gxh6
g6+ dhc7 7 dhc4 dhg7 8 dhg3 dhf8 (8...dhf8
9 dhc6 +-) 9 dhc4 dhc6 10 dhf5 +-

6...dhxe6 7 dhc4 dhf8 8 h6 dhxe6
8...dhg8 9 dhg6 dhc7 10 h7+ dhh8 11 dhf7
dh7 12 dhd6 +-

9 dhxd6+ dhc7 10 dhc4 (D)
10 dhxc5?? dhg7+ +-

5.32A

10...dhc3 11 dh6+!

Freeing the d5-square for the king.

11...dhf7 12 dhxe5 1-0

In the second example there are not so many pawns, but the bishop again has no targets and the king can’t become active:
Fundamental Chess Endings

E. Geller – M. Suba
Moscow 1986

1. f4 e5 2. d3 c6 3. f4 e3+ 0–1

White probably did not want to see the following typical procedure: 4. g1 f5 5. e5 f6 6. h2 h7 7. f3 (7 f6 8. e6 9. f4 f1+ 9. h1 f3++) 7...e3 8. a6 f3 9. g1 f5++.

K. Müller – M. Bus
Arnhem jr 1988

White wins because Black can’t exploit the weak doubled b-pawns whereas the black pawns are fixed on light squares.

1. g3 xe2

Or:

a) 1...xe7 and now:

a1) 2. h4?! allows Black to launch a counterattack: 2...d7 3. g5 xe6 (3...d3? 4. f6 g6 5. g7 xe6++) 4. f6 b5 5. x7 b4 6. xe6 b3 7. f5 b2 8. f6 a3 9. f7 a2 10. f8= a1=++

a2) 2. f6! d8 3. h4 c7 4. e8+! c6 5. d6 f5 6. g5 b6 7. h6 f7 8. f7++

b) 1...f5 2. h4! (2 exf6? f7 spoils the win) 2...f7 3. g5 e2 4. f6 b5 (4. g7? 5. e8+! f8 6. d6=++) 5. h6 c6 6. h7 b5 7. g5+ c7 8. g7 e2 9. h7 and now:

b1) 9...d1 10. f8 h5 11. g6+ h4 12. f6 c5 14. cxb4 15. fxf5 b3?! 16. c5+--

b2) 9...b6 10. f8 h5 11. g6+ h7 (or 11...e8 12. f6 b5 13. h8 f8 14. e6 g7 15. xd5 e6 16. e6++) 12. f6 e6 13. h8 b5 14. xe6 b4 15. d7 b3 16. x6 e6 17. xd5 x5b2 18. xa4+ xa4 19. e6++.

2. h4 c7

The pawn endgame after 2...xh5 is lost due to White’s king penetrating successfully: 3...xh5 e4 4. g5 d7 (4...c7? 5. b6 b5 6. f5 exf5 7. xf5 d7 8. f6 e6 9. c6++) 5. f6 e6 f5 6. f5 xf5 e7 8. b5 b6 9. d7 d7 10. d4 e6 11. g5 e7 12. f5 e6 13. f6 15 e7 h5 16. c8+--.

3. f6 d3 4. g5 b5?!

This fixes another pawn on a light square and stops the possibility of a counterattack by Black.

4. c2?! comes strongly into consideration, but White wins in any case: 5. h6 f8 6. b5 d3 (6...b6 7. d5+ c7 8. x6 d8 9. g7 c7 10. cxd5+ exd5 11. xf7++) 7. b6 b5 8. h7 c6 9. h8 b5 10. c7 d7 11. h7+ c7 12. c7 c2 13. g8+ c8 14. f6 g6 15. e7 h5 16. c8+--

5. h6

Here the game was adjourned and in joint analysis with Frank Holzke the win followed:

5...f8 6. d7+ g8

Waiting passively also loses: 6...c7 7. c5 c4 8. g7 f1 9. b7 c2 10. xd6 f5 11. exf6+--

7. c5 c2 8. g5 g7 9. a6 d3 10. c7 c4 11. c5! exf5 12. x5 d3+ 13. c4 c4 14. g5 1-0

Black is in zugzwang, so White’s king finally reaches f6: 14...g8 15. f6 f8 16. e6 fxe6 17. x6 g7 18. xd5++

Jan Timman held a very instructive lecture at Tilburg University about knight vs ‘bad’ bishop, which was published in New in Chess Magazine 8/96. However, the choice of his opening
example wasn’t very fortunate. With the following position he wanted to demonstrate that the strength of the knight in closed positions is sometimes overestimated:

\[ B \]

\[ J. Timman \]

New in Chess Magazine, 1996

But in fact it shows the knight in its best shape. If White were to move, he would lose immediately but there is no obvious way to transfer the move to him. 1...\( \text{Qxd6} \) 2...\( \text{Qd2} \) \( \text{Qc4} \) 3...\( \text{Qc1} \) only mirrors the problem. However, in a letter to NiC, Luc Compagnie pointed out that a triangulation leads to success:

1...\( \text{Qd6} \) 2...\( \text{Qd4} \)

2...\( \text{Qc3} \) \( \text{Qc7} \) 3...\( \text{Qd3} \) \( \text{Qd4} \) 4...\( \text{Qd4} \) \( \text{Qc6} \) \( \rightarrow \) and 2...\( \text{Qc2} \) \( \text{Qc6} \) 3...\( \text{Qc3} \) \( \text{Qd6} \) \( \rightarrow \) reach the main line, while 2...\( \text{Qe2}?! \) \( \text{Qx}6 \) 3...\( \text{Qd3} \) \( \text{Qd5} \) \( \rightarrow \) is the initial position with White to move.

2...\( \text{Qc6} \) 3...\( \text{Qc3} \) 4...\( \text{Qd6} \) 4...\( \text{Qd4} \) 5...\( \text{Qe4} \) 5...\( \text{Qe5} \)

\( \text{Qxg3} \) 6...\( \text{Qe3} \) 7...\( \text{Qxf5} \) g3 8...\( \text{Qe6} \)

Or:

a) 8...\( \text{Qc5} \) g2 9...f5 g1\( \text{Q} \) 10...\( \text{Qxg1} \) \( \text{Qxg1} \) 11...\( \text{Qc6} \) \( \text{Qf3} \) 12...f6 \( \text{Qg5} \) \( \rightarrow \).

b) 8...\( \text{Qxg2} \) g2 9...\( \text{Qf3} \) g1\( \text{Q} \) 10...\( \text{Qxg1} \) \( \text{Qxg1} \) 11...\( \text{Qc2} \) \( \text{Qh3} \) 12...\( \text{Qg3} \) \( \text{Qxf4} \) \( \rightarrow \).

c) 8...\( \text{Qg5} \) was Timman’s suggestion to save his example, but in the next issue of NiC a number of readers pointed out that Black wins nevertheless:

c1) 8...\( \text{Qg2}?! \) makes it unnecessarily complicated. 9...f5 and now:

c11) 9...\( \text{g1} \) 10...\( \text{Xg1} \) 11...\( \text{Qh3} \) 12...\( \text{Qh6} \) \( \rightarrow \) 12...\( \text{Qe4} \) \( \text{Qf2} \) 13...\( \text{Qc3} \) \( \text{Qd3} \) 14...\( \text{Qe4} \).

c12) 9...\( \text{Qd5} \) 10...\( \text{f6} \) 10...\( \text{f6} \) \( \text{Qc4} \) 11...\( \text{Qf2} \) \( \text{Qd4} \) \( \rightarrow \) 11...\( \text{Qc6} \) (10...\( \text{Qc6} \) ? 11...\( \text{Qf2} \) \( \text{Qf3} \) 12...\( \text{Qc5} \) \( \text{Qe4} \) 13...\( \text{Qf2} \) \( \rightarrow \) 11...\( \text{Qg6} \) \( \text{Qf4} \) 12...\( \text{Qg5} \) \( \text{Qd5} \) \( \rightarrow \) 13...\( \text{Qh3} \) 13...\( \text{Qg6} \) \( \text{g1} \) \( \text{Q} \) 14...\( \text{Qg1} \) \( \text{Qf4} \) 15...\( \text{Qg5} \) \( \text{Qh3} \) \( \rightarrow \) 13...\( \text{Qd4} \) and now:

c121) Not 13...\( \text{Qxb4} \) 14...\( \text{Qab4} \) 15...\( \text{Qg6} \) a2 15...\( \text{f7} \) a1\( \text{Q} \) 17...\( \text{Qb8} \) \( \text{Qxd4} \) 18...\( \text{Qe8} \) \( \text{Qd6} \) 19...\( \text{Qd8} \) \( \text{Qe5} \) 20...\( \text{Qg5} \) \( \text{Qe6} \) 21...\( \text{Qxg2} \) \( \text{Qxb4} \) =.

c122) 13...\( \text{Qxf6} \) 14...\( \text{Qf4} \) \( \text{Qd5} \) 15...\( \text{Qf3} \) \( \text{Qxb4} \) 16...\( \text{Qxg2} \) (16...\( \text{Qxg4} \) \( \text{Qd5} \) \( \rightarrow \) 16...\( \text{Qc2} \) \( \rightarrow \).

c2) 8...\( \text{Qd5} \) 9...\( \text{f5} \) \( \text{Qe4} \) 10...\( \text{c5} \) (10...\( \text{f6} \) \( \text{Qxe3} \) 11...\( \text{f7} \) g2 \( \rightarrow \) 10...\( \text{Qd4} \) \( \rightarrow \).

8...\( \text{g2} \) 9...\( \text{f5} \) \( \text{g1} \) \( \text{Q} \) 10...\( \text{Qxg1} \) \( \text{Qxg1} \) 11...\( \text{Qf6} \) \( \text{Qf3} \) 12...\( \text{Qf5} \)

12...\( \text{f7} \) \( \text{g5} \) 13...\( \text{Qe7} \) \( \text{Qxf7} \) 14...\( \text{Qxf7} \) \( \text{Qd5} \) \( \rightarrow \).

12...\( \text{d6} \) 13...\( \text{Qf4} \) \( \text{Qd2} \) 14...\( \text{Qf5} \) \( \text{Qe4} \) \( \rightarrow \).

The next position is even more closed, but Nimzowitsch found a way to break through:

\[ B \]

5.36

M. Henneberger – A. Nimzowitsch

Winterthur 1931

1...\( \text{Qe4} \) 2...\( \text{Qe2} \)

2...\( \text{a3}?! \) \( \text{Qd6} \) 3...\( \text{d2} \) \( \text{Qb5} \) \( \rightarrow \).

2...\( \text{Qd5} \) 3...\( \text{Qe3} \)

At first a triangulation transfers the move to White:

3...\( \text{Qd6} \) 4...\( \text{Qc2} \) \( \text{Qc6} \) 5...\( \text{Qe3} \) \( \text{Qd5} \) 6...\( \text{Qe2} \)

Now the knight heads for \( \text{b1} \) in order to imprison the bishop in the \( \text{a1} \) corner:

6...\( \text{Qd6} \) 7...\( \text{Qc3} \) \( \text{Qb5} \) 8...\( \text{Qd2} \) \( \text{Qa3} \) 9...\( \text{Qc1} \)

\( \text{Qb1} \) 10...\( \text{b2} \) a3 11...\( \text{a1} \)

Next the move has to be transferred to White again, which is again accomplished by a triangulation:

11...\( \text{Qd6} \) 12...\( \text{Qe2} \) \( \text{Qc6} \) 13...\( \text{Qd1} \) \( \rightarrow \).

13...\( \text{Qe3} \) \( \rightarrow \) loses without a fight to 13...\( \text{Qd5} \) 14...\( \text{Qe2} \) \( \text{Qe4} \).
14 ... e4 15 ... e2 f2 16 ... d2 f3 --.
14 ... e4 15 ... xbd 16 ... h3 16 ... h2!!
16 ... c2 e2 17 ... d2 f2 --.

5.37

E. Torre – O. Jakobsen
Amsterdam IBM 1973

1 ... d7 2 ... d3 c8 3 ... c3 ... b7 4 ... b3 ... b6
5 ... c3 ... e8 6 ... e2 ... f6

6 ... d6 7 ... f1 c5? is wrong as Black can't make progress after 8 ... e2 cxb4+ 9 ... xb4 ... f7
10 ... c4 ... c6 11 ... d1 = because White's pieces are too active. This was pointed out by Timman in his lecture.

7 ... d3 ... h7 8 ... f1 ... g5 9 ... c4 ... c6 10 ... c3 ... d4

Black has achieved his first aim: the bishop can't move due to ... xf3 and the king must guard c2 to keep the knight out of e3.

11 ... d2 c5 12 ... c5+
12 ... ... c3? cxb4+ 13 ... xb4 ... c2+ 14 ... c3 ... c3 --.

12 ... ... e5 13 ... c3 ... b6 14 ... d2 ... a5?!

The black king heads in the wrong direction. Completing the triangulation was of course better, especially to avoid problems with the fifty-move rule.

15 ... c3 ... b6
15 ... ... a4? allows a counterattack: 16 ... c4!
17 ... d5 ... e3+ 18 ... xe5 ... xf1 19 ... xf4 =.

16 ... d2 ... c6 17 ... e2 ... c5 18 ... d1 ... c4 19
... e2+ ... b3 20 ... d1+ ... b2

Next White's king has to be driven to g1.

21 ... e1
21 ... c2? ... f6 --.

21 ... c3 22 ... a4 ... d3 23 ... d1 ... e3 24 ... f1
Bishop moves allow the decisive blow on f3.

24 ... d2 25 ... a4 ... e2 26 ... d1?! A nice stalemate joke.

26 ... c3 27 ... e2
The motif repeats itself.

27 ... b1 28 ... a4 ... a3 29 ... b3 ... c3 30 ... a4
... c4 31 ... b5 ... c3+ 32 ... g1 ... d2 33 ... a6 ... e1

In the next step the knight is transferred to d2 to free Black's king, which marches to e3 afterwards.

34 ... d3 ... d1 35 ... a6 ... e3 36 ... d3 ... a4 (D)

The answer to the 1980 challenge: a very strong king capture.

W

1 ... d7 2 ... d3 ... e8 3 ... c3 ... b7 4 ... b3 ... b6
5 ... c3 ... e8 6 ... e2 ... f6

6 ... d6 7 ... f1 c5? is wrong as Black can't make progress after 8 ... e2 cxb4+ 9 ... xb4 ... f7
10 ... c4 ... c6 11 ... d1 = because White's pieces are too active. This was pointed out by Timman in his lecture.

7 ... d3 ... h7 8 ... f1 ... g5 9 ... c4 ... c6 10 ... c3 ... d4

Black has achieved his first aim: the bishop can't move due to ... xf3 and the king must guard c2 to keep the knight out of e3.

11 ... d2 c5 12 ... c5+
12 ... ... c3? cxb4+ 13 ... xb4 ... c2+ 14 ... c3 ... c3 --.

12 ... ... e5 13 ... c3 ... b6 14 ... d2 ... a5?!

The black king heads in the wrong direction. Completing the triangulation was of course better, especially to avoid problems with the fifty-move rule.

15 ... c3 ... b6
15 ... ... a4? allows a counterattack: 16 ... c4!
17 ... d5 ... e3+ 18 ... xe5 ... xf1 19 ... xf4 =.

16 ... d2 ... c6 17 ... e2 ... c5 18 ... d1 ... c4 19
... e2+ ... b3 20 ... d1+ ... b2

Next White's king has to be driven to g1.

21 ... e1
21 ... c2? ... f6 --.

21 ... c3 22 ... a4 ... d3 23 ... d1 ... e3 24 ... f1
Bishop moves allow the decisive blow on f3.

24 ... d2 25 ... a4 ... e2 26 ... d1?! A nice stalemate joke.

26 ... c3 27 ... e2
The motif repeats itself.

27 ... b1 28 ... a4 ... a3 29 ... b3 ... c3 30 ... a4
... c4 31 ... b5 ... c3+ 32 ... g1 ... d2 33 ... a6 ... e1

In the next step the knight is transferred to d2 to free Black's king, which marches to e3 afterwards.

34 ... d3 ... d1 35 ... a6 ... e3 36 ... d3 ... a4 (D)
The next three examples are very famous. In the 1984/5 World Championship Karpov found a very surprising refutation of a normal-looking capture by Kasparov:

1 \( \text{c3} \) \( \text{b1} \) 2 \( \text{b4} \) \( \text{gxb4?} \)

2...\( \text{e6} \) was correct as Timman pointed out in NiC Magazine 1/97. He gives 3 \( \text{g4} \) \( \text{hxg4} \) 4 \( \text{hxg5} \) \( \text{gxh5} \) 5 \( \text{gxf5} \) \( \text{xf5} \) 6 \( \text{g1} \) ++.-.

3 \( \text{e6} \)

A magnificent blow! Instead of simply recapturing, Karpov opens a path for his king.

3...\( \text{hxa5} \) 4 \( \text{h7} \) 6 \( \text{h6} \) 7 \( \text{g4} \) 9 \( \text{g6} \) 10 \( \text{f4} \) 12 \( \text{f7} \) 14 \( \text{g7} \) 16 \( \text{g6} \) 18 \( \text{g5} \) 20 \( \text{f6} \) 22 \( \text{e7} \) 24 \( \text{e5} \) 26 \( \text{e6} \) 28 \( \text{e7} \) 30 \( \text{e8} \) 32 \( \text{e7} \) ++.-.

So strangely enough, the same theme arose twice in this game: first the missing pawn on \( h4 \) opened a route for the white king to gain a winning position, and now the missing pawn on \( d5 \) should give Black sufficient counterplay to draw!

22...\( \text{b7?} \)

After 22...\( \text{h1?} \) matters are much more delicate. We give only some sample lines: 23 \( \text{xf5} \) (Timman; 23 \( \text{e8?} \) was suggested by Averbakh and Taimanov), and now:

a) 23...\( \text{c6} \) 24 \( \text{f4} \) \( \text{b3} \) 24...\( \text{d7} \) 25 \( \text{e5} \) \( \text{b6} \) 26 \( \text{e3} \) \( \text{xa3} \) 27 \( \text{d6} \) ++.- 25 \( \text{e5} \) \( \text{xa3} \) 26 \( \text{d6} \) \( \text{e4} \) 27 \( \text{g3} \) \( \text{f3} \) 28 \( \text{e5} \) ++.-.

b) 23...\( \text{d5} \) 24 \( \text{g3} \) \( \text{f2} \) 25 \( \text{d} \) and then:

b1) 25...\( \text{h3} \) 26 \( \text{h5} \) 15 27 \( \text{c3} \) \( \text{e6} \) 28 \( \text{f4} \) \( \text{d6} \) 29 \( \text{d3} \) \( \text{e4} \) 30 \( \text{c5} \) \( \text{e6} \) 31 \( \text{d3} \) \( \text{e5} \) 32 \( \text{e4} \) \( \text{e6} \) 33 \( \text{c3} \) \( \text{e8} \) 34 \( \text{e4} \) \( \text{g6} \) 35 \( \text{f4} \) \( \text{d3} \) 36 \( \text{d5} \) 37 \( \text{e3} \) ++.-.
b2) 25...f3 26 f1 e4+ 27 c3 f3 28 c3+ and here:

b21) 28...e4 29 c4! d5 30 h2 c6 31 a4 =

b22) von Bülow's suggestion 28...d6! is tougher. It is even not quite clear if White can win now; e.g., 29 b3 c6 30 d1 d6 31 e3 e4 ±.

23 f5

Not, of course, 23 d5? xd5 24 xd5 xd5 25 xd3 xe5 =.

23...g2 24 d6+ b3 25 xb5 a4 26 d6 1-0

5.39

A. Saidy – R. Fischer
USA Ch (New York) 1963/4

Of course it is much easier to play the position with Black. However, his advantage should not be sufficient to win.

1...d7 2 f1 f8 3 c2

3 g4 e6 4 c3 is better, as it prevents Black from building up a pawn-front (Timman, Belavsky and Mishkalishin).

3...e6 4 d3 h5!? 5 c3 h7 6 f3 g6 7 a4 f5 8 e2 g5 9 f2 d8 10 d2 g6 11 c3 e6 12 d3 f5 13 c3 f6 14 e2 g6 15 d3 f5 16 e2

16 g3!? f4 17 gxf4 g4 18 fxg4 hxg4 19 f2 e5+ 20 e3 f5 21 d3 g3 = (Belavsky and Mishkalishin).

16...f4 17 f2 g7??

The knight is heading for the better outpost f5.

18 h3

Now 18 g3? is bad as Black can open an entry road: 18...fxg3 19 hxg3 g4 = (Timman).

18...f5 19 d3 g4 20 hxg4 hxg4 21 fxg4 g3 22 g1 h4 23 f1 leads to a "tragicomical zugzwang situation" (Timman).

21...b6 22 a1?

This allows Black's king to penetrate on the kingside. 22...e2 was called for: 22...xg4 23 h1 f5 24 f6 25 h2 h5 26 a5 g5 27 g4 fxg3 28...xg3 = (Timman; this line is given in several sources).

22...xg4 23 d2 f5 24 e1 f6 25 h5 h6 26 c1 g4 27 c2

27 b3 g3 28 a5 f5 29 f2 h4 is similar to the game.

27...g3+ 28 d3 f5 29 f2 h4 30 a5 30 xh4 xh4 31 e2 g3 32 f1 f3 —

30...xg2 31 c3 f3 32 g1 e2 33 h2 f3 34 g3 e3 0-1

Now after...f5 the f-pawn will finally promote.

5.40

S. Flohr – J. Capablanca
Moscow 1935

White has a lot of positional trumps, but against Capablanca's defence there was no way to break through:

1...e7 2 d2 d6 3 c3 b6

Capablanca starts putting his pawns on squares opposite to the bishop's colour.

4 f4 d7 5 f3

Flohr regroups to exert more pressure on the isolani.

5...f6 6 d4 a5 7 d2 c8 8 b1 e6 9 c3 c6 10 a3 h6 11 g3 h5?!

There was no good reason to put the h-pawn on a light square.

12 b4 axb4 13 axb4 d6 14 b5 g6
This is necessary now – a consequence of 11...h5. 14...f7? is wrong: 15 f5 g8 16 e2 f7 17 d4 f6.

15 f5 gxf5
Not 15...xf5? 16 xd5 d7 17 xf6 xh5 18 d5 = with the idea of meeting 18...e6? with 19 e7+.

16 e2 d7 17 f4 e8 18 xd5 xh5 19 xb6 c6 20 c4 e6 21 b2 b5 22 d1 e2 f2 f1 24 d3 xh3 25 xd3 e5
25...d5? 26 d2! e5 27 e1! (27 e2? e4 28 f2 h4 29 gxh4 f4 30 h5 fxg3 = Bondarevsky) 27...d5 28 f2 e4 29 e2 d5 (29...h4 30 gxh4 f4 31 h5 f5 32 exf4 ++) 30 f3 e5 31 h3 ++.

26 f4 e4 27 h3
27 f2 h4 28 gxh4 f4 =.

27...d5 28 f3 e5 1/2-1/2

Articles by Timman in New in Chess Magazine 8/96 and 1/97

Exercises
(Solutions on pages 375-6)

Knight vs Bishop: a brief summary

The bishop is a long-range piece and likes play on both wings and open positions. Its main disadvantage is that it can only visit half the squares on the board. The side with the bishop should therefore generally place his pawns on the opposite colour squares. When fighting against a knight, the bishop can use zugzwang and the corralling motif (5.02).

The knight can visit every square of the board and so in inferior positions the player with the knight can try to construct a fortress on squares opposite to the bishop's colour. However, the player has to be careful not to fall into zugzwang. The knight is a short-range piece and likes play on one wing. If in closed positions many enemy pawns are blocked on the same colour as the bishop, the knight can, together with its king, use the weak colour complex to infiltrate the enemy position. In some favourable positions it might be useful to place mobile pawn-chains on the enemy bishop's colour, so as to restrict its movement. In unfavourable positions this is unlikely to be correct, as these pawn-chains can be attacked.

Reference works

Encyclopaedia of Chess Endings (ECE), Bishop and Knight Endings volume, Nicosia 1993

Läufer gegen Springer und Turm gegen Leichtfigurendspiele (Av), Averbakh, Sportverlag Berlin 1987

White's far-advanced f-pawn should give him an easy win, don't you think?

Amazingly, Black has a way to save himself. Can you find it?
5.3 The Bishop-Pair

Two bishops are in most cases better than other combinations of minor pieces, since the main disadvantage of the bishop, its inability to control squares of a particular colour, is nullified by the presence of the other one.

The subject divides naturally into two cases:
A: Two Bishops vs Two Knights
B: Two Bishops vs Bishop and Knight

A) Two Bishops vs Two Knights

In blocked positions, the knights can offer tough resistance, especially if they have secure anchor squares, but the first example shows how difficult it is to fight against the bishops in an open position:

1. c5!!
   1. Qd4 also comes into consideration; e.g.,
   1...dx5 2 fxe5 Qxc4 3 b3 d5 =.
   1...g5 2 Qc6?
   2. g3 is called for as after 2...gxh4 3 gxh4 f6
   White has the tricky 4 Qd4!, when Black is to say the least not better.
   2...gxh4 3 a4?
   This allows Black’s bishops to dominate the knights. After 3 Qbd4 the position isn’t easy to evaluate.
   3...c4! 4 Qd2 d5 5 Qxa7 a5 6 b1
   b4 7 b5 dxc5+ 8 Qf1 f3 9 gxh4 Qf5 10 Qd2 d5 11 Qe2 Qc7 12 Qd3 f5 13 c3
   b7 14 Qc4 a3 15 Qd3 Qg1 16 b4?
It is a mistake to give Black a passed h-pawn. 16 h3 was a better chance to offer resistance; e.g., 16...e5 17 b4 c4+ 18 bxc4 19 d4 f4 20 b3 b6 +.

16...hxh2 17 b5 h5 18 a5 h4 19 e2 e6 19 a6 g2 20 b6 h3 +.

19...h3 20 a6 g2 21 f2 d6 22 f3 e5+ 23 g3 f4+ 24 g4?!

Black wins even after 24...xf4!: 24...d6+ 25 e3 h2 26 xh2 xh2 27 f2 h1 28 b6 d6 --.

24...g1 25 b6

Or: 25 xf4 h2 26 xh2 xh2+ 27 g4 g1 +; 25 xg1 h2 +.

25...xf3+ 26 xf3 h2 27 g2 f3+ 0-1

Polgar resigned as 28 h1 loses to 28 f2 29 a7 f1 30 a8 e3+ 31 xh2 f4#.

Bronstein was a point ahead in the world championship match when in the penultimate game Botvinnik’s bishops stopped him:

1 g3!

This puts Black in zugzwang. After 1 f4?!, 1...e7! is possible.

1...fxe4

Or:

a) 1...g6 2 exf5+ exf5 3 a2 ab4 4 b3 + (a6 is threatened).

b) 1...ab4 2 e5+ (2 c7? dxe4 3 fxe4 fxe4 4 xxe4 d5+ =) 2...g6 3 d6 cd6 4 exd5 exd5 5 a2 +.

c) 1...g5 2 exd5 exd5 3 cd4 a4 4 c4 f4 and now 5 xg1 with the idea d2-c1-a3 gives White a clear advantage.

d) 1...e7 2 h4+ f7 3 xe7 xe7 4 exd5 exd5 5 xf5 h6 6 c8 +.

2 fxe4 h6 3 f4 h5

3...g7 4 exd5 exd5 5 a2 ab4 6 b3 c6 7 d6 +;

4 exd5 exd5 5 h4 ab8 6 g5+ f7 7 f5 a7

7...e7 8 xc7 9 g6 e6 10 xh5 a7 11 b4 +

8 f4 bc6 9 d3 e8 10 e2 g6 11 d3+ f6 12 f2 g6 13 f3 e7?!

13...e7 14 g5 f5 15 xd5 fxg4 16 e4+ f7 17 c4 ± poses more difficulties for White as there are only the two rooks’ pawns left (but they are notoriously dangerous for the knights of course).

14 g5 1-0

A possible finish is 14...e6 15 xg5 d6 16 f3 f5 17 c1 (Smyslov) 17...b5 18 xe6 bxc6 19 a5 +--.

The next example is also very well known. While Botvinnik believed that Black could defend, Flohr was of the opinion that White wins nevertheless. Many theoreticians have analysed it since then, but it still remains unclear whether White’s advantage is sufficient.

The endgame looks facile: 1 e5 fxe5 2 e6 fxe6 (2...g6 3 f5) 3 fxe6+ fxe6 4 xg7+ xg7 5 xh7+ xh7 6 d5+ e6 7 xe7=.

5.42

M.Botvinnik – D.Bronstein

Moscow Wch (23) 1951

B

5.43

S.Flohr – M.Botvinnik

Moscow/Leningrad (6) 1933

1...f8 2 e2 e3 3 d4 d8 4 e1 c7 5 d2 c5 6 b4

6...xe5? dxc5 followed by ...e8-d6 even favours Black.

6...cd7

6...a4 7 d1 b5? is lost for Black according to Euwe, who gave the following variation:
8.\xa4x4 bx4 9.\xc3xb77 10.\xe4d7 11.\xe3a5 12.\xb6\xb6 (12.\xe6x6+ 13.\xb5\xb5+) 13.\xe7\xb8a 14.\xf4f6 15.\xf5d7 16.\xe4 17.\xe4b8 18.\xe5d7 19.\xe1d8 20.\xe2d7 21.\xe3d8 22.\xe5fxg5 23.\xe5xb7 24.\xe5f6 25.\xe5xh6 +.

7.\xe5g3
7.\xe5a4! (Shereshevsky).
7.\xe5d6 8.\xe5c2 \xe5d7
8.\xe5c4?! 9.\xe5b3 \xe5b5 ± (Botvinnik).
9.\xe5a4!
Gaining more space on the queenside to limit the scope of the knights.
9...\xe5b6 10.\xe5a5 \xe5d7
White's next aim is to play f4 and to advance the pawns on the kingside. Flohr takes his time carrying this out.
11.\xe5c1 \xe5d8 12.\xe5b2 \xe5e8 13.\xe5d2 \xe5c7 14.\xe5e3 \xe5e7 15.\xe5f1 \xe5b5 16.\xe5b4 \xe5c7 17.\xe5h3
Immobilizing the d7-knight due to \xe5c8.
17...\xe5e8 18.\xe5f4 18.\xe5f6 19.\xe5f5 \xe5g6 20.\xe5h3
Now f5 followed by fxg6 is threatened.
20.\xe5h6
20...\xe5g7 21.\xe5f5 22.\xe5xg5 \xe5xg5 23.\xe5f6+ ± (Botvinnik).
21.\xe5c1! \xe5g7 22.\xe5f5 \xe5d5 \xe5e5
Not: 22...\xe5xe5? 23.\xe5c8 +--; 22...\xe5xe5? 23.\xe5c3 \xe5h5 24.\xe5g5+ \xe5e8 25.\xe5h6 +.
23.\xe5f3 \xe5h5 24.\xe5e3 \xe5d6 25.\xe5h6 \xe5c8 26.\xe5g4 hxg4+ 27.\xe5xg4 (D)

B

5.43A

27.\xe5c7?
27...\xe5c7! ± (Botvinnik); e.g., 28.\xe5h5 (28.\xe5c3 \xe5d6 29.\xe5c5 \xe5xc5 30.\xe5xc5 \xe5c4 and it seems that White can’t win) 28...\xe5xh5 29.\xe5xh5 \xe5d6 ±.
28.\xe5c3 \xe5b5 29.\xe5c2 \xe5c7
White wins after 29...\xe5c3+?! 30.\xe5d3 \xe5xe4?
31.\xe5xd7 +–.
30.\xe5xd3 f5
Now White’s h-pawn decides the outcome.
30...\xe5b5 doesn’t help either; e.g., 31.\xe5e6 \xe5e7 32.\xe5c5+, and now:
   a) 32...\xe5xe5+ 33.\xe5xe5 \xe5d4 34.\xe5c8 \xe5b3 35.\xe5d4 \xe5d8 36.\xe5xb3 +–. White’s king goes to g4 and a path is opened with h5.
b) 32...\xe5e8 33.\xe5d6 ±.
31.\xe5xf5 \xe5xf5 32.\xe5xf5 \xe5d5 33.\xe5d2 \xe5f6
34.\xe5e4 \xe5e6 35.\xe5g6 \xe5b5+ 36.\xe5d3 \xe5e7 37.\xe5e4+ \xe5e5 38.\xe5g5 \xe5h5 39.\xe5f3 \xe5g3 40.\xe5d2 \xe5d6 41.\xe5g4 \xe5f6 42.\xe5c8 \xe5e6 43.\xe5e1?!
43.\xe5x6 wins: 43...\xe5f5 44.\xe5c8! \xe5e4+ 45.\xe5e2 \xe5xb4 46.\xe5a6 +–.
43...\xe5e4+?
This makes it very easy. 43...\xe5e4 was called for: 44.\xe5f5 \xe5d6 45.\xe5g5 \xe5d5 ±.
44.\xe5d4 \xe5g5 45.\xe5f5 \xe5d6 46.\xe5d2 1–0

It is different when the knights have strong outposts. In the next position the defence is easier as there are pawns only on one wing:

5.44
T.Nalbandian – G.Sargsian
Armenian Ch (Erevan) 1999

1...\xe5b6! 2.\xe5a2 \xe5d5 3.\xe5f3 \xe5d3 4.\xe5d4 g5!
Black creates a second secure outpost to complete his fortress.
5.\xe5c4 \xe5f4 6.\xe5f1 \xe5e7 7.\xe5e4 \xe5f7 8.\xe5f2 \xe5g6 9.\xe5e1 \xe5h6 10.\xe5d2 \xe5d4 11.\xe5e1 \xe5d5 12.\xe5d2 ½–½

The knights can even be superior in blocked positions where they have outposts and the bishops’ scope is limited.

B) Two Knights

Bishop and knight vs. knight, when they face a queen, the example is quite interesting, but hardly winning, but here: 1...\xe5e4
5.\xe5h4 exf3 3.\xe5f7
5.\xe5c5+ 7.\xe5e4
\xe1g6 11
Black’s dark-squared bishop resembles an overgrown pawn and his king has to defend the f6-pawn. White’s king can penetrate successfully using zugzwang:

1. \texttt{\texttt{d}2 \texttt{a}4 2 \texttt{f}3} 
   Not, of course, 2 \texttt{\texttt{c}7+?} \texttt{\texttt{d}7} 3 \texttt{\texttt{c}xa6? \texttt{c}c6} +.

2. \texttt{\texttt{c}6} 3 \texttt{\texttt{c}3} \texttt{\texttt{d}7} 4 \texttt{\texttt{c}e}8 5 \texttt{\texttt{b}3} \texttt{\texttt{d}7} 
   6 \texttt{\texttt{d}5} \texttt{\texttt{c}6} 7 \texttt{\texttt{a}3}!
   Zugzwang.

7...\texttt{a5}

Or:

a) 7...\texttt{\texttt{f}7} 8 \texttt{\texttt{c}7} a5 9 \texttt{\texttt{b}5} \texttt{\texttt{c}6} 10 \texttt{\texttt{a}4} 
   \texttt{\texttt{e}8} 11 \texttt{\texttt{x}a5} \texttt{\texttt{d}7} 12 \texttt{\texttt{b}6} \texttt{\texttt{f}7} 13 \texttt{\texttt{c}3} +--.

b) 7...\texttt{\texttt{b}7} 8 \texttt{\texttt{a}4} \texttt{\texttt{c}8} 9 \texttt{\texttt{a}5} \texttt{\texttt{b}7} 10 \texttt{\texttt{b}6} 
   \texttt{\texttt{c}8} 11 \texttt{\texttt{c}7} +--.

8 \texttt{\texttt{b}3} \texttt{\texttt{d}7} 
8...\texttt{\texttt{a}4}+ 9 \texttt{\texttt{a}3} \texttt{\texttt{d}7} 10 \texttt{\texttt{c}7+} \texttt{\texttt{f}7} 11 \texttt{\texttt{b}5} 
   \texttt{\texttt{x}b5} 12 \texttt{\texttt{c}x} 13 \texttt{\texttt{x}a} 14 \texttt{\texttt{x}b}+ +.

9 \texttt{\texttt{x}f} 10 \texttt{\texttt{d}5} \texttt{\texttt{d}7} 11 \texttt{\texttt{c}3} 1-0

B) Two Bishops vs Bishop and Knight

Bishop and knight have better chances, but even they face a very tough task. The following example is quite typical (see next diagram).

It is not clear whether Black is already winning, but he has great chances of course:

1...\texttt{\texttt{c}4} 2 \texttt{\texttt{b}3} \texttt{\texttt{a}6} 3 \texttt{\texttt{f}3} 
3 \texttt{\texttt{f}7} \texttt{\texttt{c}x} 4 \texttt{\texttt{c}4} \texttt{\texttt{c}5}+ +.

3...\texttt{\texttt{c}7} 4 \texttt{\texttt{f}2} \texttt{\texttt{b}4} 5 \texttt{\texttt{c}2} \texttt{\texttt{d}3} 6 \texttt{\texttt{c}1} 
   \texttt{\texttt{c}5}+ 7 \texttt{\texttt{e}3} \texttt{\texttt{b}4} 8 \texttt{\texttt{c}1} \texttt{\texttt{c}6} 9 \texttt{\texttt{b}2} \texttt{\texttt{c}5}+ 10 
   \texttt{\texttt{e}1} 11 \texttt{\texttt{d}2} \texttt{\texttt{a}6} 12 \texttt{\texttt{c}3} \texttt{\texttt{h}5} 13 \texttt{\texttt{d}1} 
   14 \texttt{\texttt{c}1} \texttt{\texttt{g}1} 15 \texttt{\texttt{f}3} \texttt{\texttt{a}6} 16 \texttt{\texttt{g}1} \texttt{\texttt{h}2} 17 \texttt{\texttt{f}2} 18 \texttt{\texttt{c}5}+ 19 
   \texttt{\texttt{a}2} \texttt{\texttt{d}2} 20 \texttt{\texttt{d}1} \texttt{\texttt{c}3} 21 \texttt{\texttt{b}3} 22 \texttt{\texttt{a}4} \texttt{\texttt{c}5}+ 23 \texttt{\texttt{d}1} 
   24 \texttt{\texttt{c}3} 25 \texttt{\texttt{d}2} \texttt{\texttt{e}1} 26 \texttt{\texttt{c}2} 27 \texttt{\texttt{f}2} 
   28 \texttt{\texttt{c}2} 29 \texttt{\texttt{c}2} 30 \texttt{\texttt{c}2} \texttt{\texttt{c}1} 31 \texttt{\texttt{d}2} \texttt{\texttt{e}4}+ 32 \texttt{\texttt{f}2} --++.

28...\texttt{\texttt{b}5}!

Incarcerating White’s knight.

29 \texttt{\texttt{c}1} \texttt{\texttt{c}7} 30 \texttt{\texttt{d}2} \texttt{\texttt{a}4} 31 \texttt{\texttt{e}2}
31 \( \text{dx}a4 \text{bxa}4 \) 32 \( \text{c}c3 \text{b}b6 \) 33 f5 gx\( f5 \) 34 \( f4 \) \( d4+ \) 35 \( c2 \text{e}e5 \) +.

31...\( \text{d}d8 \) 32 \( \text{e}e3 \) \( f6 \) 33 \( \text{x}xa4 \text{bx}a4 \) 34 \( d2 \) \( c4 \) 35 \( c5 \)

Black also wins after 35 \( \text{c}c2 \) \( d4 \) 36 \( x\text{xd}4 \) \( x\text{xd}4 \) 37 \( \text{d}d2 \) e3+ 38 \( \text{e}e1 \) \( g\text{d}3 \) 39 g4 h\( x\text{g}4 \) 40 f5 g3 +.

35...\( \text{b}b2 \) 36 \( \text{e}e3 \) \( x\text{xa}3 \) 37 \( x\text{xe}4 \) \( b\text{b}2 \) 0-1

We end the discussion of the bishop-pair with the following classic:

5.47 5.47

B. Englisch – W. Steinitz
London 1883

1...\( \text{c}c8d\text{d}8 \) 2 c3 \( \text{f}f8 \) 3 \( \text{b}b3 \) b6!

Black restricts the knight and begins the strategy of putting his pawns on dark squares to strengthen his light-squared bishop, which has no counterpart.

4 h3 \( \text{e}e6 \) 5 \( \text{f}f1 \) c5 6 \( \text{g}g5 \) f6 7 \( \text{f}f4 \) \( \text{f}f7 \) 8 \( f3 \) g5 9 \( \text{x}x\text{d}8 \) \( \text{x}d8 \) 10 \( \text{c}c3 \) h6

Finally all the black pawns are on dark squares!

11 \( \text{e}e1 \) f5 12 f4 \( \text{f}f6 \) 13 g3 a5

Threatening to push the pawn to a3 to destroy White's pawn-structure on the queenside.

14 \( \text{c}c1 \) a4 15 a3 \( \text{c}c4 \) (D)

Corralling the knight.

16 \( \text{f}f2 \) gx\( f4 \) 17 \( x\text{xf}4 \) \( g\text{g}5 \)!

Steinitz decides to exchange White's strong defender. The transformation of one advantage into another is a typical strategy with the two bishops. White faces major difficulties stopping Black's rook from penetrating on the d-file.

18 \( \text{x}x\text{g}5 \)

18 \( \text{e}e3 \) \( g6 \) (Tartakower; 18...\( \text{e}e8+ \) 19 \( \text{f}f2 \) \( x\text{xe}1 \)? is wrong as Black can't penetrate after 20 \( x\text{xe}1 \) \( x\text{xf}4 \) 21 gx\( f4 \) \( \text{e}e6 \) 22 \( \text{f}f2 \) \( x\text{d}5 \) 23 \( x\text{e}3 \) \( x\text{f}1 \) 24 h4 \( x\text{c}4 \) 25 \( \text{h}\text{d}2 \) =).

18...hx\( g5 \) 19 \( \text{e}e3 \) \( \text{f}f6 \) 20 h4?! gxh4 21 gxh4 \( x\text{e}8+ \) ! 22 \( \text{f}f2 \) \( x\text{xe}1 \) 23 \( x\text{xe}1 \) \( x\text{e}5 \) 24 \( x\text{e}2 \) \( x\text{xe}2 \) 25 \( \text{h}\text{xe}2 \)

Despite White's outside passed pawn, Black wins easily due to his active king:

25...\( \text{f}f4 \) 26 c4 \( x\text{g}4 \) 27 \( \text{e}e3 \) f4+ 28 \( \text{e}e4 \) f3

29 \( \text{e}e3 \) \( g\text{g}3 \) 0-1

You should thoroughly analyze this variation.

The study occurs less often in a normal game. The rook entry is the main goal of the theme.

Our positions:

A: \( \text{g}g \)
B: \( \text{R} \)
C: \( \text{R} \)
D: \( \text{R} \)

A) Rook

The rook on a7 is the main reason to force the rook entry. If the pawn moves to the seventh, it is winnable with a following...

1 \( \text{g}g \)

The rook entry is unavoidable. Black should choose the best time to give the rook to the active white king, which is when the pawn...

1...\( \text{c}c3 \)

1...\( \text{f}f8 \)

Now the white king can...

2 \( \text{g}g \)
6 Rook Endings

You should study rook endings extremely carefully as they occur very frequently in practice.

The rook is a powerful long-range piece and should generally be used actively. The rook is not adept in passive defence and the blockade of enemy passed pawns. For this reason, the game may still be unclear even when one side has to sacrifice his rook, which leads us to the first of the three topics of this chapter, which are:

6.1: Rook vs Pawns 161
6.2: Rook vs Rook 177
6.3: Double-Rook Endings 249

6.1 Rook vs Pawns

The statistics show that this type of ending occurs less often than the similar cases with a minor piece, but due to its special importance in rook endings with passed pawns, a careful study of the themes and motifs is called for.

Our topics are:

A: Rook vs One Pawn 161
B: Rook vs Two Pawns 164
C: Rook vs Three Pawns 169
D: Rook and Pawns vs Pawns 172

A) Rook vs One Pawn

The rook’s winning chances depend very much on how close the attacking king is. Sometimes it is winning even when it is very far away (see following diagram):

1 g5!

The rook cuts off Black’s king, which is now unable to support the pawn. Black now has a choice between losing his pawn or allowing the white king to approach, with fatal consequences in either case.

1...c3

1...c6 2 g7 ++-. By cutting off the black king, White has bought himself unlimited time to bring his king into battle.

2 g3

2 g7 c2 3 g1! d5 4 c1! ++- also wins.

Then 1 g5! (1 g7? allows the bodycheck 1...e5!! =) is again the only winning move, as
it will take Black too much time to bring his king up via the b-file: 1...a6 2 g7 b5 3 f6 b4 4 e5 +--.

An important resource in this type of ending is underpromotion to a knight:

\[
\begin{array}{c}
\text{underpromotion} \\
1 \text{h2} + \text{d1} 2 \text{d3 c1} +! \\
2...c1?? 3 \text{h1} \\
3 \text{c3} \\
3...\text{b3}! 4 \text{b2} \text{c1} = \\
\text{Note that the underpromotion motif doesn’t work with a rook’s pawn, because the knight is immediately lost.}
\end{array}
\]

The next example shows an interesting fight against the knight’s pawn:

\[
\begin{array}{c}
\text{underpromotion} \\
1 \text{a6 g3! 5 a3+ f2! 6 g4 g2! 7 a2+ g1??} \\
\text{The best way to draw, although a defence using underpromotion is also sufficient: 7...f1 8 f3 g1 c+! 9 e3 h3! 10 h2 g1.} \\
8 \text{a6} \\
8 \text{g3 h1! 9 xg2 is stalemate.} \\
8...\text{f2 9 a2 g1 10 h3 h1! 11 a1+} \\
12 \text{xg1+ h2 h2} \\
\end{array}
\]

6.03A K.Lerner – Y.Dorffman. Tashkent 1980 (w/a8, h2; b/g7, g5) features the same theme. Lerner found the amazing 1 f2!! – hindering Black’s king from making a body-check is the only way to win! 1...h6 2 g7 g4 3 c6 g5 4 d5 g3 5 f8 g4 6 e4! 1-0.

The following example is very important for the understanding of many rook vs pawn(s) endings:

\[
\begin{array}{c}
6.04 \text{shouldering away} \\
1 \text{b5} \\
1...\text{c6 continued zwang:} \\
\text{c5 draw). 2...e3 5 a2} \\
4 \text{b7} \\
\end{array}
\]

White’s rook is excellently placed on the first rank, controlling the pawn’s queening square from a...
from a distance. If Black plays \ldots f3-f2 and \ldots \text{g3-g2}, White’s king will arrive at e2 just in time, winning the game. Black can do much better by shouldering away White’s king, even though this involves blocking his own pawn:

1...\text{f3}!!

We also refer to this motif as a bodycheck. 1...f3? 2 \text{e}c5! f2 3 \text{d}d4 \text{f}f3 4 \text{d}d3! \text{g}g2 5 \text{e}e2! ++.

2 \text{e}c5 \text{e}e3!!

Not: 2...\text{e}e2?! 3 \text{d}d4! ++; 2...\text{e}e4? 3 \text{c}c4 \text{e}e3 4 \text{c}c3! \text{e}e2 (4...f3 5 \text{e}e1+! \text{f}f2 6 \text{d}d2 ++) 5 \text{d}d4 f3 6 \text{a}a2+! \text{e}e1 7 \text{e}e3 ++.

3 \text{a}a3+?!

The rook doesn’t feel at home on the third rank, but it is worth a try. After 3 \text{d}d5 f3! 4 \text{a}a3+ \text{e}e2! 5 \text{e}e4 f2! 6 \text{a}a2+! \text{e}e1 7 \text{e}e3, the underpromotion 7...f1\text{g}+! = saves Black (see 6.02).

3...\text{e}e4!

Not 3...\text{e}e2??, when White wins by 4 \text{d}d4! f3 5 \text{a}a2+ ++.

4 \text{c}c4 f3! 5 \text{a}a8 f2 =

The next classic shows the battle of the kings from another angle:

![Diagram](image)

6.06 =/+  

**H.Hamdouchi – V.Topalov**  
*Cap d’Agde 1994*

1...\text{d}d4?

A grave error. Black has to win a tempo by forcing White’s king back to g5 first: 1...\text{g}g2+! 2 \text{f}f5 \text{h}h2! 3 \text{g}g5 \text{d}d4 4 \text{h}h5 \text{c}c5 5 \text{g}g6 \text{e}e6 6 \text{h}h6 \text{g}g2+ 7 \text{h}h7 \text{f}f7 8 \text{h}h8 \text{a}a2 9 \text{h}h7 \text{a}a6 10 \text{h}h8 \text{x}xh6#.

2 \text{h}h5! \text{e}e5 3 \text{h}h6! \text{e}e6 4 \text{g}g7!  
4 \text{h}h7?? \text{g}g2+! 5 \text{h}h6 \text{f}f7! 6 \text{h}h8\text{g}+ \text{f}f6! 7 \text{h}h7 \text{g}g1 =.

4...\text{g}g2+

The alternative 4...\text{c}c7 also leads to a draw after 5 \text{h}h7? \text{g}g2+ 6 \text{x}xh8! =.

5 \text{f}f8! \text{f}f2+ 6 \text{g}g7 \text{g}g2+ 1/2-1/2

We end our discussion of the case where the rook has the advantage with an example by the famous Russian trainer Mark Dvoretzky where very deep thought is required:
1...c5!!

Black has to think in terms of 'shouldering away' right from the start. Instead:

a) 1...a3?? 2 h5! +- wins by cutting off Black's king; this is analogous to 6.01.

b) 1...b5? 2 f7! a5 3 e6! c4 (3...a4 4 d5! +- ) 4 a8 (this is the correct moment to improve the rook's position; Black has to protect the pawn, but can't get nearer to the queening square) 4...b4 5 d5 a4 6 d4 b3 7 d3 a3 8 b8+ --.

2 f7

2 h5+ b4! 3 f7 a5! 4 e6 a4! 5 d5 and now:

a) 5...b3? 6 c5 a3 7 h3+ b2 8 b4! (8 c4? a2! 9 h2+ a3! =) 8...a2 9 h2+ b1 10 b3! a1=+ (10..a1= 11 h1=) 11 c3 --.

b) 5.a3! 6 d4 a2 7 h1! b3! 8 d3 b2! 9 h2+ b1 10 x a2 = (not 10 c3?? a1+! 11 b3 a8! --; that trick works only with a queen!).

2...a5! 3 e6 a4! 4 e5 a3 5 a8 b4! 6 d4 b3! 7 d3 b2!

Remember that with the rook's pawn, 7...a2?? doesn't work due to 8 b8+! a3 9 c2! --.

8 b8+ c1! =

Not 8...a1? 9 c3 a2 10 h8 b1 11 h1#.

The last example sees the pawn winning. You can find it in nearly every endgame book (see following diagram).

Surprisingly, Black's rook can't stop the pawn. However, he has one resource left, which has made the position very famous:

1 c7! d6+ 2 b5! d5+ 3 b4! d4+ 4 c3 d1 5 c2! d1!?

Setting a devilish trap. From a practical point of view, 5..f1 comes strongly into consideration as White has to win the tricky ending of queen vs rook after 6 c8=!! = (see 10.03).

6 c8=!!

The only way to win. 6 c8=?? f4+!! 7 x c4! is stalemate.

6...a4 7 b3! h4 8 c1#!

B) Rook vs Two Pawns

Of course the rook again has very good chances to win and we will encounter several familiar motifs from the previous section. However, there are also many new possibilities. We consider the following cases:

B1: Connected Pawns
B2: Isolated Pawns

B1) Connected Pawns

In the following diagram, if Black had only one pawn then the position would be winning easily for White due to his excellent king position. To win both pawns, White has to choose the right way to use his rook:

1 a1!

Only this move enables White's king to approach successfully. After 1 e8? this is not possible: 1...g2 2 f8 (not 2 e1?? f2+! --) 2...f2! 3 e8 =.

1...g3 2 e3 g2 3 b1 g3 4 g1+ h2 5 f2! --
Two connected passed pawns can be very dangerous. However, despite this the rook wins if the attacker’s king is in front of the pawns:

1...b4+

White escapes with a draw after 1...f2? 2 h5! xg3+ 3 f5 =.

2...f3! 3 h5 a5+ 4 g6 g4!
The trailing pawn on g3 is not as important as king activity: 4...xg3?? 5 h6! =.

5 h6 xh6+ 6 g7 g5 7 h7 xh7+! 8 g8 g6! 9 h8+ h6! 10 g4 b5 11 h7 h5 12 h6 xg4 13 h5 0-1

The following diagram shows the rook’s last chance to stop two connected passed pawns:

1...h1 a3
1...c4 2 h8 d4 3 b8 d3 4 c1 (be- 
wary the trap 4 xb3?? d2! = and Black 
draws) 4...c4 5 b7 b2+ 6 c2 d4 7 b4+
+-.

2 h8
2...g1? c2+ 3 c1! c2! 4 h1 a1! 5 
d2+ c3 d1 c1+! b3! 8 c2 
a1! 9 xb2 is stalemate.

2...c2+
2...b4 3 c8 +-
3...c1 b4 4 b2 +-

The fight against two passed pawns with the attacking king very near is similar to that with just one pawn:

1 g6!
Generally the rook has to deal with the more advanced pawn first.

1...\text{d}7

The black king is cut off by the rook controlling the sixth rank, and so it can’t support its pawns. 1...g2 2...\text{x}g2! \text{d}6 3...\text{g}5! \text{= (6.01)}.

2...\text{g}4!

2...\text{b}7? is not good enough to win. 2...\text{e}7!

and now:

a) 3...\text{g}4 g2 4...\text{x}g2 \text{f}6! (g5 had to be protected) 5...\text{e}6 \text{e}5! 6...\text{e}5 \text{f}4 7...\text{f}4 \text{f}3 =.

b) 3...\text{e}6 \text{f}7! 4...\text{g}4 \text{f}6! 5...\text{d}5 (5...\text{xf}4+ \text{g}5! 6...\text{f}8 \text{g}4 7...\text{d}5 \text{g}2! 8...\text{e}4 \text{f}4! 9...\text{g}8+ \text{f}2 =) 5...\text{f}5! 6...\text{g}8 \text{f}3! 7...\text{d}4 (7...\text{g}3 \text{f}4! 8...\text{g}8 \text{f}2 9...\text{d}4 \text{f}3! =) 7...\text{f}8+ \text{g}4! 8...\text{e}4 \text{f}2! 9...\text{e}3 \text{h}3! 10...\text{e}2 \text{g}2 =) 7...\text{f}2! 8...\text{e}3 \text{f}1 \text{h}+, =.

2...g2

2...\text{e}6?! 3...\text{xf}4! \text{=}.

3...\text{g}xg2! \text{e}6 4...\text{g}5!

Black’s king is cut off again!

4...\text{f}6 5...\text{a}5 \text{=}.

Sozin had White’s king on a7 (ECE 89, Av 80) and Rabinovich put Black’s king on d7 and White’s on a7, so that White to move only draws with 1...\text{g}6! (ECE 90).

If the pawns are further advanced, the rook usually loses if the king can’t help stop the pawns. Occasionally, though, the game can be saved thanks to mating ideas:

\begin{center}
\textbf{6.13}
\end{center}

\textbf{J. Moravec, 1924}

1...\text{a}1+! \text{b}8 2...\text{b}1+! \text{c}8 3...\text{a}1!

Threatening mate.

3...\text{d}8 4...\text{e}6! \text{e}8 5...\text{e}6! \text{f}8 6...\text{f}6!

\text{g}8 7...\text{a}8+! \text{h}7 8...\text{a}7+! \text{h}6 9...\text{a}8!

Again the mating threat.

9...\text{h}5 10...\text{f}5! \text{h}4 11...\text{f}4!

Black now has to return.

11...\text{h}5! 12...\text{f}5! \text{=}

The next example is similar:

\begin{center}
\textbf{6.13A}
\end{center}

\textbf{J. Kling and B. Horwitz, 1851}

1...\text{f}5! \text{h}4

1...\text{h}6 2...\text{f}6! \text{=}.

2...\text{f}4! \text{h}3 3...\text{f}3! \text{h}2 4...\text{e}3

White makes use of the fact that...a2 is impossible at the moment. Otherwise:

a) 4...\text{e}4? \text{g}3! 5...\text{g}1+ (5...\text{d}3 a2! \text{=}+) 5...\text{f}2! 6...\text{b}1 \text{e}2! \text{=}.

b) 4...\text{f}4 also works: 4...\text{g}2 5...\text{e}3! \text{g}3 6...\text{g}1+! \text{h}2 7...\text{b}1! \text{g}2 8...\text{d}3 \text{g}3 9...\text{c}2 a2! 10...\text{b}2 =.

4...\text{g}3

White also draws after 4...\text{g}2 5...\text{d}3 \text{f}3 6...\text{c}2 a2! 7...\text{xb}2 =.

5...\text{g}1+! \text{h}4 6...\text{f}4! \text{h}3 7...\text{f}3! \text{h}4! =

Not 7...\text{h}2?? 8...\text{b}1! \text{=}.

There are many studies (and even some games) involving these mating tricks. See, for example, ECE 109-16.

If the king is far away, the rook has a tough job fighting against the pawns (see following diagram).

With precise play White can promote his pawns:

1...\text{a}6!!

1 a6? (1...\text{b}6? \text{g}3! 2...a6 comes to the same thing) 1...\text{g}3! 2...\text{b}6 \text{f}4! 3...\text{b}5 \text{e}5! 4...\text{a}7 \text{d}6

5...\text{b}7? \text{c}5 (the typical drawing technique: the rook is sacrificed for the more advanced pawn

\begin{center}
\textbf{6.14}
\end{center}

\textbf{Variation:

6 b6 \text{h}5

1...\text{g}7

\textbf{a7?! \text{d}4! =}

In the reverse position:

\begin{center}
\textbf{6.15}
\end{center}

\textbf{B}

1...\text{f}3!!

Not 1...

a) 2...\text{g}6

4...\text{c}3 \text{f}5

b) 2...\text{g}7

b1) 3...\text{c}2

given not, but because
and the king keeps an eye on the backward one)
6 b6 ♕b7 7 ♕c7 ♗a6 =.
1. ...♕g3 2 b5! ♕f4 3 b6! ♕e5 4 b7! ♕b1 5 ♕a7! ♕d6 6 b8♕+! ++

In the next example the pawns are successful again:

Now if it were White's turn to move he would draw with ♗g3!, but with Black to move, there is a subtle winning manoeuvre: 9...♕c3! 10 ♕c5 ♕d2! 11 ♕d4 ♕e1! 12 ♕e3 ♕f2! 13 ♕a7 (13 ♗xg2 ♗f1! 14 ♕b2 ♗h3+ +++) 13...♕f1 ♕+! 14 ♕f3 ♗g1! ++.

b2) 3 ♗g8!. This position is a good example of the following rule: if your aim is a simple retreat or to give some checks, the rook should move as far away as possible to avoid coming under attack from the king. You should strictly follow this rule. Even for a grandmaster it would be nearly impossible to foresee that the rook on g7 will later be subject to attack in a subvariation. 3...♕f4 4 ♕c6 ♕f4 5 ♕d5 g3 6 ♕d4! g2 (6...f2 7 ♗f8+! ♗g4 8 ♕e3! ♗h3+ ++) 7 ♗f8+! ♗g5! (7...♕g4 8 ♗g8+! ♗f5?? 9 ♕e3! ++) 8 ♗g8+! ♗f4! 9 ♗f8+! ♗g3 10 ♗g8+! ♗h2 11 ♕e3! =.

1...♕f3!
Not 1...g4? 2 ♗g6! (2 ♕e6? f3! ++) and now:

a) 2...♕g3 3 ♕e6 f3 4 ♗g4+! (4 ♗xg3? f2! ++) 4...♕xg3! =.
b) 2...♕f5 and then:

b1) 3 ♗g7?? (the second question mark is given not because this is an obvious blunder, but because there is no reason not to go as far away as possible!) 3...♕f3! 4 ♕c6 ♗f4 5 ♕d5 g3! 6 ♗f7+ (6 ♗d4 g2! 7 ♗f7+ ♕g5! 8 ♗g7+ ♕f6! ++ attacks the rook) 6...♕e3! 7 ♗g7 g2! 8 ♕e5 ♕d3! (8...♕e2?? 9 ♕f4 f2 10 ♗xg2! =) 9 ♕d5 (D).

6.15A =/+
White’s pawns are extremely dangerous but Black could have saved the game nevertheless: 1 g5 e3 2 g6 d4! 3 f4! d8 4 f5 f8+ 5 e6 e4?

So far Black has defended well, but now he strays from the correct path. 5...g8 6 h5 (6 f7 b8 7 h5 e5 8 g7 f5! 9 h6 a7+ =) 6...e4! 7 f6 f8+!! 8 g5 (8 e6 g8 =; 8 g7 e6 a9 9 h6 f5 10 h7 g5 =) 8...e5 and now:

a) 9 h6 f5+ (9...f1 is the only alternative: 10 h7 g1+! 11 h4 h1+! 12 g5! =) 10 g4! f4+! 11 g5! = (11 g3?? f6! =). 

b) 9 g7 f8 10 g6 g1+! 11 g7 f1+! 12 e7 g1! 13 h6 g6!! 14 f7 f6+! 15 e8 e6+! 16 d8 d6+! 17 e8 e6+! 18 d7 (18 b7?? g6! ++) 18...g6 =.

6 g7! a8 7 h5! a6+ 8 e7!!
Not 8...f7? f7! 9 g8?? a7+! 10 f8 a8+! =.

8...e7+ 9 e6! a6+ 10 g5! a5+ 11 g6 a6+ 12 h7! a7 13 h8 a5 14 h6! 1-0

B2) Isolated Pawns

In the following diagram, White has to put all his hopes on the h-pawn:

1 g4!

If you are fighting for a draw, concentrate mainly on one pawn! Black wins after 1 f4? e5! 2 g4 e4 3 h6 e5! 4 f5 c5 5 h6 h5 6 g6 c6 7 g7 (7 f6+ e7!! 8 f6+ e8! 9 h7 h2 10 f7 h1 ++) 7...e4! 8 h7 g1+! 9 e6 f7! =+.

1...c1

1...b3 2 h5! c4 3 h6! d4 4 h7 (4 g5? e6+! 5 g6 c1 6 g7 e7 7 h7 g1+! ++) 4...c8 5 f5 =.

2 h5 b3 3 b6 e4 4 f5 d5 5 h7 h1 6 g6! e6 7 g7! g1+ 8 f8!
Not: 8 b6? f7! --; 8 h8?? f7 9 f4 a1 10 f5 a8#.

2-2

If the pawns are very far advanced they can sometimes beat the rook:

W/B

1 zb b3

Note: There is a similar position in the study under 3)

C) Rotated

With the white king on c2, the king on b3, or when the rook structure is rotated 90 degrees (agram):

1...e3

1...e4

4 f6+f 4...d6+ 1 5 g6 e8+ 2...e6+ 3...e7 f6+ 2...f7 6 a8
2...xc2+ 6...e5 7 f6 2...e5
2...f6 6 f5 c2 c6 6...f5 6...e5
2...f5+ 6...c2 2...b3 6...a6 2...f5
3...<br>
4<br>
5<br>
5<br>
5<br>
Black won some twenty moves later.<br>
If White were to move, he would have many ways to draw. 1<br>
2<br>
3<br>
3 probably the easiest way.<br>
However, there are situations where the rook draws even without the help of the king:<br>

![Diagram](image1.jpg)

6.19
R. Réti (end of a study), 1929

1<br>
2<br>
Note that Black wins if there are fewer files between the pawns. You will find the original study under 6.26.

C) Rook vs Three Pawns

With three pawns, there are drawing positions when the pawns form a chain (see following diagram):

1...<br>
1...<br>
4<br>
4<br>
7<br>
2<br>
2<br>
2...<br>
2...<br>
4<br>
4<br>
3...<br>
3...<br>
3...<br>
3...<br>
3...<br>
3...<br>
3...<br>
3...<br>
White has to transfer the move to Black several times in the following play to overcome his resistance:

1<br>
Or:<br>a) 2...<br>b) 2...<br>
3...f4 4 e6 d4 (4.e5 5 e7 f4 6 f7+ e5 7 d7 e6 8 d8 e5 9 e3 ++) 5 f6+ e5 6 f8 d3 7 e3 ++.

4 g1 f5 5 f1 f4 6 f2 f5

For 6...d4 see 6.22.

7 g3 f6 8 h2 f5 9 d8 e6 10 h3 e5 11 g3 e6 12 f2 e5 13 e3 e6 14 d4 f6 15 d6+ ++

6.22 +/-

G. Fischidd – P. Schlosser
Passau 1994

3...d4?! 4 d8!

Forcing the total blockade.

4...d3 5 e3 f5 6 f8+ g4 7 g8+ f5 (D) ½-½

The conclusion is that a chain with all the pawns on different ranks (as in 6.20) is the best defensive set-up for the pawns.

The next two examples show that in practice it is difficult to solve all the problems correctly. In the following diagram, White should win with correct play:

1.f4

Or:

a) 1...d4 2 d8 d3 3 e3 ++.

b) 1...d4 2 f6 e5 3 g3 d4 4 e8+ d5 5 f4 c4 (5.d3 6 d8+ c4 7 e3 ++) 6 c5 e3 7 e4 e2 (7...e3 8 f3! f2 9 e8+ ++) 8 e8+ b3 9 e1 b2 10 e1 ++.

2 f3

2...d4 3 e8+ d5 4 e1 d3 (4.e3 5 e2! ++; 4...f3 5 f2 ++) 5 f1 f3 6 d2 d4 7 d8+ e5 8 e3 f5 9 e8+ .

3 e8!+

3 e3 e6 4 d8! ++ (6.21).

6.23 "/

W

6.23A "/

W

Here, with very little time left for both players, a draw was agreed, but White is winning:

8 e8 g4 9 e4+ g3 10 f4 d2 11 xf3+ g2 12 f2++

White's pawns are well-placed in the following diagram and he should be able to draw:

1 a3! h3+ 2 b2 b6 3 a2!

3 c2?? a3! ++.

3...a5 4 b2! g3 5 c2?

The only move was 5 a2! b4 6 c7 a3+ 7 b2 b3+ 8 a2 =. In view of the threats of c8 and b6, Black has nothing better than a perpetual.
5...\textbf{g}4?

Returning the favour. Instead, Black could use White’s unfortunate placement on the c-file by \texttt{5...b4} 6 \texttt{\textit{d}2} (6 \texttt{\textit{c}7} \texttt{\textit{c}3}++) 6...\texttt{\textit{b}2} \texttt{\textit{g}8} 7 \texttt{\textit{c}7} \texttt{\textit{c}5}++) 6...\texttt{\textit{g}8}! 7 \texttt{\textit{d}3} (7 \texttt{\textit{b}6} \texttt{\textit{c}5}++) 7...\texttt{\textit{x}a4} 8 \texttt{\textit{c}4} \texttt{\textit{a}5} 9 \texttt{\textit{c}5} \texttt{\textit{g}5}++.

\texttt{6 \textit{b}3} \texttt{\textit{b}4} 7 \texttt{\textit{c}3}! \texttt{\textit{b}1} 8 \texttt{\textit{c}2} \texttt{\textit{f}1} 9 \texttt{\textit{b}3}?

9 \texttt{\textit{b}2}! = (6.20).

9...\texttt{\textit{a}1}! 10 \texttt{\textit{c}4}

10 \texttt{\textit{c}3} \texttt{\textit{a}3}+! ++.

10...\texttt{\textit{x}a4}+ 11 \texttt{\textit{e}5} \texttt{\textit{a}1} 12 \texttt{\textit{c}7} \texttt{\textit{c}1}+! 13 \texttt{\textit{d}6} \texttt{\textit{b}6}! 0-1

We conclude the discussion of three connected pawns vs rook with one example where White managed to use the main drawing idea from 6.20:

\begin{center}
\textbf{R. Réti, 1929}
\end{center}

\begin{center}
\textbf{1 \textit{g}8!}
\end{center}

After 1 \texttt{\textit{f}8}? Black emerges with b- and f-pawns: 1...\texttt{\textit{f}3} 2 \texttt{\textit{f}4} \texttt{\textit{b}4} 3 \texttt{\textit{x}g}4 \texttt{\textit{b}3} 4 \texttt{\textit{g}1} (4 \texttt{\textit{f}4} \texttt{\textit{b}2}++) 4...\texttt{\textit{b}2} 5 \texttt{\textit{g}7} \texttt{\textit{f}2} 6 \texttt{\textit{d}1} \texttt{\textit{c}4} 7 \texttt{\textit{f}6} \texttt{\textit{c}3} 8 \texttt{\textit{f}1} \texttt{\textit{d}3} ++.

\texttt{1...\textit{g}3} 2 \texttt{\textit{g}4} \texttt{\textit{b}4}

2...\texttt{\textit{d}4} 3 \texttt{\textit{x}f}4+ \texttt{\textit{e}3} 4 \texttt{\textit{g}4} \texttt{\textit{f}2} 5 \texttt{\textit{b}4} \texttt{g}2 \texttt{6 \textit{b}2}+.

3 \texttt{\textit{f}4} \texttt{\textit{b}3} 4 \texttt{\textit{f}1} \texttt{\textit{b}2} 5 \texttt{\textit{g}7} \texttt{\textit{g}2} 6 \texttt{\textit{g}1} \texttt{\textit{d}4} 7

\texttt{\textit{f}6} \texttt{\textit{e}3} 8 \texttt{\textit{b}1}! \texttt{\textit{d}3} 9 \texttt{\textit{g}1}! =

Fighting against the rook isn’t easy, as the following example from practice shows:

\texttt{1 \textit{e}5 \textit{c}4}?!

1...\texttt{\textit{h}4} (this move would even draw without the c-pawn!) 2 \texttt{\textit{a}3}+ \texttt{\textit{g}4}! 3 \texttt{\textit{e}4} \texttt{h}3 4 \texttt{\textit{a}8} \texttt{h}2 =.

2 \texttt{\textit{a}3}+ \texttt{\textit{g}4}!

2...\texttt{\textit{e}2}? 3 \texttt{\textit{e}4} (3 \texttt{\textit{x}f}4? \texttt{\textit{d}2}! 4 \texttt{\textit{e}4} \texttt{c}3 =)

3...\texttt{\textit{d}4} 2 \texttt{\textit{h}3} 3 \texttt{\textit{d}3}+ \texttt{\textit{c}2} 6 \texttt{\textit{d}4}++.

3 \texttt{\textit{e}4} \texttt{\textit{h}4} 4 \texttt{\textit{a}8}
Markowski threw in the towel due to the continuation 19...h2 20 Kb8+ Kg1 21 Kg8! Kh2 22 Kd2! ++.

D) Rook and Pawns vs Pawns

Naturally, the presence of a friendly pawn greatly increases the rook’s chances. One of the new winning motifs is simplification into a pawn ending:

1 f7! (NC)

White has to preserve the e2-pawn, so he cuts off Black’s king along the f-file.

1...h3 2 b7! h2 3 h7! h1=++

3...g2 4 c6 h1=++ 5 xh1! gxh1 6 d5 g2 7 e4 f2 8 d3! +–.

4 xh1! f2 5 h2+! g1 (D)

7...f2!

7...h2? 8 a2+! g1 9 g3! h1=++ 10 f3!

8 e4 f2! 9 f4 e2! 10 c8 d3

Black could also draw by 10...h2 11 h8 c3

12 xh2+ d3! =.

11 f3 h2! 12 d8+ c2! 13 h8 d3?

13...c3! 14 a3 b1! 15 d3 c2! 16 b8+!

a2 17 a8+! b3 18 b8+! a4 19 a8+!

b3! = (19...xb4?? 20 a1! ++–).

14 f2! d2

14...c3 15 e1! c2 16 h3+! e4 17 d2!

++

15 xh2 c3 16 f1+! d1 17 h8 c2 18 d8+! c1 19 e2 1-0

6 c6! xh2 7 d5! g3 8 e4!
8...f2 9. d3! +-  

Another important resource is the following:

6.29  

G. Vescovi – C. Hoi  
Copenhagen 1995  

1. c7 (NC) 1...b3 2. g4+! c3  
2...c5 a3! b2 4. b4! +-.  
3. xa4! b2 4. a3++ 1-0  
Bb3 comes next.  

6.29A  

N. Kopaev  

1. f3 (NC)  
1...g3 2. g4+ f3 (2...f5 3. h3! +-) 3. h4! g2 4. h3+! f2 5. g3! +-.  
2. d5!  
2...a4? h3! 3. a3+ g2! 4. a2+ f3! 5. a3+ g2! 6. g3+ h2! 7. xg4! h1 8. d5 h2! =.
2...g3  

2...h3 3. g8 g2 4. xg4+ xh2 5. e4 h1 6. f3 h2 7. f4 g1 8. a1=.  
2...g2 3. a2+ and then:  
a) 3...h3 4. e4! g3 5. hxg3! (5...f3? g2! =) 5...xg3 6. f5 h3 7. a3! f2 8. g4! h2 9. a2++! g1 10. g3! h1+ 11. f3 +-.  
b) 3...f3 4. a4 (4. e5 g3 5. h3 g2 6. a3+!  
7. a1+! ++) 4...h3 5. e5 g3 6. a3+! g2 7. xg3+ xh2 8. f4 +-.  
3. h3! 2. g2 4. g8! f2 5. e4! g1 6. xg1!  
6.30  

L. Comas Fabrego – J. Piket  
Escaldes Z 1998  

1. g4!?  
1...g4 2. d2 2. g5 (2 f5 e3+ 3. f4 d3 4. g5  
5. e4+ ++) 2...f5 ++ (Ribli).  
6.30  

1. e2  
Or:  
a) 1...e3? 2 f5 xg3 3. xxf6 =.  
b) The immediate 1...e8 also wins, as Curt Hansen proved in CBM 68: 2. f5 f8 3. g6  
f5 4. g7 e2! 5. xf8 (5 g4 f3!! ++) 5...f3  
6. f7 xg3 +-.  
2. f5 a6?  
2...e8! 3. xg6 f3 4. f5 (4 f7 a8 5. f5  
4. e4 6. f6 e5 7. g4 a7+ 8. g6 e6 9. g5 h7  
10. h6 f5 ++) 4...f8+ 5. g6 e4! 6. g4  
e5 7. g7 f6 ++ (Hansen).  
3. g4! f3 4. g5 a5+  
4...fxg5 5. xg5 a5+ 6. f6 =.
5 ♦xf6 ♦xf4 6 g6 ♦a6+ 7 ♦f7 ♦f5 8 g7 ♦a7+ 9 ♦g8?!
Easier than 9 ♦f8 ♦f6 10 g8♦+! =.
9... ♦g6 10 ♦h8 ♦xg7 (stalemate) ½-½

We end our discussion of rook vs pawns with two very complicated struggles:

![Diagram](image)

6.32
P. Mandelbaum – F. Ketelaar
Germany Jr tt 1998

White could have reached a draw with precise play:
1 ♦d7!
1...g8+? ♦f4 2 ♦f8+ ♦e4 3 ♦d7 a4 4 ♦e6
a3 5 ♦a8 h2 6 ♦a4+ ♦f3 7 ♦xa3+ ♦xf2 8 ♦a2+
♯g3 9 ♦a1 ♦f4--+ (9... ♦h3? 10 ♦f5 ♦g3 11 ♦g5 =).
1...a4! 2 ♦e6!

a) In the game White missed this move, and continued 2 ♦g8+? ♦f4 3 ♦f8+ ♦e4:
   a1) 4 ♦g8 ♦f3 5 ♦f8+ ♦g2 6 ♦f4 h2 7
       ♦xg4+ ♦xg4 8 ♦h4 ♦g2! (8... ♦g3? 9 ♦h8 a3
       10 ♦g8+! ♦f3 11 ♦f8+! ♦e3 12 ♦f1 =) 9 ♦g4+
       ♦h3! --.-
   a2) 4 ♦a8 (the game continuation) 4... ♦f3 5
       ♦f8+ ♦g2 6 ♦f4 h2 7 ♦xg4+ ♦xg4 8 ♦h4 ♦g2
       9 ♦xh4 (9 ♦g4+ ♦h3 10 ♦xh4 ♦h1 --.) 9... ♦h1
       -- and Ketelaar later won the game.

b) 2 ♦a8?! ♦f4 and then:
   b1) 3 ♦e6? ♦f3 4 ♦xh4 (4 ♦f5 h2 --.; 4
       ♦f8+ ♦g2 5 ♦g8 h2 6 ♦xg4+ ♦xg4 7 ♦h4 ♦f2
       8 ♦h4+ ♦h3 --.) 4... ♦h2 5 ♦e1 ♦f3 6 ♦e2+ ♦g3
       7 ♦a1 ♦f4 --.-
   b2) 3 ♦xh4+ ♦f3 4 ♦a8 ♦xf2 5 ♦h8! ♦g2
       6 ♦e6! ♦h2 7 ♦f5! ♦g3 8 ♦g4! =.

2...a3 3 ♦f5+!?
White could also have drawn by 3 ♦e5 a2 4
♯g8+! (4 ♦a8? h2! 5 ♦g8+ ♦h6 --.) 4... ♦h5
♯a1! ♦h2 6 ♦f6! ♦h7! 7 ♦a7+! ♦h6 8 ♦a8!
♯h7! 9 ♦a7+! =.
3... ♦h4
3... ♦g6 4 ♦e5 (4 ♦f6+ ♦g5 =) 4... ♦h2 5 ♦e1
♯g5 6 ♦h1 a2 7 ♦e5 g3 8 ♦xf3 ♦g4 9 ♦e4
♯xg3 10 ♦a1 =.
4 ♦f7

The last example is from a battle between the youth teams of Hamburger Schachklub and Königsspringer Hamburg, the authors’ clubs.
Not 4 \textit{f}8? a2 \textit{=}, but White can also draw by 4 \textit{f}6 a2 5 \textit{f}5! \textit{h}5! 6 \textit{a}6! h2! 7 \textit{a}8! \textit{h}6! 8 \textit{h}6! \textit{h}7! 9 \textit{a}7+! \textit{g}8 10 \textit{a}8\textit{=} =. 4...\textit{g}5 5 \textit{f}5\textit{=} =

\textbf{Rules and Principles: Rook vs Pawns}

The following rules and motifs are very important:
- Cutting the king off (6.01)
- Shouldering away (6.03 and 6.04)
- Intermediate rook check to avoid the body-check (6.06)
- Underpromotion to a knight (6.02)

Also remember that when fighting against two connected pawns, the best position for the rook is usually behind the more advanced pawn (6.12).

\textbf{Reference works}

\textit{Encyclopaedia of Chess Endings} (ECE), Rook Endings Volume 2, Belgrade 1986
\textit{Technique for the Tournament Player}, Dvoretsky and Yusupov, Batsford 1995, pp. 11-17

\textbf{Exercises}
(Solutions on pages 376-8)

\textbf{Exercise 6.01}

\begin{center}
\begin{tabular}{c}
\textit{W} \\
E6.01 \\
\textit{=/}
\end{tabular}
\end{center}

After 1 \textit{c}4 Black resigned. Was that correct?

\textbf{Exercise 6.04}

\begin{center}
\begin{tabular}{c}
\textit{W} \\
E6.04 \\
\textit{=/}
\end{tabular}
\end{center}

1 \textit{c}7 is clearly the first move, but how does White proceed after the forced 1...\textit{f}6\textit{=} ?

\textbf{Which piece do you improve first, king or rook?}

\begin{center}
\begin{tabular}{c}
\textit{B} \\
E6.03 \\
\textit{p=} \\
\end{tabular}
\end{center}

What thoughts do you have on the following play? 1...\textit{e}1+ 2 \textit{f}3 \textit{e}8 3 \textit{d}5 \textit{e}5 0-1.
This shouldn’t be too difficult. How do you eliminate White’s split pawns?

What do you think about the following play?

1. \text{f8} 2. \text{d5} 3. \text{e4} 4. \text{f3} 5. \text{e3} 6. \text{g2} 7. \text{f4} 8. \text{g3} 6. \text{a4} 1-0.

It’s easy to draw, but how might White win?

It’s clearly time to take the d-pawn, but which piece should make the capture?

King or rook – that is the question!

Can you spot the mistakes in the following play? 1...\text{d6} 2. \text{b4} 3. \text{c6} 4. \text{d6} 4. \text{a6} 5. \text{a1} 0-1.

Can we play \text{b4} and the Rook on \text{a1}? You find out when you finish the book.
**Rook Endings**

B: Pawns on One Wing (no Passed Pawns) 205
C: Pawn Races 216
D: One Side has a Passed Pawn 223
E: Pawns on Both Wings 233
F: Principles of Rook Endings 245

### A) Rook and Pawn(s) vs Rook

We consider the following cases:

**A1:** Rook and Pawn vs Rook 177
**A2:** Rook and Two Pawns vs Rook 192

#### A1) Rook and Pawn vs Rook

Our topics are now:

**A1a:** Basics: Philidor and Lucena Position 177
**A1b:** The Defending King is Cut Off Along a File 182
**A1c:** The Defending King is Cut Off Along a Rank 184
**A1d:** Rook's Pawn 187

#### A1a) Basics: Philidor and Lucena Position

We begin with the most important position in the whole book, because the motif can be applied to the other pawns on the fifth or fourth rank as well:

#### 6.2 Rook vs Rook

This subchapter on endings with rook + pawn(s) vs rook (+ pawns) is by far the largest of the whole book, since rook endings occur very frequently in practice. One possible explanation for this is that it usually takes a long time for the rooks to enter the game, since they start in the corners, and can only really become active once there are some open files. Therefore it is very likely that two of them will remain until the endgame. You should study this section carefully and you should know the basic positions, especially the Philidor and Lucena positions, by heart.

We divide the material as follows:

**A:** Rook and Pawn(s) vs Rook 177

1...\texttt{d}6(!) In fact any rook move on the b-file (except for 1...\texttt{b}5? and 1...\texttt{b}7??) draws, but 1...\texttt{a}b6
is clearly best, as the drawing method is completely clear-cut. For 1...b1?! see 6.37.

2 f6

There is no other try. A rook exchange results in a drawn pawn ending and other ideas are answered by ...f7 or waiting moves by the rook on the third rank.

2...b1(!)

Once the pawn has advanced, White lacks a shield against checks from behind, and Black immediately exploits this. As a rule: if you want to give annoying checks, keep as much distance from the opponent’s king as possible!

3 g6 g1= + ! 4 f5 f1 + 5 e6 e1 = +

With White to move, Black is lost:

1 g6!

Not: 1 f6 g6= + ; 1 f6 b1 =.

1 e8

It is also too late for activity: 1...b1 2 a8+! e7 3 f6+! e6 4 a8+ d7 5 f7 +=.

2 f6 g8!! (D)

W

6.33A

+/

3 g7+

In order to play h7 with tempo! 3 h7?! c6 forces White to return.

3...f8

3...h8 4 h7+! g8 5 f7+ +=.

4 h7! g8 5 f7+ +=

It is important to know that a back-rank defence is only possible with a knight’s or a rook’s pawn (see following diagram):

1 g7+ h8!

1...f8?? 2 h7! b1 3 f7+ c8 4 g8 += reaches a Lucena-type position (see diagram 6.35).

2 h7+

In order to win, White would now need there to be an i-file.

If the attacker manages to cut the defending king off, the following basic winning motif, which has been known for a very long time, plays a crucial role:

W

6.35

‘Lucena Position’

+/

1 d1+

Bringing the rook to g8 (via h1 and h8) is the alternative win, but for obvious reasons this method is not possible with a knight’s pawn and is therefore of less general importance: 1 h1 g3 2 h8 g1 3 g8 f1 4 g7 g1+ 5 h6 h1+ 6 g5 g1+ 7 h4 h1+ 8 g3 g1+ 9 f2 +=.

1...c7

Or: 1...e6 2 e8 +=; 1...c6 2 e7 (or 2 d4 c5 3 d7 c6 4 e8 f2 5 e7 +=)
2...\textcolor{red}{\texttt{d}2+} 3 \textcolor{red}{\texttt{d}d8} \textcolor{red}{\texttt{d}f2} 4 \textcolor{red}{\texttt{d}d7} \textcolor{red}{\texttt{f}f1} 5 \textcolor{red}{\texttt{e}e8} \textcolor{red}{\texttt{f}f2} 6 \textcolor{red}{\texttt{e}e7} +--.

2 \textcolor{red}{\texttt{d}d4}

This manoeuvre is known as ‘building a bridge’, and it provides a successful exit for the white king. 2 \textcolor{red}{\texttt{d}d7?! \texttt{d}d2+} 3 \textcolor{red}{\texttt{f}f6} \textcolor{red}{\texttt{f}f2} 4 \textcolor{red}{\texttt{g}g6} \textcolor{red}{\texttt{g}g2} 5 \textcolor{red}{\texttt{h}h5} \textcolor{red}{\texttt{f}f2} gets White nowhere.

2...\textcolor{red}{\texttt{e}e1+} 3 \textcolor{red}{\texttt{d}d7} \textcolor{red}{\texttt{e}e1+} 4 \textcolor{red}{\texttt{f}f6} \textcolor{red}{\texttt{f}f1+} 5 \textcolor{red}{\texttt{e}e6} \textcolor{red}{\texttt{e}e5} 6 \textcolor{red}{\texttt{d}d2} 6 \textcolor{red}{\texttt{d}d5} \textcolor{red}{\texttt{f}f2} 7 \textcolor{red}{\texttt{e}e5} +--.

6 \textcolor{red}{\texttt{d}f5} \textcolor{red}{\texttt{f}f1+} 7 \textcolor{red}{\texttt{d}d4} +--

The point of 2 \textcolor{red}{\texttt{d}d4}!

In the Chess Cafe Holiday Quiz 2000 by Russell and Kingston the second question was “True or False: The Lucena position is so named because it first appeared in Lucena’s 1497 work on chess. Answer: False. The 1497 book by Lucena does not include the position that bears his name. The position first appears in Salvio’s II puttino (1634).”

It is also worth knowing how to reach a Lucena-type position:

1 \textcolor{red}{\texttt{d}f8}!?

The only way to make progress: 1 \textcolor{red}{\texttt{g}g6}?? \textcolor{red}{\texttt{e}e7} =; 1 \textcolor{red}{\texttt{a}a5} (threatening \textcolor{red}{\texttt{d}d7}) 1...\textcolor{red}{\texttt{e}e8} 2 \textcolor{red}{\texttt{g}g7} \textcolor{red}{\texttt{d}d1}+ and White has to return.

1...\textcolor{red}{\texttt{d}f2}

1...\textcolor{red}{\texttt{h}h1} 2 \textcolor{red}{\texttt{g}g7} \textcolor{red}{\texttt{d}d1}+ 3 \textcolor{red}{\texttt{h}h7} \textcolor{red}{\texttt{d}h1} 4 \textcolor{red}{\texttt{f}f6} \textcolor{red}{\texttt{h}h7}+ 5 \textcolor{red}{\texttt{d}d6} \textcolor{red}{\texttt{h}h1} 6 \textcolor{red}{\texttt{a}a8} \textcolor{red}{\texttt{g}g1}+ 7 \textcolor{red}{\texttt{f}f7}! +--.

2 \textcolor{red}{\texttt{d}f7} \textcolor{red}{\texttt{g}g2}+

2...\textcolor{red}{\texttt{f}f7} 3 \textcolor{red}{\texttt{d}d6}+ \textcolor{red}{\texttt{e}e6} 4 \textcolor{red}{\texttt{d}d8}+! \textcolor{red}{\texttt{d}d7} (4...\textcolor{red}{\texttt{f}f5} 5 \textcolor{red}{\texttt{f}f7} \textcolor{red}{\texttt{g}g2}+ 6 \textcolor{red}{\texttt{f}f8} \textcolor{red}{\texttt{f}f6} 7 \textcolor{red}{\texttt{a}a8} \textcolor{red}{\texttt{b}b2} 8 \textcolor{red}{\texttt{a}a6}+ +--) 5 \textcolor{red}{\texttt{f}f7} +--.

3 \textcolor{red}{\texttt{d}f7} \textcolor{red}{\texttt{d}f2} 4 \textcolor{red}{\texttt{f}f6} \textcolor{red}{\texttt{f}f1} 5 \textcolor{red}{\texttt{a}a8} \textcolor{red}{\texttt{f}f2} 6 \textcolor{red}{\texttt{g}g7} \textcolor{red}{\texttt{g}g2}+ 7 \textcolor{red}{\texttt{f}f8} \textcolor{red}{\texttt{d}d2} 8 \textcolor{red}{\texttt{g}g2} 9 \textcolor{red}{\texttt{a}a4} \textcolor{red}{\texttt{g}g1} 10 \textcolor{red}{\texttt{d}d4}+ --

Note that 6.36 shifted to the left is only a drawn

[Diagram]

6.36A

1 \textcolor{red}{\texttt{d}d8}! \textcolor{red}{\texttt{d}d1}+ 2 \textcolor{red}{\texttt{f}f7}

2 \textcolor{red}{\texttt{d}d7}+ \textcolor{red}{\texttt{d}d8}! 3 \textcolor{red}{\texttt{f}f7} \textcolor{red}{\texttt{e}e8} =.

2...\textcolor{red}{\texttt{h}h7}+ 3 \textcolor{red}{\texttt{g}g6} \textcolor{red}{\texttt{d}d7} 4 \textcolor{red}{\texttt{x}xh7} \textcolor{red}{\texttt{x}x8}! 5 \textcolor{red}{\texttt{g}g6} \textcolor{red}{\texttt{e}e7} = (2.06)

If the defending king manages to get to the short side of the pawn, the position is drawn since a Lucena-type position is out of reach:

[Diagram]

6.37

M.Karstedt

1...\textcolor{red}{\texttt{f}f1}

1...\textcolor{red}{\texttt{g}g1}?! is less accurate as White can penetrate further with 2 \textcolor{red}{\texttt{f}f6} \textcolor{red}{\texttt{g}g8}! 3 \textcolor{red}{\texttt{a}a8}+ \textcolor{red}{\texttt{d}d7} 4 \textcolor{red}{\texttt{f}f7}, although this still isn’t sufficient to win.

2 \textcolor{red}{\texttt{f}f6}
2 \( \mathbb{a}8+ \mathbb{e}7 \) and the f-pawn is stopped.
2...\( \mathbb{g}8! \)

Always move the king to the short side, so that the rook has more checking space on the long side. 2...\( \mathbb{e}8? \) loses: 3 \( \mathbb{a}8+ \mathbb{d}7 \) 4 \( \mathbb{f}8++ \) (6.36).
3 \( \mathbb{a}8+ \mathbb{h}7 \) (D)

![Diagram 6.37A](img)

**The short-side defence**

4 \( \mathbb{f}8 \)
4...\( \mathbb{e}6 \mathbb{g}7 =. \)
4...\( \mathbb{a}1() \) 5 \( \mathbb{e}8 \mathbb{f}1 \) 6 \( \mathbb{e}5 \mathbb{g}8 = \)

If the defender misses (or can’t reach) the Philidor position (6.33) or the short side-defence (6.37A), his last hope is the following set-up:

![Diagram 6.38](img)

**The back-rank defence**

1...\( \mathbb{e}8! \)
1...\( \mathbb{h}8?? \) 2 \( \mathbb{b}1 ++. \)
2 \( \mathbb{d}6 \mathbb{a}8! = \)

Preparing side-checks is essential, as we can see from considering the alternatives:

a) After 2...\( \mathbb{g}8? \) the plan of regrouping the rook with 3 \( \mathbb{b}4 \) decides: 3...\( \mathbb{a}8 \) 4 \( \mathbb{f}4+! \mathbb{g}7 \) 5 \( \mathbb{a}4! \mathbb{a}4 \) 6 \( \mathbb{e}8\mathbb{f}! +. \)

b) 2...\( \mathbb{h}8? \) allows even 3 \( \mathbb{e}8\mathbb{w}++ \mathbb{e}8\mathbb{e}8 \) 4 \( \mathbb{b}8++! +=. \)

c) 2...\( \mathbb{f}6? \) 3 \( \mathbb{b}3 \mathbb{a}8 \) (3...\( \mathbb{xe}7 \) 4 \( \mathbb{f}3+! +=. \) ) 4 \( \mathbb{f}3+ \mathbb{g}7 \) 5 \( \mathbb{a}3! +=. \)

Another drawing resource is the following, which again demonstrates the importance of the checking distance:

![Diagram 6.39](img)

The black rook’s checking distance is large enough:

1...\( \mathbb{a}8+! \)
1...\( \mathbb{d}1? \) 2 \( \mathbb{g}2++. \)
2 \( \mathbb{d}7 \mathbb{a}7+! \) 3 \( \mathbb{d}6 \mathbb{a}6+! \)
3...\( \mathbb{a}8? \) 4 \( \mathbb{a}2! ++. \)
4 \( \mathbb{d}5 \mathbb{a}5+! \) 5 \( \mathbb{c}6 \mathbb{a}6+! \) 6 \( \mathbb{b}7 \mathbb{e}6! = \)

The next position could also serve as an example of Tarrasch’s aphorism “All rook endings are drawn” (see following diagram):

1 \( \mathbb{d}6 \)
1 \( \mathbb{b}7 \) and now:

a) 1...\( \mathbb{g}8? \) 2 \( \mathbb{f}6 \mathbb{f}8++ \) 3 \( \mathbb{f}7 \mathbb{a}8 \) 4 \( \mathbb{g}7+ \mathbb{h}8 5 \mathbb{g}4 ++ \) is a Lucena-type position.

b) 1...\( \mathbb{a}1 \) 2 \( \mathbb{d}7 \mathbb{a}8! \) 3 \( \mathbb{e}7 \mathbb{f}7! += \) (6.38).

c) 1...\( \mathbb{g}6? \) 2 \( \mathbb{d}6 \mathbb{f}6 \) 3 \( \mathbb{e}7 \) (3 \( \mathbb{f}7++ \mathbb{g}6! \) \( \mathbb{f}1 \mathbb{a}6++ \) ) 3...\( \mathbb{f}7! \) 4 \( \mathbb{d}7 \mathbb{e}8! += \) and Black sets up a back-rank defence (6.38).

1...\( \mathbb{g}6!! \)

Not: 1...\( \mathbb{a}7?? \) 2 \( \mathbb{e}8! \) 3 \( \mathbb{d}8! \) 4 \( \mathbb{a}6 \mathbb{e}7 \) 5 \( \mathbb{e}8 \mathbb{f}6 \) 6 \( \mathbb{d}6+! \) 7 \( \mathbb{g}7 \) 8 \( \mathbb{d}8 \mathbb{e}8+8 \) \( \mathbb{e}8! ++; \) 1...\( \mathbb{a}1?? \) 2 \( \mathbb{e}8! ++ \) is similar.

2 \( \mathbb{g}6 \)
1 \( \mathbb{g}a \)
3 \( \mathbb{b}3 \mathbb{c}5 \mathbb{g}3 \mathbb{c}8 \mathbb{g}6 \mathbb{g}6 \)
Exercises
(Solutions on pages 378-9)

How would you defend Black's position?

Is there anything better than passive defense?
A1b) The Defending King is Cut Off Along a File

If the defending king can’t get in front of the pawn, and the attacker can’t directly reach a Lucena Position, matters become much more complicated. In this section we consider the case where the king is cut off along a file, while the next section deals with positions where it is cut off along a rank. Note that these two sections only cover centre, bishop’s and knight’s pawns; in these three cases there are plenty of thematic similarities in the play, though some important differences too. Totally different principles apply to rook’s pawns, which are therefore discussed separately, in section A1d.

Two points are worth noting to start with:

1) The rook defends best from in front, so that the attacking king can’t use its pawn as a shield.

2) As checking distance is crucial, it is of great importance whether the pawn can cross the middle of the board.

We start with a bishop’s pawn:

![Diagram]

If it is White’s move, he can use the a-file and the possibility of $d4$ to win: $1 \texttt{b4} $b8+ $2 \texttt{a5} $c8 $3 \texttt{b5} $b8+ $4 \texttt{a6} $c8 $5 $d4 $e6 $6 \texttt{b7} $c5 ($6...$e5 $7 $d5+ $++$) $7 \texttt{b6}$ $c8$ $8 \texttt{c5} $++. The pawn has crossed the middle of the board and Black’s rook can’t hinder White from reaching a Lucena position.

If Black is to move, he can even exchange rooks to reach the draw: $1...\texttt{d8} (1...$e6 $=) $2 \texttt{xd8} $xd8 $3 $d4 $c8$ =.

With Black’s king perfectly placed, White can’t win as the checking distance of Black’s rook is large enough:
1 \( \textit{\textsc{b4}} \)

1.e5 \( \textit{\textsc{c7}} \) 2.e4 \( \textit{\textsc{d8}} \) =.

1...\( \textit{\textsc{b8}} \) + 2.a5 \( \textit{\textsc{c8}} \) =

Not 2...\( \textit{\textsc{a8}} \) +? 3.\( \textit{\textsc{b6}} \) ! \( \textit{\textsc{b8}} \) + 4.\( \textit{\textsc{c7}} \) ! and White manages to advance his pawn to e5.

3.\( \textit{\textsc{b5}} \) \( \textit{\textsc{b8}} \) + 4.\( \textit{\textsc{a6}} \) \( \textit{\textsc{c8}} \) ! 5.\( \textit{\textsc{d4}} \) \( \textit{\textsc{c5}} \) ! 6.\( \textit{\textsc{d5}} \) +

6.\( \textit{\textsc{b7}} \) \( \textit{\textsc{x1d}} \) 7.\( \textit{\textsc{xc8}} \) ! \( \textit{\textsc{xc4}} \) =.

6...\( \textit{\textsc{e6}} \) ! 7.\( \textit{\textsc{b5}} \) \( \textit{\textsc{b8}} \) + 8.\( \textit{\textsc{c5}} \) \( \textit{\textsc{c8}} \) + 9.\( \textit{\textsc{d4}} \) \( \textit{\textsc{h8}} \) =

Or 9.\( \textit{\textsc{c7}} \) 10.\( \textit{\textsc{d8}} \) \( \textit{\textsc{f7}} \) ! 11.\( \textit{\textsc{h8}} \) \( \textit{\textsc{c6}} \) !=.

If the defending king is cut off by two files, White wins regardless of whether the defending king is on f6 or f7:

4.\( \textit{\textsc{b5}} \) \( \textit{\textsc{b8}} \) + 5.\( \textit{\textsc{e6}} \) \( \textit{\textsc{c8}} \) + 6.\( \textit{\textsc{b7}} \) \( \textit{\textsc{e5}} \) 7.\( \textit{\textsc{d7}} \) \( \textit{\textsc{c4}} \) 8.\( \textit{\textsc{b5}} \) + =.

2.\( \textit{\textsc{d7}} \) 2.\( \textit{\textsc{d3}} \) \( \textit{\textsc{e6}} \) =.

2...\( \textit{\textsc{e6}} \) ! 3.\( \textit{\textsc{d1}} \) \( \textit{\textsc{e5}} \) ! 4.\( \textit{\textsc{c4}} \) \( \textit{\textsc{c8}} \) ! 5.\( \textit{\textsc{b5}} \) \( \textit{\textsc{b8}} \) + 6.\( \textit{\textsc{c5}} \) \( \textit{\textsc{c8}} \) + 7.\( \textit{\textsc{b6}} \) \( \textit{\textsc{b8}} \) + 8.\( \textit{\textsc{a5}} \) \( \textit{\textsc{a8}} \) +

9.\( \textit{\textsc{b5}} \) \( \textit{\textsc{b8}} \) + 10.\( \textit{\textsc{a4}} \) \( \textit{\textsc{a8}} \) +! 11.\( \textit{\textsc{b3}} \) \( \textit{\textsc{b8}} \) =

If the defending king is cut off by three files, White wins even with the pawn on b3:

With a knight's pawn it is different as the attacking king doesn't have enough space to penetrate (see following diagram).

Even if the king is cut off by two files, it is still drawn with a pawn on the fourth rank and Black's king on e6.

1.\( \textit{\textsc{d2}} \) \( \textit{\textsc{e5}} \) !

Not 1...\( \textit{\textsc{a8}} \) ? 2.b5! + =: 1...\( \textit{\textsc{b7}} \) 2.\( \textit{\textsc{c4}} \) \( \textit{\textsc{c7}} \) + 3.\( \textit{\textsc{b5}} \) \( \textit{\textsc{d7}} \) + 4.\( \textit{\textsc{c5}} \) \( \textit{\textsc{c7}} \) + 5.\( \textit{\textsc{b6}} \) + =; 1...\( \textit{\textsc{e7}} \) ? 2.\( \textit{\textsc{d4}} \) \( \textit{\textsc{e6}} \) 3.\( \textit{\textsc{c4}} \) ! (3.\( \textit{\textsc{a4}} \) ? \( \textit{\textsc{e5}} \) ! =) 3...\( \textit{\textsc{e8}} +

(6.33A)

With White to move it is relatively easy: 1.\( \textit{\textsc{c3}} \) \( \textit{\textsc{c8}} \) + 2.\( \textit{\textsc{d4}} \) \( \textit{\textsc{d8}} \) + 3.\( \textit{\textsc{c5}} \) \( \textit{\textsc{c8}} \) + 4.\( \textit{\textsc{d6}} \) \( \textit{\textsc{d8}} \) + 5.\( \textit{\textsc{c6}} \) \( \textit{\textsc{b8}} \) (5...\( \textit{\textsc{c8}} \) + 6.\( \textit{\textsc{b7}} \) \( \textit{\textsc{e5}} \) 7.\( \textit{\textsc{b6}} \) \( \textit{\textsc{c8}} \) 8.\( \textit{\textsc{b4}} \) \( \textit{\textsc{b8}} \) + 9.\( \textit{\textsc{c5}} \) \( \textit{\textsc{c8}} \) + 10.\( \textit{\textsc{d6}} \) \( \textit{\textsc{b8}} \) 11.\( \textit{\textsc{b1}} \) + =) 6.\( \textit{\textsc{b1}} \) ! \( \textit{\textsc{b4}} \) 7.\( \textit{\textsc{c5}} \) \( \textit{\textsc{b8}} \) 8.\( \textit{\textsc{b4}} \) \( \textit{\textsc{e6}} \) 9.\( \textit{\textsc{c6}} \) + =.

With Black to move, matters are much more complicated:

1...\( \textit{\textsc{f6}} \) 2.\( \textit{\textsc{e2}} \) !?
2...\texttt{b7}

Or:

a) 2...\texttt{f7} 3 \texttt{e4} \texttt{f6} 4 \texttt{c3} \texttt{c8}+ 5 \texttt{d4} \texttt{b8} 6 \texttt{c4} \texttt{f5} 7 \texttt{e1} \texttt{c8}+ 8 \texttt{d5} \texttt{d8}+ 9 \texttt{c6} \texttt{b8} 10 \texttt{b1}+--.

b) 2...\texttt{f5} 3 \texttt{c3}+-- wins in similar fashion to the White-to-play case.

3 \texttt{c3} \texttt{c7}+ 4 \texttt{d4} \texttt{b7} 5 \texttt{e3} \texttt{b8} 6 \texttt{c5} \texttt{c8}+ 7 \texttt{d6} \texttt{b8} 8 \texttt{f3}+ \texttt{g6} 9 \texttt{c5} \texttt{e8}+ 10 \texttt{d4} \texttt{b8} 11 \texttt{c3} \texttt{e8}+ 12 \texttt{b2} \texttt{b8} 13 \texttt{f1} \texttt{g5} 14 \texttt{c3} \texttt{c8}+ 15 \texttt{d4} \texttt{b8} 16 \texttt{c4} \texttt{c8}+ 17 \texttt{d5} \texttt{b8} 18 \texttt{b1}+--

The situation with a central pawn is similar to a bishop’s pawn. The following position demonstrates how to overcome a defence based on checking from the long side (here the queenside), which isn’t possible with a bishop’s pawn:

\begin{center}
\includegraphics[width=0.5\textwidth]{image.png}
\end{center}

A.\texttt{Chéron}, 1926

With the king cut off on the h-file, White can use mating motifs:

1 \texttt{g2}!?

First White transfers the move to Black as the black pieces occupy ideal squares and have no good move. A plan analogous to the one we saw in 6.42 doesn’t work here: 1 \texttt{d4} \texttt{d8}+ 2 \texttt{c5} \texttt{e8} 3 \texttt{d5} \texttt{d8}+ 4 \texttt{c6} \texttt{e8} 5 \texttt{e1}! (5 \texttt{d5}!+-- ) 5...\texttt{g6} 6 \texttt{d7} \texttt{a8} 7 \texttt{c5} \texttt{a7}+.

1...\texttt{h4} 2 \texttt{g7} \texttt{h5} 3 \texttt{g1}

Now Black is in zugzwang.

3...\texttt{a8}

3...\texttt{h4} 4 \texttt{e5} \texttt{xe5}+ 5 \texttt{f4}!+--.

4 \texttt{e5} \texttt{a4} 5 \texttt{e6} \texttt{h6}

5...\texttt{a6} 6 \texttt{f4} \texttt{xe6} 7 \texttt{f5}!+--.

6 \texttt{e7} \texttt{a8} 7 \texttt{f4} \texttt{e8} 8 \texttt{f5} \texttt{xe7} 9 \texttt{f6}!+--

\section{A1c) The Defending King is Cut Off Along a Rank}

The winning chances are even higher if the king is cut off along a rank as the rook can help the advance of the pawn and shield the king better.

With the defending king cut off along the fifth rank, the b-pawn is winning:

\begin{center}
\includegraphics[width=0.5\textwidth]{image.png}
\end{center}

\texttt{S.\textit{Tarrasch}}

\textit{Deutsche Schachzeitung}, 1908

1...\texttt{c8}

1...\texttt{a8} 2 \texttt{b5} \texttt{a1} 3 \texttt{b4} \texttt{b1}+ 4 \texttt{a5}! \texttt{a1}+ 5 \texttt{b6}!+--.

2 \texttt{b5}

2 \texttt{g5} \texttt{c7} 3 \texttt{a4}+--.

2...\texttt{e5} 3 \texttt{h4}+! \texttt{d5} 4 \texttt{b4} \texttt{c8}

4...\texttt{d6}?! 5 \texttt{h6}+--.

5 \texttt{h6} \texttt{c1} 6 \texttt{a5} \texttt{a1}+ 7 \texttt{b6}! \texttt{b1} 8 \texttt{a6} \texttt{a1}+ 9 \texttt{b7} \texttt{g1} 10 \texttt{b6} \texttt{c5} 11 \texttt{a7}+--

With the king cut off on the sixth rank it is different. White only wins if he moves first (see following diagram):

1 \texttt{a4}

Or 1 \texttt{a6}+--.

1...\texttt{e8}+

1...\texttt{c4} and then:

a) 2 \texttt{h4}?! \texttt{c3}! 3 \texttt{h3}+ (with a bishop’s pawn, c5 would win easily now, but here 3 \texttt{b5}?? \texttt{a8}! is fortunate!) 3...\texttt{c4}! =.

b) 2 \texttt{c6}+ \texttt{d5} 3 \texttt{b5}+--.

2 \texttt{b5}! \texttt{b8}+ 3 \texttt{a5} \texttt{a8}+ 4 \texttt{a6} \texttt{b8} 5 \texttt{b5}+--

If Black is to move, he can, surprisingly, save himself: 1...\texttt{a8}!! (eliminating both winning
moves! 2 g6 a1 3 b5 c5! 4 b6 b1+ = picking up the pawn.

Even top players have difficulties in these endings:

It is clear that if Black is to move, he draws with 1...c8.
But with a centre pawn White can’t win even with the move:
1 c4 c8+! 2 d5
2 b5 c4 =.
2...a8!
Here is the difference: Black’s rook has sufficient space for annoying checks.
3 c5 a5+! 4 c4
4 c6?? a6+! =.
4...a4+! =

We finish this section with two practical examples:

1...g8+! 2 h5 h8+! 3 g5 g8+! 4 h4 e5?
We already know from the previous example that this continuation is mistaken. Instead there were two ways for Black to draw: 4...h8+ 5 g3 e5 6 a6 h1 = (6.48) and 4...f4 5 a4+ f3! =
5 a6! f4 6 f6+ e5 7 g5 1-0

We now consider the situation with a centre pawn.

1 b1?
You get only one chance! 1 e5? also loses, to 1...c6! 2 a1 (2 b1 c4! 3 d5 a4! =)
2...c4! 3 d5 b5! ++, but White can save the game with 1...e4! b5 2 b1 b6 3 e3! c5 (3...d5 4 e4! =) 4 c1+! =.

1...d4!!

It is with good reason that Andersson is famous for his precise endgame play!

2 e5 a4 3 d5 a6! 4 c6 c4+! 5 d5 b5 6 a1+ b6 7 a2 b4 8 a8 b4 9 b8+ a5 10 e5 a4! 11 g8 a3 12 a8+ b2 13 a4 c3 0-1

6.52

A. Mikhalchishin – D. Losev
Moscow 1974

1...c2

Surprisingly, 1 b2 (as played in the game) also wins: 1...f4 (1...b4+ 2 b3! h4 3 b6 h8 4 b7 b8 5 a3 ++) and now:

a) 2 c3? (the game continuation) 2...e5! 3 a3 d6! 4 b6 d7! 5 c7+ d8! 6 c6 d7! 7 c7+ d6! 8 c5 d5 ½-½.

b) 2 e6? f5 3 e3! ++.

c) 2 d3!! e4 3 c3! e5 4 d8 e6 5 b6 ++.

1...f4 2 e7

Or 2 d3 ++.

2...h5 3 b6 h5 4 b7 f5 5 c3 f6 6 c4 h7 7 e6 8 c5! ++

Exercises
(Solutions on page 379)

The following positions will test your knowledge of + vs , one of the most important fundamental endings from the practical point of view.

White's pieces are not on their best squares yet, but maybe he can still save himself, as the black pawn is far away from the queening square. Can you see a way?
A1d) Rook’s Pawn

In rook endings a pawn at the edge is usually weaker than other pawns. There are two reasons for this:

1) Whilst a rook’s pawn may protect the king against vertical checks, it offers no protection against checks from the side.

2) The attacking king can easily get caged in front of the pawn, making its promotion impossible.

We consider the following situations:

A1d1:  King in Front of its Pawn
A1d2:  Rook in Front of its Pawn
A1d3:  Other Situations

A1d1) King in Front of its Pawn

The first position is a prime example of the king trapped in front of its pawn:

With other pawns this would be a Lucena win, but here White can’t do anything. There is simply no escape for the king on the left-hand side of the pawn. Note that such positions are also drawn if the pawn hasn’t yet advanced to the seventh rank.

1...c6! White’s king escapes from the cage:
2...b8! b1+ 3...c8! a1 4...h6+ c5 5...b7 b1+ 6...c7 a1 7...h5+! ++.

In such situations the defending king must be cut off by four files (along the e-file in the case of an a-pawn) in order to force a win:

1...c1 e7 2...e8! d6? More tenacious than 2...d7 3...b8! a2 4...b7! b2+ 5...a6! a2+ 6...b6! b2+ 7...c5! ++.

3...b8! a2 4...b7! b2+ 5...c8! After 5...a6?! a2+ 6...b6 b2+ White has to return.

5...c2+ 6...d8! h2
6...g2?? 7...e8 e6 8...f8 ++.

7...b6!+
7...e8?? h8+! 8...f7 h7+! =.

7...c5 8...c6+? b5
8...d5 9...a6 h8+ 10...c7 h7+ 11...b6! ++.

If Black takes the rook, he will immediately lose his own: 8...xc6 9...a8++! c5 10...c8+ d4 11...g4+! d5 12...f5+ c6 13...e6+ b7 14...c8+ a7 15...c7+ ++.

9...c8 h8+ 10...c7! h7+ 11...b8! b6 12...a8 ++.
In chess training groups 12 a8?? b7#! is a popular joke.

Note that if Black is to move, he can play:
1...b3!? 2 e2?! f8!?
This forces White to win queen against rook.
3 c2 c7 4 c8! d6 5 b8! a3 6 b7! b3+ 7 c8! c3+ 8 d8! h3 9 b6+! c5
10 c6+ xc6 11 a8?? d6!?
Now White can’t win the rook by just delivering checks and has to win the ending queen vs rook (see 10.03). This is the best practical chance to save the game. 11...c5?! 12 c8+ d4 13 xh3 is not very tenacious of course.
12 b8+ d5 13 b7+ e5 14 g7+ f4 15 d4+ +

A1d2) Rook in Front of its Pawn
The following diagram shows the general draw with the pawn already on the seventh rank:

Black only needs to give a check when White threatens to free his rook:
1 b6
1 b4 b1+ 2 c3 a1! (2...c1+? 3 b2! c7 4 g8+ ++) 3 b3 h7 = (moving the king closer to the pawn with 3...f7?? is fatal:
4 h8 xa7 5 h7+ ++; this skewer is an important motif, and so Black’s king has to wait on g7 and h7).
1...b1+! 2 a6 a1+! 3 b7 b1+! 4 c6 a1 =

The defender can sometimes hide his king behind the opponent’s king. The following position is critical:

With the pawn still on the sixth rank, White’s king has a possible shelter on a7. Black’s rook is therefore much better placed to the side, from where it can deliver annoying checks, than
behind the pawn. The rook has to be on the same rank as White’s pawn, since this forces White’s rook to stay on the a-file. With the rook on the f-file, there is also the chance to give a defensive rook check on f7 if necessary. Thus with Black’s rook on g6 or h6 White (to move) would win with Êb5-b6-b7 and Ëc8. Black’s king is happy on g7 since an advance of the pawn to a7 could be met by shifting the rook to the a-file (White has no Ëh8 tricks). Note that a set-up with the black king on h7 and the rook on g6 is equally successful.

1 Êb5
White protects the pawn and threatens to win by Ëc8.

1...Êf5+! 2 Êb6 Êf6+! 3 Êc5
3 Êh7 Ëf7+! =.

3...Êh7 = and 3...Êe6 = also hold the draw. However, Black must avoid 3...Êg6? 4 Êb5! Ëg5+ 5 Êb6 Ëg6+ 6 Êb7 (Black’s king is in the way of his own rook, so the white king is now able to support the pawn) 6...Êh7 7 Ëc8 +=.

4 Êd4 Ëf6!!
4...Êf4+? 5 Êe5! Êa4 (5...Êf6 6 Ëg8+ ++) 6 Êd5 ++ is analysed in 6.58.

5 Êa7+ Ëg6 6 Êe5 Ëb6 7 Êa8 Ëg7 8 Êd5 Ëf6 9 a7 Êa6 =

If the defender’s rook is behind the pawn, he should immediately try to reach the Vančura set-up (6.57):

W/B

6.58 (f3 is also marked) +/=  
After P. Romanovsky  
Shakhmaty v SSSR, 1950

If Black is to move, he can only draw when the white king is on one of the marked squares.

Here 1...Êf1+ 2 Êe4 Ëf6! is sufficient to reach the Vančura draw.

When White is to move, he can leave the drawing zone:

1 Êe4!
Not:

a) 1 Êe2? Êc1 (1...Êa5? 2 Êd3! Ëd5+ 3 Êc4! Êd6 4 Êb5 Ëd5+ 5 Êc6 Êa5 6 Êb6 ++) 2 Êa7+ Êg6! 3 Êb7 Êa1 4 a7 Êa3 5 Êd2 Êf6 =.

b) 1 Êf4? Êa5 (1...Êf1+? 2 Êe5! ++) 2 Êe4 Ëc5 3 Êa7+ and now Black has to find 3...Êg6!! = as 3...Êg8? 4 Êb7 ++, 3...Êf6? 4 Êd4 Ëc6 (4...Êa5 5 Êa8! ++) 5 Êh7 ++ and 3...Êh6? 4 Êb7 Êa5 5 a7 ++ all fail.

1...Êa5
Or:

a) 1...Êf1 2 Êe5 Êa1 3 Êd5 ++.

b) 1...Êh1 2 Êa7+! Êf6 3 Êd5 Ëd1+ 4 Êc6 Ëc1+ 5 Êd7 Ëd1+ 6 Êc8 Êa1 (6...Êa6 7 Êh7 ++) 7 Êa8 Êe7 8 Êb7 Êb1+ 9 Êc6 (9 Êa7? Êd7 =) 9...Êc1+ 10 Êd5 Êd1+ 11 Êe4 Êe1+ 12 Êf3 Êa1 13 a7! Êf7 (13...Êf6 14 Êf8+ ++) 14 Êh8! ++.

2 Êd4 Êb5
2...Êf5 3 Êa7+ Êg6 4 Êb7 Êa5 5 a7 ++.

3 Êa7+ Êf6 4 Êh7 Êa5 5 a7 Êe6 6 Êh6+ Or 6 Êe4 ++.

6...Êd7 7 Êh8 Êxa7 8 Êh7! ++

A1d3) Other Situations

With the king and rook supporting the pawn, new motifs arise:

With White to move, he can use his well-placed rook as a shield to block Black’s checks:
1 a6 b1+ 2 b6! c1 3 a7 c7+ 4 a6! c8 5 h8 +–.

On the other hand, if Black is to move he has saving checks on the c-file: 1...b1+! 2 b6! c1! 3 a6 c7+! 4 b8 c8+! 5 a7 c1 6 b2 c7 =.

Salov demonstrates the right way to handle the attacking rook with the defending king cut off vertically:

1...f3!!

Now the rook can shield Black’s king against checks from the side and from behind. Not 1...h3? 2 a2+! dg1 3 f4 g2 4 a1+! h2 5 f3 =.

2 g8+ f2! 3 a8 h3! 4 a7 g2
4...h2?? 5 a2+ g3 6 xh2+ =.
5 h7 g3 0-1

We end the discussion of the rook’s pawn with two very complicated cases:

In the following diagram, Black can save the draw with extremely accurate play.

1...c1+! 2 d7

Or:

a) 2 b5 b1+! 3 a4 c5 4 c8+ d6 5 a5 d7 6 c4 a1+! =.

b) 2 b7 b1+! 3 a7 c5 4 b8 h1 5 b7 h7+ (5...b1+ 6 c7 h1 =) 6 a8! c6 7 a7 h1 8 c8+ d7 =.

c) 2 d6 a1! 3 a7 and now:

c1) 3 a3? 4 c6! c3+ 5 b5! b3+ 6 a4! b1 7 c7 d5 8 a1? d6 (8...a1+ 9 b5! d6 10 h7 b1+ 11 a6! a1+ 12

A.Chéron, 1955

b7! b1+ 13 c8! a1 14 b8 b1+ 15 b7 +– 9 c3 a1+ 10 a3! +–.

c2) 3...a2!! 4 a8 a1! 5 a7 a6+! =.

2...a1! 3 d6?! a2!! 4 c6 c2+! 5 b5 b2+ 6 a4 c4!!

Not 6...a2+?, when White wins by 7 b3! a1 8 a7 +–.

7 a3

7 c8+ d5! 8 c3 a2+! 9 b5 d6! = (9...b2+? 10 a5! a2+ 11 b6! b2+ 12 c7! a2 13 c6 +–).

7...b3+ 8 a2 b6 9 a7 c6! 10 a3 c5 10...c7? 11 a4! c5 12 a5! c6 13 a6! +–.

11 a4 b6 =

Even world champions are not immune to errors in such difficult endings:
If Black were to move, he would win quite easily with 1...b2 2 a8 b4 3 c2 b2 4 d2 a3 →.

In the game it was Euwe’s move, and this enabled him to create more serious problems for his opponent:

1 e3!?

Black’s task is easier after other moves: 1 a8 a3 →; 1 c8+ d2 2 d8+ c2 3 c8+ d1 4 a8 a3 5 e3 h2 →.

1...h2? (D)

A year after the match Grigoriev showed the correct winning method: 1...a3, and now:
a) 2 c8+ b2! 3 d2 b1+! 4 d1 h2 5 b8+ b2! 6 c8 b4 7 c1+ b2! 8 c2+ b3! →.

b) 2 a8 a1 3 c8+ (3 f2 b2 4 b8+ a2 5 e2 b1! 6 a8 b4 7 d2 b2 →) 3...b4 4 b8+ c5 5 c8+ b6 6 a8 a2 7 f2 h1 →.

2 c8+?

Returning the favour. Instead 2 a8! h4 3 c8+ b3 4 d3 b4 (4...a3 5 b8+ b4 6 xb4+!) 5 d2 a3 6 e3+ a4 7 c2 b2+ 8 c1! b5 9 c2! b3 10 b1! draws for White.

2...b2!

Euwe gets no second chance.

3 b8+ c1 4 c8+

4 a8 a3 →.

4...b1 5 b8+ b2 6 a8 b3+ 7 d4 a3

8 c4 b2 9 h8 c3+ 0-1

Reference work

1 h4+!
Yes, the rook’s pawn has to go ahead first. White’s king can now hide both in front of, and to the right of, the g-pawn.
1...g6 2 e4
White proceeds with circumspection. There is no prize for the quickest win in such endings. 2 e6+ f5 is not the way to make progress.
2...f1+
2...h5 3 e5+ --.
3 g4 a1 4 b4 a3 5 h5+ h6 6 b6+ h7 7 h4 e3 8 g4 e5 9 f6 g7 10 f5 e4 11 g5 a4 12 h5 e4 13 h6+ h7 14 b7+ g8 15 h5 c5+ 16 g5 a5
So far everything has been easy, but now special care is required to avoid any tricks.
17 e7!
Preparing a shelter for the king. 17 h7+?? is met by 17...h8, when White faces various stalemate ideas and suddenly has to give up the h-pawn, resulting in a draw: 18 h6 (18 b8+ h7 19 b7+ g8 20 h6 a8 =) 18...a6+ 19 g6 (19 h5 h6+ =) 19...a6+! =.
17...a6
17...a6 18 e8+ h7 19 g6+ --.
18 g6 b6+ 19 f5 b5+ 20 f6 b6+ 21 a6 b1+!
21...b8 22 g6 a8 23 h7+ h8 24 g5 g7 25 h7+ h8 26 h6+ --.
22 e8+ 1-0
If the defender can’t get his king in front of the pawns, the attacker can often win by shuffling his pawns forward in unison with the rook, even if his own king is cut off from the action.

A2) Rook and Two Pawns vs Rook

Our topics are:
A2a: Connected Pawns 192
A2b: Isolated Pawns 196
A2c: Two Rooks’ Pawns 200
A2d: Rook’s and Bishop’s Pawns 201
A2e: Doubled Pawns 204

A2a) Connected Pawns

Naturally, two connected extra pawns are generally sufficient to win. However, there are quite a few exceptions and it is often easy to go astray, especially when a rook’s pawn comes into play. Therefore nearly all of our positions are with g- and h-pawns.

The first example shows the way to win:

6.63
H.Hunt – M.Makropoulou
Pula wom Echt 1997

6.64
W.von Holzhausen – A.Nimzowitsch
Hanover 1926

After...
Black’s king isn’t needed as White can’t stop the pawns anyway.
1...g5 2 h1
2 d5 g2 3 b8 g4 4 h8 h2 5 e4 g3 6 f5 g1 =+.
2...g3 3 d4 g4 4 e4 g2 5 f4 h2 0-1

However, there are some fortresses worth knowing:

![Chess board](image)

6.65
G.Flear – G.Lawton
*British Ch (Brighton) 1984*

There is nothing at all that White can do if Black just keeps his king on g7 and his rook on the fourth rank.

![Chess board](image)

6.66
V.Liberzon – L.Gutman
*Beerseba 1982*

After 1 d3 the only thing left to do is to shake hands: 1/2-1/2. 1 e8+ would also draw:

![Chess board](image)

6.68
J.Kling and B.Horwitz, 1851
1...\texttt{b6} 2 \texttt{d8} \texttt{b4}+ 3 \texttt{e5} \texttt{b7}!

Not: 3...\texttt{xg5??} 4 h7! ++; 3...\texttt{g4?} 4 \texttt{d8} \texttt{g7}
4 \texttt{g8}+ \texttt{h7} 5 \texttt{d8} \texttt{g6}!
5...\texttt{a7??} 6 \texttt{d6} ++.
6 \texttt{f4} \texttt{h4}+

White hasn’t made progress.

Even the following position is drawn:

\texttt{6.69} \texttt{A.Chéron, 1926}

Black’s king is well placed in the hole of the pawns and White’s king is cut off:
1 \texttt{c8} \texttt{g7} 2 \texttt{d7} \texttt{g8}+! 3 \texttt{d8} \texttt{g7}
3...\texttt{g6} 4 \texttt{b8} \texttt{g7}! 5 \texttt{d6}+ \texttt{c5}!=; see the
main line.
4 \texttt{b8} \texttt{h7} 5 \texttt{d6}+-.
5 \texttt{g8} \texttt{g7} 6 \texttt{e6}+ \texttt{xh5} 7 \texttt{a7} \texttt{g8}+! 8 \texttt{c7} \texttt{g7}+!=.
5...\texttt{c5}!!
5...\texttt{xh5} 6 \texttt{a7!} \texttt{h8}+ 7 \texttt{c7} \texttt{h7}+ 8 \texttt{d7}! ++.
6 \texttt{a7}
Or: 6 \texttt{d1} \texttt{b6}! =; 6 \texttt{b6} \texttt{xd6} 7 \texttt{a8} \texttt{h8}+!
8 \texttt{a7} \texttt{c6} 9 \texttt{h7} \texttt{c7} =.
6...\texttt{xd6} 7 \texttt{b6} \texttt{c5}
Not 7...\texttt{c6??}, when White wins by 8 \texttt{a8}+!
\texttt{xh5} 9 \texttt{a1}+.
8 \texttt{a8}
8 \texttt{b7} \texttt{b6}! 9 \texttt{a8}! \texttt{xb7}! =.
8...\texttt{xb7}+!

However, not all positions with the king in
the hole of the pawns are drawn (see following
diagram):

The blockade is easily broken: 1 \texttt{e4} \texttt{b6} 2
\texttt{e6}+! \texttt{xe6} 3 \texttt{fxe6} \texttt{xe6} 4 \texttt{g5}! ++.

\texttt{6.70} \texttt{In the next example it is more difficult to}
\texttt{break through:}

\texttt{6.71} \texttt{Y.Averbakh}

1 \texttt{h4}
After 1 \texttt{g1?}! \texttt{g8} White is not making any
progress.
1...\texttt{g8} 2 \texttt{d7} \texttt{a8} 3 \texttt{g4!} \texttt{a7}+
3...\texttt{g8} 4 \texttt{e6} \texttt{xh6}? 5 \texttt{f6} ++.
4 \texttt{e6} \texttt{a6}+ 5 \texttt{f5} \texttt{a5}+ 6 \texttt{f4} \texttt{a8} 7 \texttt{g5}!
\texttt{g8} 8 \texttt{f5} \texttt{a8}
8...\texttt{xh6} 9 \texttt{g1}++.
9 \texttt{g4} \texttt{b8} 10 \texttt{h5} \texttt{a8} \texttt{(D)}
This position had been solved by Kling and
Horwitz in 1851:
11 \texttt{g6}!
11 \texttt{f5??} would throw the win away after
11...\texttt{a6}! =.
11...\texttt{a5}+ 12 \texttt{g4} \texttt{a4}+ 13 \texttt{f5} \texttt{a5}+ 14
\texttt{e4} \texttt{a4}+ 15 \texttt{xd3} \texttt{a3}+ 16 \texttt{c4} \texttt{a4}+ 17
\texttt{b5} \texttt{a8} 18 \texttt{h6} \texttt{g8}

1. ...\texttt{a4} !+.
2. \texttt{g4} \texttt{a4}+.
3...\texttt{g7}.
4...\texttt{f5}.
5. \texttt{xa4}.
6...\texttt{xa4}.
7. \texttt{f6}.
8...\texttt{xa4}.
9...\texttt{xa4}.
Now White wins either by returning his king to g6 or by exchanging rooks.

19 \textcolor{red}{\textit{\textsc{W} \textbf{	extsc{b}6 e8 20 \textbf{	extsc{b}7 e8 21 c6 h7 22 ec8 +\textsuperscript{--} }}}}

We end this section with two practical examples:

6.72

\textbf{B}

G. Thomas – A. Alekhine
Hastings 1922

1...\textcolor{blue}{\textit{\textsc{B} \textbf{\textsc{d}3}}}

1...\textcolor{blue}{\textit{\textsc{B} \textbf{\textsc{f}2+ 2 \textbf{\textsc{g}4 \textbf{\textit{f}1! 3 \textbf{\textit{h}3 (3 \textbf{\textit{xh}4 \textbf{\textit{h}1+!}}}}}}}} +\textsuperscript{--} 3...\textcolor{blue}{\textit{\textsc{B} \textbf{\textit{e}3 +\textsuperscript{--} is quicker.}}}

2 \textcolor{red}{\textit{\textsc{W} \textbf{\textsc{d}8+ \textbf{\textit{c}3 3 \textbf{\textsc{g}8 \textbf{\textsc{d}2 4 \textbf{\textsc{a}8}}}}}}}

4 \textcolor{red}{\textit{\textsc{W} \textbf{\textit{d}8+ \textbf{\textit{e}1 +\textsuperscript{--}.}}}}

4...\textcolor{green}{\textit{\textsc{B} \textbf{\textit{f}2+ 5 \textbf{\textsc{g}4 g2 6 \textbf{\textsc{a}1 \textbf{\textit{c}3!}}}}}

\textcolor{green}{\textit{Not 6...\textbf{\textit{f}1??, when White wins the g-pawn by 7 \textbf{\textsc{d}2+ =.}}}}

7 \textcolor{green}{\textit{\textsc{B} \textbf{\textit{h}3 \textbf{\textsc{e}2 8 \textbf{\textsc{g}1}}}}}

8 \textcolor{green}{\textit{\textsc{B} \textbf{\textit{h}2 \textbf{\textsc{f}2 9 \textbf{\textsc{g}1 \textbf{\textit{h}3 +\textsuperscript{--}.}}}}}}

8...\textcolor{blue}{\textit{\textsc{B} \textbf{\textit{f}3 9 \textbf{\textsc{h}2 \textbf{\textit{h}3 0-1}}}}}

White’s king is very far away, which makes the win extremely complicated:

1...\textcolor{red}{\textit{\textsc{W} \textbf{\textit{e}5 2 \textbf{\textsc{a}3 \textbf{\textsc{b}8}}}}}

2...\textcolor{green}{\textit{\textsc{B} \textbf{\textit{g}2?? 3 \textbf{\textsc{h}4 \textbf{\textsc{f}5 4 \textbf{\textsc{b}3 only helps White.}}}}}}

3 \textcolor{green}{\textit{\textsc{B} \textbf{\textit{h}5+ \textbf{\textsc{f}6 4 \textbf{\textsc{h}4 \textbf{\textit{g}5}}}}}

4...\textcolor{green}{\textit{\textsc{W} \textbf{\textit{f}5 5 \textbf{\textsc{f}4+ \textbf{\textsc{e}5 6 \textbf{\textsc{b}4 \textbf{\textsc{h}8 7 \textbf{\textsc{h}4 \textbf{\textsc{g}8 8}}}}}}}

g4 \textcolor{green}{\textit{h8 9 h5 \textbf{\textit{f}6 10 \textbf{\textsc{b}6+ \textbf{\textit{g}5? 11 \textbf{\textsc{g}6+ +\textsuperscript{--} and White wins by shuffling his pawns up to the eighth rank.}}}}}}

5 \textcolor{green}{\textit{\textsc{B} \textbf{\textit{b}4 \textbf{\textsc{h}8 6 \textbf{\textsc{h}4+ \textbf{\textit{h}5 7 \textbf{\textsc{b}5+ \textbf{\textit{h}6}}}}}}}

After 7...\textcolor{green}{\textit{\textsc{W} \textbf{\textit{g}4? 8 \textbf{\textsc{g}5+ White uses shuffling again: 8...\textbf{\textsc{B} \textbf{\textit{f}3 9 \textbf{\textsc{h}5 \textbf{\textsc{b}6 10 \textbf{\textsc{g}4 \textbf{\textsc{f}4 11 \textbf{\textsc{g}6 \textbf{\textsc{h}8}}}}}}}}}

12 \textcolor{green}{\textit{\textsc{B} \textbf{\textit{h}6 13 \textbf{\textsc{g}5 \textbf{\textit{f}5 14 \textbf{\textsc{g}7 \textbf{\textsc{h}8 15 \textbf{\textsc{h}7 \textbf{\textsc{a}8+ 16 \textbf{\textsc{b}4 \textbf{\textsc{b}8+ 17 \textbf{\textsc{c}5 \textbf{\textsc{c}8+ 18 \textbf{\textsc{d}6 \textbf{\textsc{h}8 19 \textbf{\textsc{g}6 \textbf{\textit{f}6 20 \textbf{\textsc{g}8 +\textsuperscript{--}.}}}}}}}}}}}}}

8 \textcolor{green}{\textit{\textsc{b}4 \textbf{\textsc{e}8}}}

Not, of course, 8...\textcolor{green}{\textit{\textsc{W} \textbf{\textit{g}8?? 9 \textbf{\textsc{b}5+ \textbf{\textsc{g}6 10 \textbf{\textsc{g}5+ +\textsuperscript{--}}}}}}}

9 \textcolor{red}{\textit{\textsc{W} \textbf{\textit{b}4 \textbf{\textit{g}6}}}

9...\textcolor{red}{\textit{\textsc{B} \textbf{\textit{e}3+ 10 \textbf{\textsc{a}4 \textbf{\textsc{h}3 11 \textbf{\textsc{b}6+ \textbf{\textsc{g}7 12 \textbf{\textsc{h}5 13 \textbf{\textsc{b}6+ \textbf{\textsc{f}7 11 \textbf{\textsc{b}7+ \textbf{\textsc{e}6?}}}}}}}}}}

11...\textcolor{red}{\textit{\textsc{W} \textbf{\textit{g}6 is tougher; e.g., 12 \textbf{\textsc{h}5+ \textbf{\textsc{h}6}}}}}

(12...\textcolor{red}{\textit{\textsc{B} \textbf{\textit{g}5 13 \textbf{\textsc{g}7+ \textbf{\textsc{h}6 14 \textbf{\textsc{g}6+ \textbf{\textsc{h}7 15 \textbf{\textsc{b}4 \textbf{\textsc{c}8 16 \textbf{\textsc{g}5 \textbf{\textsc{e}8 17 \textbf{\textsc{c}6 \textbf{\textsc{e}5 18 \textbf{\textsc{g}6+ \textbf{\textsc{h}6 19 \textbf{\textsc{c}5 \textbf{\textit{\textsc{f}6 20 \textbf{\textsc{g}6 \textbf{\textsc{a}5+ 21 \textbf{\textsc{b}4 \textbf{\textit{b}5+ =.}}}}}}}}})))}}}}}))

\textcolor{red}{\textit{Not 6...\textbf{\textit{f}1??, when White wins the g-pawn by 7 \textbf{\textsc{d}2+ =.}}}}

7 \textcolor{red}{\textit{\textsc{W} \textbf{\textit{h}3 \textbf{\textsc{e}2 8 \textbf{\textsc{g}1}}}}}

8 \textcolor{red}{\textit{\textsc{W} \textbf{\textit{h}2 \textbf{\textsc{f}2 9 \textbf{\textsc{g}1 \textbf{\textit{h}3 +\textsuperscript{--}.}}}}}}

8...\textcolor{red}{\textit{\textsc{B} \textbf{\textit{f}3 9 \textbf{\textsc{h}2 \textbf{\textit{h}3 0-1}}}}}

12 \textcolor{red}{\textit{\textsc{W} \textbf{\textit{h}7 \textbf{\textsc{b}8+}}}}
12...♘f6!? was the last chance to stay in front of the pawns.

13 g5! ♘f5 14 ♦h6 ♗e5 15 ♦h5 ♘f5 16 g6 ♘f6 17 ♦h7 ♦g8 18 ♗b3 1-0

Shirov resigned. A possible finish is 18...♗b8+ (18...♗e8 19 g7 ♘f7 20 ♥h8 ++) 19 ♗c4 ♦g8 20 ♗d5 ♦d8+ 21 ♗e4 ♦e8+ 22 ♗f4 ♗e1 23 ♗f7+ ♗e6 24 ♗g5 ++.

** Does White prevail, or can Black achieve a blockade?

Exercises
(Solutions on pages 380-1)

Can you find the blunder in the following play? 1 ♘f3 ♗e5 2 ♗g3 ♗g5 3 ♗a3 ♘b5 ½-½.

Can you find the only way to draw? Hint: there is a hidden reciprocal zugzwang!

Where did White miss the win in the following play? 1...♗g6 2 ♗f4 ♗a5 3 ♗h4 ♗h5 4 ♗f8 ♗a3+ 5 ♗f4 ♗a4+ 6 ♗t5 ♗a5+ 7 ♗t6 ♗xh4 8 ♗g6 ♗a6+ 9 ♗f5 ♗a5+ 10 ♗e6 ♗a6+ 11 ♗f7 ½-½.

A2b) Isolated Pawns

The winning chances decrease when the pawns are not connected, but only with rook's and bishop's pawns on the same wing (a+c or f+h) is the general result a draw. We start with e- and g-pawns (see following diagram):

1.♗g1! 2 ♗f3
2.♗e6+ ♗h5 3 ♗xh5+ ♗g4! ++.
2.♗f1+ 3 ♗g3 ♗f5 4 ♗b8
4 ♗g4 ♗f4+ 5 ♗g3 ♗t5 6 ♗f8+ ♗e4 7 ♗g8 ♗f3+ 8 ♗g2 (8 ♗g4 ♗f1 --) 8... ♗f7 --.
4.♗g5 5 ♗e8 ♗f6 6 ♗f8+ ♗e6 7 ♗e8+ ♗f6
8 ♗f8+ ♗e6 9 ♗e8+ ♗d5 10 ♗a8 ♗f7 11 ♗g4
12 ♗a5+ ♗e6 13 ♗a6+ ♗f7 14 ♗f3 ♗e6
Not 14...e4? 15 ♗e3 ♗e6 (15...g5 16 ♗b6 g4 17 ♗bl ♗f6 18 ♗f4 =) 16 ♗xe6 ♗xe6 17 ♗xe4 = with a draw.
15 ♗a8
15 a7+ f6 16 e4 f6 17 a8 d4+ 18 f3 d4 19 f8+ g5 20 g8 h7 21 e8 h3+ 22 e4 g4 23 xe5 g5 (Speelman in BCE).

15...c4+ 16 e3 g5 17 a1 g6 18 b1 e5
19 d4 f6 20 e1

Or:

a) 20 f1+ f5 21 g1 f4 22 e3 f5 23 a1 f3+ 24 e2 g4 +.

b) 20 e3 f5 21 f1+ g4 22 d4 a5 23 xe4 g3 24 f3+ g2 25 f5 a4+ 26 c3 g4 +.

20...a5! 21 xe4
21 xe4 e5+ +.

21...f5 +.

Exchanging rooks only draws: 21...a4+??
22 e3 x e4+ 23 xe4 g6 24 f3 h5 25 g3 =.

22 e8 g4 23 e3 g3 0-1

When a rook’s pawn is involved, it is much more difficult (see following diagram):

1 f3 g4 2 f8 h4 3 g8+ h3 4 g1 e4 +!

Immediately advancing the h-pawn with 4...h2?! 5 g4 h3? is not the correct plan: 6 g8 h1 7 g3 h2 8 g8 f7 9 xe3 f1 10 h8 = (Gelfand in CBM 47; not 10 e2? g1! ++).

5 f3
5 g8 g4 6 f8 g2 7 xe3 h3 8 f2+ g1 +.

5...h2 6 g2+ h1 7 e2 e8 8 g4
8 xe3 x e3+ 9 xe3 g2 +.

8...g1 9 f3 g8

9...h3? spoils it due to 10 e1+ h2 11 e2+ = (Dautov) but 9...f8+ 10 g4 h3 ++ works as well.

10 e1+ h2 11 e2+ h1 12 f4 g3 13 b2 g1 14 a2 f1 0-1

With b- and e-pawns the win is usually easier:

W

6.76

J. Speelman – B. Gulko
Hastings 1988/9

White wins by threatening to use his king to support whichever pawn Black’s king is cut off from:

1 b6+ d7 2 e5 h2 3 d6+ e7
3...e7 4 d4 e6 5 b4 h5+ 6 f6 h4 7 g5 h8 e5 ++.

4 d5 b2 5 b5 d7 6 b7+ c6 7 b4

d7
After 7...b1 even 8 d4 hxb3 9 d6 is possible.

8 d4+ e7 9 b4 hxb1 10 d5 d7
10...b2 11 c6 c2+ 12 b6 d6 13 b5 ++.
11 e5 e1 12 b5 e5 13 e5+ e7
13...e6 14 b6 xe5+ 15 c6 ++.
14 b6+ e8 15 d6 1-0

If one pawn is much further advanced than the other, difficulties can easily arise:

6.77

I.Cosma – B.Ikis
Romanian Ch (Bucharest) 1998

Great care is required because White’s king can’t readily support the d-pawn:

1...h3 2 g2 d3 3 d7?

White should play 3 d7! (Tisdall in CBM 69) 3...f5 (3...g5 4 h3 d1 5 d8 f6 6 g4 d4+ 7 f3 e5 8 d7 f6 9 e8+ d7 10 c5 ++) and now:

a) After 4 h3?! d1 White has to go back with 5 g2 as 5 g4? g5 6 h3 d3 7 g2 f6 8 f2 e6 9 e8+ f7 10 e7+ f6 11 h7 g5 = and 5 d8? h1+ 6 g2 h7 (6...d1? 7 d7 e8 8 e8+ xxd7 9 e3! ++) 7 f3 e5 8 g4 g7+ 9 h3 h7+ 10 g2 g7 = both fail.

b) 4 d8 d2 5 h3 g6 6 g4 d4+ 7 f3 ++.

3...f5 4 f2 e5 5 e2 d6 6 a4+ f5
7 a5+ e4 8 a7 f5 9 e3 d1 10 b7
10 g4+ e5 11 b7 f6 (11...e6? 12 e4
f6 13 g5 ++) 12 e4 e1+ 13 a3 d1 14
f1+ 15 f3 d1 16 e4 e1+ 17 d5
d1+ 18 f6 d7 =.

10...e5 11 h2 e4 12 b4 e4 13 f3
d4 14 e3

14 g3 d3+ 15 c4 f6 =.
14...e4+ 15 d3 d4+ 16 e3 d1 17
f4
17 g5 f5 18 c4 xg5 19 b5+ f6 20
a5 xxd5 21 xxd5 e7 22 c6 d8 23 d6 is stalemated.
17...e6 18 a7 e7!
Not, of course, 18...xd7?? 19 xxd7 f6 20 d5 ++.
19 c5 d2 20 c6 d6+ 21 c5 d1 22
b7 m2 23 g5 xxd7! ½-½

Now we deal with positions involving rook’s pawns. We based our analysis on work by Yusupov and Hecht in CBM 50:

6.79

V.Ivanchuk – A.Yusupov
Horgen 1995

The defender is well placed, but the position is lost nevertheless:

1...a5+

White also wins after 1...g2 2 f4 f2+ 3
e3 c2 4 h4 ++.

2 f4 a4+ 3 e5 a5+ 4 d4 a4+ 5
c5 a5+ 6 c4 g5
6...a4+ 7 h5 ++.
7 h4 e5 8 h5 g5 9 d4 h6
Or:

a) 9...g4+ 10 e5 g5+ 11 f6 e5 12
h8 ++.

b) 9 a5 10 e4 c5!? 11 h8 (11 f4 is
not the right plan as 11 xh5 12 f5 c5+ 13
g6? only leads to a draw: 13...xh6 14 g7
c5 15 h8 b7 =) 11...xh6 12 f5 c5+ 13
g6 c1 g8 ++.
10 f4 c5 11 f4 c7 12 h7+ xxc6 13
h6 h5 14 h8 h1

With b-a-m ing diagram

1...c5 2
2...xh6 1
2...xh6 1
2...xh6 1
Or: 14...\*d7 15 h7 \*c7 16 \*a8 ++; 14...\*c7 15 \*g4 \*h1 16 \*g5 \*g1+ 17 \*f6 \*f1+ 18 \*g7 \*g1+ 19 \*h7 \*d7 20 \*g8! ++.
15 \*g5 \*h3 16 \*d8 1-0

The following position is also won:

W

\[ N. Short – A. Yusupov \]

\[ Thessaloniki OL 1984 \]

1 \*e3
1 c4+? \*c5 2 \*c3 \*h4 =.
1...\*c5 2 \*f4 \*d5 3 \*d3+ \*c5 4 \*g3 \*g8+ 5 \*h2 \*c4 6 \*f3
6 \*d4+! \*c5 (6...\*xc3 7 \*g4 \*h8 8 \*g3 \*d3 9 \*h4 \*e3 10 \*g3 ++) 7 \*h4 \*e8 8 \*g3 \*c3+ 9 \*f4 \*xc3 10 \*d8 ++.
6...\*h8 7 \*g3 \*g8+ 8 \*f4 \*h8 9 \*g5 \*g8+ 10 \*h6 \*d5 11 \*h4 \*e4 12 \*h3? \]

This is an exception to Tarrasch’s rule that the rook should always be placed behind a passed pawn, as White’s king is stuck in front of it. It was necessary to keep more control with 12 \*f7!: e.g., 12...\*h8+ 13 \*g5 \*g8+ 14 \*f6 \*h8 15 \*a7 \*f3 16 \*a4 \*g3 17 h5 \*xh5 18 c4 \*f4 19 \*e6 \*e4 20 c5+ ++.
12...\*f5! 13 h5 \*e8 14 \*g7 \*g4 15 \*h1 \*g5 16 \*h3 \*c7+ 17 \*f8 \*g4 18 \*h1 \*g5 1/2–1/2

White can’t win with 19 h6 \*f6 20 \*e8 \*xc3 21 h7 \*e8+ 22 \*d7 \*h8 =.

With b- and h-pawn it is similar (see following diagram):

1...\*c5 2 \*h8!
2 \*g6? \*xb6 3 \*h8 \*c6+ =.
2...\*xb6
2...\*b7 3 h6 \*c6 4 h7 \*h6 5 \*g7 ++.

B

5.80

R. Ponomariov – R. Hübner

\[ Istanbul OL 2000 \]

3 h6! \*c7+ 4 \*g6 \*c6+ 5 \*g5 \*e5+ 6 \*f4 \*e4+ 7 \*e5 \*c5+ 8 \*d4 \*h5 9 \*e4 \*b7 10 \*f4 \*c7 11 \*g4 \*h1 12 \*g5 \*g1+ 13 \*f6 \*f1+ 14 \*g7 \*g1+ 15 \*h7 \*d7 16 \*g8! \*f1 17 \*g7 \*g1+ 18 \*h8 1-0

Two notes need to be added. Firstly, the following position is also won:

B

\[ M. Dvoretzky \]

\[ Technique for the Tournament Player, 1995 \]

1...\*h7 2 \*h5 \*h6+ 3 \*g4 3 g\*h6? is stalemate.
3...\*d6 4 \*f5 \*b5+ 5 \*f6 \*b6+ 6 \*e5 \*c6 7 \*d5 \*b6 8 \*e5 \*e6 8...\*g6 9 \*a7+ \*g8 10 \*d4 ++.
9 \*a7+ \*g6
9...\*g8 10 \*d5 \*g6 11 \*e4 \*xg5 12 \*b7 ++.
10 ąb5 ąc5+ 11 ąc6 ąe6+ 12 ąc5 ąe5+ 13 ąd6 ąxg5 14 ąb7 ++

Secondly, the following position demonstrates an exception as White's b-pawn has advanced too far:

6.80B

E. Sveshnikov – V. Filippov
Russian Ch (Elista) 1995

1...ąb1+ 2 ąc5 ąc1+ 3 ąd4 ąc6 4 ąb7
4 ąh4 ąxh6 5 ąc5 ąa6 6 ąg7 ąb6 7 ąg4 ąc7
8 ąd4 ąc6+ 9 ąb5 ąd6 =

4...ąa6 5 ąh4 ąa4+ 6 ąc5 ąf4 7 ąc6 ąc4+ 8
ąd6 ąd4+ 9 ąc6 ąa4 10 ąh5 ąa5 11 ąf6 ąc5
d6 ąd6 ąf5+ 16 ąg7 ąc5 17 ąh6 ąc7+ 18 ąg6 ąc6+
19 ąf5 ąc5+ 20 ąc6 ąc6+ 21 ąc5 ąb6 22
ąf4 ąc6 23 ąf5 ąc5+ 24 ąf4 ąc6 25 ąf4
ąc4+ 26 ąf5 ąc5+ 27 ąh6 ąc6+ 28 ąc5 ąb6
29 ąf5 ąc6 30 ąg5 ąc5+ 31 ąg6 ąc6+ 32
ąg7 ąc7+ 33 ąh8 ąc6 34 ąg8 ąg6+ 35 ąf8
ąc6 36 ąe8 ąb6 37 ąb8 ąb7 38 ąd7 ąf6 39
ąh7 ąb8 40 ąe7 ąc6 ½-½

A2c) Two Rooks' Pawns

Here the defender has good drawing chances. If he can use the following defensive technique, then he can generally count on a draw (see following diagram):

1 ąa4 ąf6 2 ąa6+ ąg7 3 ąb5 ąd4+ 4 ąf3
ąh4?!

4...ąd2 keeps an eye on White's a-pawn and
hinders the rook from leaving the a-file.

5 ąh6+ ąg7

Not, of course, 5...ąxh6? 6 ąxh6 ąxh6 7 ąa4
+-

6 a4

6 ąc6?? ąa4 7 ąc2 ąxh6 8 ąg2 is drawn, but
White can still torture Black.

6...ąb4 7 ąc3 ąc4 8 ąd3 ąb4 9 ąc3 ąf4
10 ąb3 ąf3+ 11 ąc4 ąf4+ 12 ąd5 ąb4 13
ąc6 ąf4 14 ąd7 ąd4+ 15 ąc7 ąf4 16 ąa5 ąf5
17 ąd7 ąd5+ 18 ąc7 ąc5+ 19 ąf6 ąc5 20
ąa8 ąb5 21 ąa6+! 22 ąc7 ąxh6 23 ąf7
ąb6 24 ąa7 ąh6 25 ąf8 ąb8+ 26 ąc7 ąb6
27 ąc8 ąg6 28 ąd8 ąf6 29 ąc8 ½-½

If the defending king is cut off from the saving squares g7 and h7 it is different. Our analysis is based on Curt Hansen's in CBM 73.

6.82

K. Lerner – Z. Gyimesi
Kraszina 1999

8

8 ąb6

If...

8...ąa6

Black has...

Exercise

(Solution)
1 \textit{\textcolor{red}{\textbf{\#f2 \#g5}}}  \\
1...\textit{\textcolor{red}{\textbf{\#c2+}}} 2 \textit{\textcolor{red}{\textbf{\#e3 \#xh2}}} 3 \textit{\textcolor{red}{\textbf{\#a2}}} 4 \textit{\textcolor{red}{\textbf{\#d4 + --}}}.  \\
2 \textit{\textcolor{red}{\textbf{\#c3 \#h4}}}

Attacking the a-pawn from the side doesn't help since the king is too far away from g7:  \\
2...\textit{\textcolor{red}{\textbf{\#h5}}}, 3 \textit{\textcolor{red}{\textbf{\#c5}}} 4 \textit{\textcolor{red}{\textbf{\#d4}}} 5 \textit{\textcolor{red}{\textbf{\#a5}}} 6 \textit{\textcolor{red}{\textbf{\#d6}}} 7 \textit{\textcolor{red}{\textbf{\#a7}} +}  \\
3 \textit{\textcolor{red}{\textbf{\#a5}}} 4 \textit{\textcolor{red}{\textbf{\#f1}}} 5 \textit{\textcolor{red}{\textbf{\#a8}}} 6 \textit{\textcolor{red}{\textbf{\#f6}}} 7 \textit{\textcolor{red}{\textbf{\#a6}}} 8 \textit{\textcolor{red}{\textbf{\#c6}}} 9 \textit{\textcolor{red}{\textbf{\#h8}}} 10 \textit{\textcolor{red}{\textbf{\#f4}}}  \\
4 \textit{\textcolor{red}{\textbf{\#a8}}} 5 \textit{\textcolor{red}{\textbf{\#xh2}}} 6 \textit{\textcolor{red}{\textbf{\#a6}}} 7 \textit{\textcolor{red}{\textbf{\#h7}}} 8 \textit{\textcolor{red}{\textbf{\#d4}}}  \\
6 \textit{\textcolor{red}{\textbf{\#f7}}} 7 \textit{\textcolor{red}{\textbf{\#e5}}} 8 \textit{\textcolor{red}{\textbf{\#b5}}} 9 \textit{\textcolor{red}{\textbf{\#f4}}} 1-0

The a-pawn costs Black his rook: 9 \textit{\textcolor{red}{\textbf{\#e8}}} 10 \textit{\textcolor{red}{\textbf{\#f6+}}} 11 \textit{\textcolor{red}{\textbf{\#c6}}} +--.

\textbf{Exercises}

\textit{(Solutions on page 381)}
Or:

a) 3...@h1 4 @g7+ @f8 4...@h8 5 @e7 @xh6+ 6 @f1! @a6 7 @f6! @h7 8 @f8+! @g6 9 @f7+! @e8 @a7 11 @e6+! ++ 5 @g6 @g1+ 6 @h7 @f1 7 @a7 @g1 7...@xf5 8 @g6+ ++ 8 @f6 @g2 9 @g7 @f2 10 @g6 @f1 11 @h7 @g1+ 12 @f5 @h1 and now:
   a1) 13 @g8+ @f7 14 @a8 ++ (but not 14 @h8?? @xh8 15 @g7+ {15 @xh8 is stalemate}, when Black draws by 15...@f8! 16 @g6 @h1 =)

a2) 13...@e5 ++ is easier.

b) 3...@f1 4 @g7+ @h8 4...@f8 5 @g5 @h1 6 @g6 @g8 7 @f6 @h2 8 @f7+ @f8 9 @h7 ++ 5...@e7 @g8 6 @e8+ @h7 7 @e6 @a1 7...@xh6 8 @f6! @a1+ 9 @f7 @a1 10 @h8+ @g5 11 @g7+ ++ 8 @f6 @a6+ 9 @f5 @a5+ 10 @e5 ++.

4 @e6+ @a2 4...@h1 5 @e6+ @xh6+ 6 @f6++.

5 @e5 @e2+ 6 @d6 @d2+ 6...@e2 7 @e8+ @h7 8 @e6+ ++.

7...@e6+ @e2 8 @d7 @d2+ 8...@e2 9 @e8+ @h7 (9...@f7 10 @h7 ++) 10 @e6+ ++.

9 @e8 @f2 10 @e5 @h7 10...@f1 11 @a7 ++.

11 @f7 11...@e7? @xh6 12 @f7 @a2 13 @f6 @a8 14 @e6 @h7 =.

11...@xh6 12 @e6+! @h7 13 @f6! @a2 14 @f8+ ++.

However, if he starts from a normal position, the attacker usually cannot confine the defending king to the back rank. The following defensive effort by endgame virtuoso Vasily Smyslov is so impressive that Mark Dvoretsky thinks that for a practical player it is enough to study it to understand the whole ending with h- and f-pawns and rook vs rook (see following diagram).

Black's rook occupies a good position on b5 as it hinders the advance of White's king:

1 @g6+!

After 1 f5 Black can give checks from behind: 1...@b1 2 @h6+ @h7 3 @g5 @g1+ 4 @f4 @f1+ 5 @e5 @e1+ 6 @f6, and then:

a) The immediate 6...@xh6?? runs into 7 @f7+! @h8 8 @a2 @h1 (8...@h6 9 @f6 @b1 10 @h2+! @g5 11 @g7+ ++) 9 @f6 ++.

b) 6...@b1! is correct: Black draws after 7 @e6 @xh6 =.

1...@f7 2 @g5

6.84

S.Gligorić - V.Smyslov

Moscow 1947

In Batsford Chess Endings, Speelman draws attention to Kopanov's idea (see ECE 582) 2 @h4!?? with the plan of @g3 to cut Black's king off from the h-pawn (the argument that therefore 1...@h7 might even be preferable to Smyslov's 1...@f7). Black must now find 2...@h8! (2...@a5? 3 @g3 @a1 4 @h6 @h1+ 5 @g5 @a1 6 @f5 @b1 7 @g4 @a1 8 @h4 @g1+ 9 @f4 @f1+ 10 @g4 @g1+ 11 @f3 @g8 12 @h7 ++.) 3 @g5 @g1+ 4 @h6 @f1 5 @g7+ @f6 6 @g8 @f7 7 @g4 @h1 = in order to draw.

2...@b1!

The south-west corner is the right place for the rook. It can give check from the side or behind depending on White's winning attempts.

3 @c5

3...@a1! (3...@g1+? 4 @f5 @h1 5 @g7+ ++) 4 @h7 (4...@g8 5 @h7+ @h8 6 @f5 @a4+ 7 @g5 @a6 =) 4...@g1+ 5 @f3 @h1 6 @a5 @g6 7 @a7 @f5 =.

3...@f6 4 @c6+ @g7! This decision is of crucial importance. After 4...@f7? Black's king is driven to the back rank: 5 @g5 @g1+ 6 @f5 @h1 7 @c7+ ++.

5 @g5 @g1+ 6 @f5 @a1 7 @c7+ @h6 8 @c7 @b1 9 @e8 @g7 10 @e5 @a1 11 @d5 @f1 11...@b1 =.

12 @d4 @a1 13 @d6 @a5+ 14 @g4 @a1 14...@b1!? 15 @g6+ brings us to the same position that arose after 1 @g6+.

15 @e6 @g1+ 16 @f5 @a1 17 @h6+ @h7!

Now Black's king has to go to the h-file so that it can take the h-pawn when necessary.

18 @xh6 @a2 19 @g5 @g2+ 20 @f6 @xh6 21 @e7+ @h7
Or 21...\(\text{g7} 22 \text{f5} \text{e2} + 23 \text{e6} \text{f2} ! 24 \text{f6} + \text{g6} ! (24...\text{g8} ? 25 \text{e5} + -) 25 \text{f6} (25 \text{f7} + \text{g7} ! = 25 \text{e1} \text{a2} 26 \text{g1} + \text{h7} 27 \text{f7} \text{a7} + ! =) 25...\text{h1} = 26 \text{f5} \text{e2} + 23 \text{e6} \text{a2} 24 \text{f6} \text{a8} ! 25 \text{f7} \text{h6} 26 \text{e1} \text{a7} + ! 27 \text{e7} \text{a8} = 27...\text{a1} 28 \text{f8} \text{g6} ! 29 \text{f6} ! 30 \text{g8} \text{g1} + ! =. 28 \text{d7} \text{h7} 29 \text{d1} \text{a7} + ! 30 \text{e6} \text{a6} + 31 \text{e6} \text{a8} 32 \text{d4} \text{g8} 33 \text{f4} + \text{f8} 34 \text{h5} + \text{f6} 35 \text{f4} + \text{h7} =.

You should study the role of Black's king in detail. It must avoid being confined to its back rank and can stay on g7 until White plays \text{g6}+ or h6+. After \text{g6}+ both ...\text{f7} and ...\text{h7} draw, but h6+ forces it to go to h7.

In the next position White has managed to penetrate one step further, but with accurate play it is still drawn.

\[ \text{W} \]

\[ \text{6.85} \]

A.V. Ivanov – A. Vitolins
Franz 1979

1 \text{e6}+?
1 \text{f7} \text{xh6} 2 \text{e2} \text{b7} + 3 \text{e7} \text{b8} 4 \text{f6} \text{h7} =.

1...\text{b6}+?

This allows White's king to penetrate to f7 with decisive effect. 1...\text{e1}+? also loses, to 2 \text{f7} \text{f1} 3 \text{f6} \text{xh6} 4 \text{e2} \text{g5} 5 \text{g7} +... 1...\text{xh6}! was called for: 2 \text{f6} \text{b6}+! 3 \text{f7} (3 \text{e7} \text{b7} + =) 3...\text{h7} =.

2 \text{f7} \text{a6}

White also wins after 2...\text{xh6} 3 \text{e6}+ !++, 2...\text{xh6} 3 \text{f6} + and 2...\text{b7}+ 3 \text{f8} \text{xh6} 4 \text{e6}+ !++.

3 \text{e1} \text{a8}

3...\text{a7}+ 4 \text{f8}! (Maizelis) 4...\text{xh6} 5 \text{e6}+!

\[ \text{g5} (5...\text{h7} 6 \text{e7} + =) 6 \text{f6}! \text{f5} 7 \text{d6} \text{e5} 8 \text{b6} +--. 4 \text{f6} \text{a7} + 5 \text{e7} \text{a8} 6 \text{e8} \text{a7} +

Or 6...\text{a6} 7 \text{a7}, and then:

a) 7...\text{g6} and now:

\[ \text{a1} \]

a1) 8 \text{g8}+?! \text{f5} 9 \text{h7} (not 9 \text{f7} ? \text{a7} + 10 \text{e8} \text{a8} + =) 9...\text{a7} + 10 \text{f8} \text{xh7} 11 \text{g7}! \text{h8} + 12 \text{e7}! \text{a8} 13 \text{f7}! \text{a7} + 14 \text{d6} \text{a6} + 15 \text{c5} \text{f6} 16 \text{d5} \text{e} 17 \text{e} \text{g1} \text{e} 13 \text{e} \text{g1} \text{e} 18 \text{a1} + \text{d2} 19 \text{h7} ! +--.

\[ \text{a2} \]

a2) 8 \text{h7} \text{a7} + 9 \text{e6} \text{a6} + 10 \text{d5} \text{xh7} 11 \text{f7} ! +--.

b) 7...\text{a7} + 8 \text{e6} transposes to the position that arises in the game after 7 \text{a6}.

7 \text{e6} \text{a6} + 8 \text{f5} \text{a5} + 9 \text{e5} \text{a1} 10 \text{f7} \text{xf1} + 11 \text{e6} \text{g6} (D)

At first sight it seems that Black can hold on, but the strike 12 \text{g5}+!! clarifies the situation:

12...\text{gx} 13 \text{h7} \text{e} 1 + 13...\text{f6} + 14 \text{e7} \text{g6} 15 \text{h8} \text{xf7} + 16 \text{e} 6 + --.

14 \text{d7} \text{d1} + 15 \text{e} 8 \text{e} 1 + 16 \text{f8} \text{h1} 17 \text{g7} 1-0.

If Black's king is cut off, the defensive method is different (see following diagram):

1 \text{f4}

1 \text{e4}+? \text{xf2} +=

1...\text{e5} 2 \text{g2} \text{a1} 3 \text{f8} \text{e} 6 4 \text{h} 4 \text{e} 7 5 \text{e} 4 \text{a8} 6 \text{h} 3 \text{h} 8 7 \text{g} 4 \text{g} 8+ 8 \text{h} 5 \text{e} 6 9 \text{h} 6

9 \text{f3} ? ?.

9...\text{e} 5 10 \text{a} 4

10 \text{f} 3 \text{h} 8 + 11 \text{g} 5 \text{g} 8 + 12 \text{h} 5 \text{h} 8 + and White can't make progress.
A2e) Doubled Pawns

The general result is a draw if the defending king can get in front of the pawns (see following diagram):

1... \texttt{d7+ e8}

Black can also defend using the following method: 1... \texttt{g8} 2 \texttt{d6 b4}! (attacking the backward pawn to discourage the advance of the white king) 3 \texttt{d8+ f7 d7+ g8 5 f6 xf4 6 d8+ h7 7 f8 e4 8 g8 f4 =}

2 \texttt{d6 b7?}

Not 2... \texttt{b4?} 3 \texttt{f6 g8 4 g6 +=; 2... b1?} 3 \texttt{h6 g8 4 d8+ h7 5 c7 b7+(5... e7+ 6 f8 c4 7 d1 =)} 6 \texttt{d7 b8 7 f6 g6 8 f7 g7 9 f5 +=}

\textbf{Exercises}

(Solutions on pages 381-2)

3 \texttt{f6 f7+ 4 g5 g7+ 5 g6 a7 6 f6+ g7 7 b6 c7 8 b8 a7 9 e8 f7!} 9... \texttt{b7?! 10 c7+ e8 11 f6 + -}

10 \texttt{h8 g7 11 h6 f8}

11... \texttt{b7} also defends due to 12 f6+ \texttt{g8} 13 \texttt{g6 g7+ =}

12 \texttt{f6 a1 13 h8+ f7 14 h7+ f8 15 e5 b1 16 d7 a1 17 f7 a6 18 h5 g6+ b2 h1+}

\textbf{B) Pawn to move (no Pawn to move)}

We divide this into three subcases:

B1: Rook

B2: Rook

B3: Rook

B4: Rook

Theoretically, he generally wins especially without check.
Rook Endings

**B1) Rook and Pawn vs Rook and Pawn**

The general result is a draw. We deal mainly with positions that often arise when the attacker sacrifices his extra pawn in a 2 vs 1 situation:

![Chess Board](image)

A.Ozsvath – B.Malich
Budapest 1965

White's king is too active:
1...\(\text{a}8+\)
2 \(\text{b}3\) \(\text{c}5\) 3 \(\text{f}5+\) \(\text{b}6\) 4 \(\text{b}4\) \(\text{a}2\) 5 \(\text{f}6+\) \(\text{b}7\)
6 \(\text{c}5\) \(\text{xb}2\) 7 \(\text{f}7+\) \(\text{c}8\) 8 \(\text{b}6\) \(\text{b}1\) 9 \(\text{f}8+\)
\(\text{d}7\) 10 \(\text{b}8\) and White went on to win.

**B) Pawns on One Wing (no Passed Pawns)**

We divide the material as follows:

**B1:** Rook and Pawn vs Rook and Pawn 205

**B2:** Rook and Two Pawns vs Rook and Pawn 206

**B3:** Rook and Three Pawns vs Rook and Two Pawns 211

**B4:** Rook and Four Pawns vs Rook and Three Pawns 212

Theoretically, all these endings are thought to be generally drawn, but the practical chances, especially with 4 vs 3, can be quite good.

The next position occurs quite frequently in practice:

![Chess Board](image)
6.89

F.Olafsson – G.Sigurjonsson
Reykjavik 1968

White can win the f7-pawn but surprisingly he can’t win the game:

1...e8+

1...e7? 2 g6! a6 3 e8+ -- 2 e8+ 1 a7+ 3 e8+ 4 f7 e7

2...e7 3 e6 4 e2

3...e7 4 a7 5 b7 6 b6 5 f7 g6+ 6 e7

3...e8+ with perpetual check.

3...a7 4 e7 a6 5 b7 c6 6 b2 1/2-1/2

White can’t make any progress; e.g., 6...e6 7 e2+ e5 =.

B2) Rook and Two Pawns vs Rook and Pawn

We start with positions without passed pawns. Normally the defender’s drawing chances are very high, but it is different if the attacking king manages to penetrate:

6.90

A.Burn – R.Spielmann
San Sebastian 1911

Black has to be careful that he is not forced into a passive position:

1...g6!?
Rook Endings

White has reached a Lucena position.

After 20...\texttt{h}2, 21 \texttt{e}4 ++ builds a bridge.

The next example shows that matters can be very complicated. Claus Dieter Meyer analysed it in detail (drawing upon Levenfish's, Smyslov's and Avorshkevich's work) and we in turn have found his annotations a valuable source.

\textbf{B}

\begin{center}
\textbf{J.Heissler – E.Pezerović}
\textit{Bundesliga 1999/00}
\end{center}

1...\texttt{g}6+

1...\texttt{e}7?? is refuted by 2 \texttt{b}7+! (2...\texttt{f}6? \texttt{g}xf6 3 \texttt{g}6+ \texttt{g}7 4 \texttt{b}7+ \texttt{g}8 5 \texttt{h}6 \texttt{a}8 = 2...\texttt{f}8, and now:

\begin{enumerate}
\item a) 3 \texttt{g}6? \texttt{a}1! 4 \texttt{b}8+ \texttt{e}7 5 \texttt{g}8 \texttt{f}6 6 \texttt{g}8+ \texttt{e}5 7 \texttt{f}6 (7 \texttt{e}7?? \texttt{f}4 8 \texttt{x}g7 \texttt{h}1#) 7...\texttt{h}1+ =.
\item b) 3 \texttt{b}8+ \texttt{e}7 (3...\texttt{e}7 4 \texttt{f}6+! \texttt{g}xf6 5 \texttt{g}6 \texttt{a}1 6 \texttt{g}7 \texttt{h}1+ 7 \texttt{g}6 \texttt{g}1+ 8 \texttt{h}7 \texttt{h}1+ 9 \texttt{g}8 \texttt{f}5 10 \texttt{b}7+ \texttt{e}6 11 \texttt{f}8 \texttt{g}1 12 \texttt{g}8\texttt{=} \texttt{x}g8+ 13 \texttt{x}g8 \texttt{f}4 14 \texttt{f}7 ++ =) 4 \texttt{g}6+ \texttt{e}7 5 \texttt{g}8 \texttt{f}6 6 \texttt{f}8+ \texttt{e}5 (D).
\end{enumerate}

Now White has a beautiful way to win that is worth committing to memory: 7 \texttt{f}6!! (7 \texttt{e}7?? \texttt{a}1 =) 7...\texttt{f}6 8 \texttt{f}7? \texttt{f}5+ (8...\texttt{e}6 9 \texttt{x}g7 ++ =) 9 \texttt{g}4 \texttt{f}6 10 \texttt{g}5 \texttt{a}6 11 \texttt{x}g7 ++ =.

2 \texttt{h}6!+

After 2 \texttt{f}xg6?, Black can draw by 2...\texttt{a}1! =, but 2...\texttt{g}7?? loses because of 3 \texttt{b}7+ \texttt{g}8 4 \texttt{h}6 \texttt{a}8 5 \texttt{b}6 (5 \texttt{e}7+ \texttt{h}8 6 \texttt{g}7 \texttt{g}8 7 \texttt{h}6?? \texttt{a}1 8 \texttt{g}7 \texttt{h}1+ 9 \texttt{g}6 \texttt{h}6+ 10 \texttt{g}5 \texttt{h}1 11 \texttt{e}6 \texttt{g}7 12 \texttt{e}7+ \texttt{f}8 13 \texttt{a}7 also wins.

\begin{center}
\textbf{6.92A}
\end{center}

\begin{center}
\textbf{6.92B}
\end{center}

but is much more complicated: 5...\texttt{e}8 6 \texttt{g}7 \texttt{a}8 7 \texttt{f}6 \texttt{e}8 8 \texttt{f}6 \texttt{f}8+ \texttt{f}8 9 \texttt{g}8? \texttt{f}8+ \texttt{f}8 10 \texttt{h}7 ++ =.

2...\texttt{g}5+ 3 \texttt{g}6 \texttt{a}1

3...\texttt{a}8 4 \texttt{h}7 \texttt{a}7+ 5 \texttt{h}8 ++ =.

4 \texttt{b}8+ \texttt{e}7 5 \texttt{g}7 \texttt{h}1+ 6 \texttt{g}6 \texttt{g}1+ 7 \texttt{h}7 \texttt{h}1+ 8 \texttt{g}8 \texttt{g}1

Or 8...\texttt{f}4 9 \texttt{b}7+! \texttt{e}6 (9...\texttt{e}8 10 \texttt{b}4 \texttt{f}3 11 \texttt{e}4+ \texttt{d}7 12 \texttt{f}4 ++) 10 \texttt{f}8 \texttt{g}1 11 \texttt{b}5 ++ =.

9 \texttt{b}5 \texttt{f}6 (D)

9...\texttt{f}4 10 \texttt{f}5 \texttt{g}4 11 \texttt{h}7 \texttt{h}4+ 12 \texttt{g}6 \texttt{g}4+ 13 \texttt{h}6 \texttt{h}4+ (13...\texttt{g}6 14 \texttt{f}x\texttt{f}4 \texttt{f}x\texttt{f}4 15 \texttt{g}8\texttt{=} ++ =) 14 \texttt{g}5 \texttt{h}1 15 \texttt{f}x\texttt{f}4 ++ =.
Black returns the favour. 10...\( \text{hxg7} \) was called for: 11 \( \text{Bb6+ Cg5!} \) 12 \( \text{hxg7 f4!} = \).

Also bad are 10...\( \text{f4?} \) 11 \( \text{g8\#} \) \( \text{gxg8} \) 12 \( \text{hxg8} \) ++ and 10...\( \text{Ba1} ? \) 11 \( \text{Bb8} \) \( \text{g1} \) 12 \( \text{g8\#} \) \( \text{gxg8} \) 13 \( \text{hxg8} \) \( \text{g5} \) 14 \( \text{f7} ++ \).

11 \( \text{g8\#} \) \( \text{gxg8} \) 12 \( \text{hxg8} \) \( \text{g5} \) 13 \( \text{f7} \) \( \text{g4} \) 14 \( \text{e6} \) 1-0

The following example is worth studying as it is easy to go wrong:

\[ \text{W} \]

6.93

R. Kuczynski – C. Bauer
Saint Vincent Ech 2000

White has to be careful because of Black’s far-advanced pawns:

1 \( \text{Ba4+ Bd4} \) 2 \( \text{Ba2} \)

It is also possible to go into a pawn ending: 2 \( \text{Bd4+ Bdxd4} \) 3 \( \text{Bxe2 Bxe4} \) 4 \( \text{Bf3 Bf3} \) (4...\( \text{g4} \) 5 \( \text{hgxg3+} \) 6 \( \text{Ch2} \) =) 5 \( \text{Bc1 Bc3} \) 6 \( \text{Bf1 g2} \) 7 \( \text{f2} \) \( \text{Bd1} \) 8 \( \text{f1} \) 9 \( \text{g1} \) \( \text{c2} \) 10 \( \text{h1} \) h3 11 \( \text{g1=} \).

2...\( \text{g3} \) 3 \( \text{Bc2 Bh4} \) 4 \( \text{Ba8} \)

This is one of the few cases where active defence is wrong, while passively waiting with 4 \( \text{Ba1! Bb2} \) 5 \( \text{f1} \) gives White an impregnable fortress.

4...\( \text{h2+} \) 5 \( \text{f1} \) \( \text{Bf2} \) ?

Bauer misses his chance at first. 5...\( \text{bl1+} \) 6 \( \text{Bb2} \) h3 ++.

6 \( \text{Bf1 Bb2} \) 7 \( \text{Bf1} \)

Again allowing Black to break through. Passive defence with 7 \( \text{Ba1} \) leads to a draw.

7...\( \text{Bd1} \) 8 \( \text{Bxe2 h3} \) 9 \( \text{Ba4+ Bc5} \) 10 \( \text{Ba5+ Bd6} \) 11 \( \text{Ba6+ Bc7} \) 0-1

We now consider the situation with c- and d- vs e-pawn:

\[ \text{W} \]

6.94

G. Levenfish – P. John
Karlsbad 1911

White has to defend extremely accurately to hold this position.

1 \( \text{Bf8} \)

Or 1 \( \text{Bf8} \) \( \text{h1} \) 2 \( \text{Bb4} \) \( \text{h4} \) 3 \( \text{Bxe8} \) \( \text{h2} \) 4 \( \text{Bxe7} \) \( \text{g1} \) 5 \( \text{Bf8} \) \( \text{h3} \) 6 \( \text{Bf2} \) \( \text{h1} \) 7 \( \text{Bxe7} \) \( \text{g1} \) =.

1...\( \text{Bh2} \)

1...\( \text{h1} \) allows the typical resource 2 \( \text{c3+!} \) \( \text{dxc3} \) 3 \( \text{Bc2} \).

2 \( \text{Bc1} \)

2 \( \text{Bd1} \) ? 3 \( \text{Bf4} \) \( \text{g1} \) 4 \( \text{c2} \) \( \text{d3} \) \( \text{f1} \) 5 \( \text{d4} \) \( \text{h6} \) \( \text{c4} \) 6 \( \text{c5} \) 7 \( \text{c6} \) 8 \( \text{d5} \) 9 \( \text{d6} \) \( \text{h4} \) 10 \( \text{c5} \) \( \text{f1} \) 11 \( \text{c4} \) \( \text{f2} \) 12 \( \text{c5} \) \( \text{f3} \) 13 \( \text{c6} \) \( \text{f2} \) 14 \( \text{f6} \) \( \text{h2} \) 15 \( \text{g7} \) \( \text{c4} \) 16 \( \text{Bxd4} \) \( \text{Bc1} \) 17 \( \text{d3} \) =.

3...\( \text{Bh1} \)

3...\( \text{e2} \) 4 \( \text{d1} \) (4 \( \text{c3} \) \( \text{f6} \) 5 \( \text{cxb5} \) \( \text{f6} \) \( \text{f6} \) \( \text{c3} \) 6 \( \text{c5} \) \( \text{d3} \) 7 \( \text{cxd4} \) \( \text{Bc3} \) ++)

4...\( \text{e2} \) 5 \( \text{Bb3} \) \( \text{c3} \) 6 \( \text{cxb5} \) \( \text{c3} \) 7 \( \text{cxd4} \) \( \text{Bc3} \) ++.

4...\( \text{Bf3} \) 5 \( \text{dxc3} \) \( \text{c3} \) 6 \( \text{Bf4} \) \( \text{h4} \) \( \text{h3} \) 7 \( \text{c5} \) \( \text{g5} \) \( \text{f6} \) 8 \( \text{c3} \)

5 \( \text{a2} \) \( \text{g1} \)

5...\( \text{h2} \) 6 \( \text{Bc1} \) \( \text{a7} \) 7 \( \text{c5} \) \( \text{a5} \) 8 \( \text{c6} \) \( \text{h2} \) 9 \( \text{a5} \) 10 \( \text{c5} \) \( \text{h3} \) 11 \( \text{c4} \) \( \text{h2} \) 12 \( \text{c5} \) \( \text{h1} \) 13 \( \text{c6} \) \( \text{h6} \) 14 \( \text{c5} \) \( \text{h5} \) 15 \( \text{c6} \) \( \text{h4} \) =.
8 h8 d5 9 d8+ e4 10 e8+ f3 11 b3 d2 12 c4 d1 13 e7 d2 14 e8 e2 15 d8 ½-½

L. Szabo - J. Kapu
Hungarian Ch (Budapest) 1951

With precise play, Black can keep White's king out:

1 b6+ f7 2 f4 a5
2...a4 is also possible: 3 b7+ g6 4 f5+ (4 e7 xe4 =) 4...h6 5 f4 a3 6 f7 a6 =.

3 b7+ f8 4 d7
4 f5 a4 5 h5 xe4 6 g6 g4+ 7 xg6 g8! =.

4...b5 5 d5?!
This sets a devilish trap into which Black falls.

5...b6?
After 5...b7! 6 f5 f7 White can't make progress.

6 f5 f7
6...e7 7 a5 b7 8 a6 b5+ 9 g6 b4
10 a7+ e8 11 xg6 e7
12 d7+ f8 a7 d6 9 g6 e6 10 a4
10 f5 spoils it: Black draws by 10...xe4 11
xf6 g8! =.

10...b6 11 f5 e7 12 g7 h7
12...e6 13 a7+ e8 14 c5 xe5 15 f6++.
13 a6 b4 14 e6+ 1-0

If the attacker has passed pawn his winning chances increase, but theoretically g- f-pawn vs h-pawn is most often drawn (see following diagram).

Fischer demonstrates one defensive strategy:

1 h3 f5 2 a3 f7 3 h3 d3 e7 4 g3!
Attacking the g6-pawn saves the day:
4...e8 5 g1 e3+ 6 h2 d3 7 g2 d6
8 h3 f6 9 g5 ½-½
The attacker's chances increase with e- and f- vs g-pawn.

With f- and g-pawns vs e-pawn, the situation is similar:

Very accurate defence is required to save the position:

1. \( \text{f2} \text{b3} 2. g5+ \text{f7} 3. \text{e3} \text{bl} 4. \text{f3} \text{al} 5. \text{g4} \text{a4} \\
5...\text{f1}, as given by Hecht in CBM 78, is also playable. He analyses 6 \text{e2} \text{e7} 7 \text{h2} \text{gl} (7...\text{f7}? 8 \text{h7}+ \text{f8} 9 \text{g6} \text{gl} 10 \text{h5} \text{e1} 11 \text{f7}+ \text{e1} 8 \text{f3} \text{e7} 9 \text{h7}+ \text{g6} 10 \text{e1} 11 \text{f2} \text{e4} 12 \text{g3} \text{e1} 13 \text{f3} \text{f1}+ 14 \text{e4} \text{e1}+ 15 \text{d4} \text{e2} and it seems that White can't break through. \\
6 \text{e5} \text{b4} 7 \text{a5} \text{c4} 8 \text{a7}+ \text{f8}! \\
8...\text{g6} 9 \text{e7} \text{d4} 10 \text{f6e6}+ \text{f6} 11 \text{f5} \text{f7} 12 \text{xe6}+ \text{xe6} 13 \text{h5} \text{f7} 14 \text{h6} \text{g8} 15 \text{g6} +. \\
9 \text{f3} \text{b4}! \\
9...\text{e1}+ 10 \text{g4} (10 \text{e4} \text{e1}+ 11 \text{d4} \text{e2} \text{f5} 12 \text{xe6}+ \text{xe6} 13 \text{h5} \text{f7} 14 \text{h6} \text{g8} 15 \text{g6} +. \\
10 \text{g6}! \text{b5} \\
White also wins after the alternative 10...\text{c4} 11 \text{f7}+ \text{e8} (11...\text{g8} 12 \text{e7}+ \text{g7} 12 \text{g4} \text{c5} \\
13 \text{g5} \text{xf4} (13...\text{xf4} 14 \text{f5}+ \text{f5} 14 \text{xf4} \text{exf4} 15 \text{h6} +. \\
11 \text{f7}+ \text{g8} \\
11...\text{e8} 12 \text{g4} \text{a5} 13 \text{f5} \text{xf5}+ 14 \text{xf5} \text{a1} 15 \text{g5} +. \\
12 \text{e7} \text{b6} 13 \text{g4} 1-0 \\
Black resigned due to 13...\text{f8} 14 \text{f7}+ (14 \\
g7+? \text{g8} 15 \text{g5} \text{h7} 16 \text{h6} \text{b4} 17 \text{e5} \\
\text{xe5} 14...\text{g8} 15 \text{g5} \text{b5}+ 16 \text{h6} \text{b1} 17 \\
\text{e7} +). \\
6.98 A.Grosar – Barcenilla \\
Erevan OL 1996
We shall end our discussion of two pawns vs one pawn with an example where the attacker has split pawns:

```
W

\[6.100\]
```

V.Khomiatov – A.Miles  
Alushta 1999

Miles tried:
1...h3+! 2 \(\text{\texttt{#xh3}}\)
2 \(\text{\texttt{#h2}}\)? is too passive; e.g., 2...\(\text{\texttt{#f3}}\) 3 \(\text{\texttt{#a2}}\) 4 \(\text{\texttt{#g5}}\) 5 \(\text{\texttt{#xf2}}\) 5 \(\text{\texttt{#f8}}\) + \(\text{\texttt{#e2}}\) = +.
2...\(\text{\texttt{#f3}}\)?
This threatens \(\text{\texttt{#h5}}\), but miraculously there is still a defence.
3 \(\text{\texttt{#h2}}\)?
3 \(\text{\texttt{#a3}}\) + \(\text{\texttt{#xf2}}\) 4 \(\text{\texttt{#g4}}\) would have saved the day.
3...\(\text{\texttt{#xf2}}\) 4 \(\text{\texttt{#a2}}\) + \(\text{\texttt{#f3}}\) 5 \(\text{\texttt{#a3}}\)
5 \(\text{\texttt{#g1}}\) \(\text{\texttt{#d5}}\) (not 5...\(\text{\texttt{#e3}}\) allowing 6 \(\text{\texttt{#f1}}\) \(\text{\texttt{#h5}}\) 7 \(\text{\texttt{#f2}}\) + =) 6 \(\text{\texttt{#f2}}\) + \(\text{\texttt{#e3}}\) 7 \(\text{\texttt{#f8}}\) \(\text{\texttt{#a5}}\) 8 \(\text{\texttt{#g2}}\) \(\text{\texttt{#a2}}\) + 9 \(\text{\texttt{#g3}}\) \(\text{\texttt{#a1}}\) 10 \(\text{\texttt{#g2}}\) \(\text{\texttt{#d3}}\) 11 \(\text{\texttt{#d8}}\) + \(\text{\texttt{#e2}}\) 12 \(\text{\texttt{#b8}}\) \(\text{\texttt{e3}}\) = +.
5...\(\text{\texttt{#e3}}\) 6 \(\text{\texttt{#a2}}\) \(\text{\texttt{e2}}\) 0-1

B3) Rook and Three Pawns vs Rook and Two Pawns

Usually such positions are drawn, but in practice they still have to be defended. In the first example Black’s rook is very active and the h-pawn has already advanced to h5, so the draw is clear (see following diagram):

```
W

\[6.102\]
```

\(\text{\texttt{1 a3}}\)?
This waiting move is a decisive mistake. 1 \(\text{\texttt{a8}}\) is called for; e.g., 1...\(\text{\texttt{g4}}\) 2 \(\text{\texttt{hgx}}\) 3 \(\text{\texttt{g5}}\) 4 \(\text{\texttt{xg5}}\) \(\text{\texttt{b5}}\) =.
1...\(\text{\texttt{g4}}\) 2 \(\text{\texttt{#e5}}\) \(\text{\texttt{#b4}}\) 3 \(\text{\texttt{#f6}}\)
3 \(\text{\texttt{g5}}\) \(\text{\texttt{hxg5}}\) 4 \(\text{\texttt{#xg5}}\) \(\text{\texttt{b5}}\) =.
3...\(\text{\texttt{#b5}}\) +

J.Lautier – M.Godena  
Guelphs Z 1998

The immediate 3...\(\text{\texttt{gxf6}}\) is also playable: 4 \(\text{\texttt{#xf6+}}\) \(\text{\texttt{#g7}}\) =, 4 \(\text{\texttt{#f4}}\) \(\text{\texttt{gxf6}}\) 5 \(\text{\texttt{#xf6}}\) \(\text{\texttt{#g7}}\) 6 \(\text{\texttt{g6+}}\) \(\text{\texttt{#f7}}\) \(\text{\texttt{\frac{1}{2}}\text{\texttt{\frac{1}{2}}}}\)

The next example is much more complicated as the attacker has a better position:

```
W

\[6.102\]
```

A.Lutikov – M.Taimanov  
Moscow 1955

1 \(\text{\texttt{a3}}\)!
This waiting move is a decisive mistake. 1 \(\text{\texttt{a8}}\) is called for; e.g., 1...\(\text{\texttt{g4}}\) 2 \(\text{\texttt{hgx}}\) 3 \(\text{\texttt{#e2}}\) \(\text{\texttt{#b4}}\) 4 \(\text{\texttt{#f1}}\) \(\text{\texttt{c1}}\) + 5 \(\text{\texttt{#c2}}\) \(\text{\texttt{#g5}}\) 6 \(\text{\texttt{#h8}}\) =.
1...\(\text{\texttt{g4}}\) 2 \(\text{\texttt{hgx}}\) 3 \(\text{\texttt{#f2}}\) \(\text{\texttt{#c2}}\) + 4 \(\text{\texttt{#f1}}\)
\(\text{\texttt{c1}}\) + 5 \(\text{\texttt{#e2}}\)

After 5 \(\text{\texttt{#f2}}\) it looks like an easy win, but White has a last trick: 5...\(\text{\texttt{g3}}\) 6 \(\text{\texttt{#e2}}\) \(\text{\texttt{g1}}\) 7 \(\text{\texttt{#a2?!}}\) as 7...\(\text{\texttt{#xg2}}\) + 8 \(\text{\texttt{#f3}}\) \(\text{\texttt{#a2}}\) is stalemate. However, 7...\(\text{\texttt{#g4}}\) 8 \(\text{\texttt{#d3}}\) \(\text{\texttt{f3}}\) wins.
5...\textcolor{red}{\textit{f5}} 6 \textcolor{blue}{\textit{b3}} \textcolor{red}{\textit{h4}} 7 \textcolor{blue}{\textit{f2}} \textcolor{red}{\textit{g3}} + 8 \textcolor{blue}{\textit{f3}} \textcolor{red}{\textit{f1}} + 9 \textcolor{blue}{\textit{e4}} \textcolor{red}{\textit{f2}}!! 10 \textcolor{blue}{\textit{xf3}} \textcolor{red}{\textit{f2}}! 11 \textcolor{blue}{\textit{e3}} \textcolor{red}{\textit{exg2}}

White can't prevent Black from reaching a Lucena-type winning position.

12 \textcolor{blue}{\textit{f8}} \textcolor{red}{\textit{a2}} 13 \textcolor{blue}{\textit{h8+}} \textcolor{red}{\textit{g4}} 14 \textcolor{blue}{\textit{h7 g2}} 15
\textcolor{blue}{\textit{e7}} +\textcolor{red}{\textit{h3}} 16 \textcolor{blue}{\textit{f3}} \textcolor{red}{\textit{h2}} 17 \textcolor{blue}{\textit{h7+}} \textcolor{red}{\textit{g1}} 18 \textcolor{blue}{\textit{b7}}
\textcolor{red}{\textit{a3}} + 19 \textcolor{blue}{\textit{g4}} \textcolor{red}{\textit{e3}} 20 \textcolor{blue}{\textit{f7}} \textcolor{red}{\textit{e8}} 21 \textcolor{blue}{\textit{f3}} \textcolor{red}{\textit{h8}} 0-1

In our final example, the defender's king is away from the base of his pawn-chain:

6.103

D. Vigorito – H. Multhopp
Philadelphia 2000

1 \textcolor{blue}{\textit{h6}}
1...\textcolor{blue}{\textit{e6}} 2 \textcolor{red}{\textit{b2}} \textcolor{blue}{\textit{e2}} 3 \textcolor{blue}{\textit{bxc2}} \textcolor{red}{\textit{xe2}} 4 \textcolor{blue}{\textit{xe2}} \textcolor{red}{\textit{e6}} leads to a drawn pawn ending.

1...\textcolor{blue}{\textit{h6}} 2 \textcolor{red}{\textit{g2}} 3 \textcolor{blue}{\textit{e4}} 4 \textcolor{red}{\textit{h3}} 5 \textcolor{blue}{\textit{f3}}

The immediate 3...\textcolor{red}{\textit{e1}} is a much easier way to draw.

4 \textcolor{blue}{\textit{h5}} 5 \textcolor{red}{\textit{h4}} 6 \textcolor{red}{\textit{h1}}?

This move gives away a valuable tempo, and so allows White's king to penetrate. 5...\textcolor{red}{\textit{g5xh5}}
was called for: 6 \textcolor{red}{\textit{g5xh5}} \textcolor{red}{\textit{g5xg3}} 7 \textcolor{red}{\textit{g5}} \textcolor{red}{\textit{b4 =}} 6 \textcolor{red}{\textit{e5}} \textcolor{red}{\textit{g6}} 7 \textcolor{red}{\textit{h6}} 8 \textcolor{red}{\textit{e4}} 9 \textcolor{red}{\textit{e5}} 10 \textcolor{red}{\textit{e6}} +
\textcolor{red}{\textit{f2}} 11 \textcolor{red}{\textit{e5}} \textcolor{red}{\textit{g8}} 12 \textcolor{red}{\textit{e5xf5}} \textcolor{red}{\textit{f7}} = .

6...\textcolor{blue}{\textit{g5}} \textcolor{red}{\textit{g6}} 7 \textcolor{blue}{\textit{h5}} 8 \textcolor{red}{\textit{g5xg3}} 9 \textcolor{red}{\textit{g5}} +

8...\textcolor{blue}{\textit{xf5}} 9 \textcolor{red}{\textit{e5}}?

9 \textcolor{red}{\textit{e8}} is necessary, so as not to allow Black's rook the full checking distance from the front of the pawn: 9...\textcolor{red}{\textit{g4}} 10 \textcolor{red}{\textit{h3+}} +=
9...\textcolor{red}{\textit{e3}} 10 \textcolor{red}{\textit{e5}} 11 \textcolor{red}{\textit{f5}} +
10 \textcolor{red}{\textit{h3+}} 11 \textcolor{red}{\textit{f5}} +=.

9...\textcolor{red}{\textit{g4}} 10 \textcolor{red}{\textit{f5}} \textcolor{red}{\textit{g4}} 11 \textcolor{red}{\textit{h1}} \textcolor{red}{\textit{e8}} 12 \textcolor{red}{\textit{e1}} +
\textcolor{red}{\textit{h1}} 13 \textcolor{red}{\textit{f6}} \textcolor{red}{\textit{e6}} 14 \textcolor{red}{\textit{d1}} \textcolor{red}{\textit{e6}} 15 \textcolor{red}{\textit{d6}} \textcolor{red}{\textit{a1}}
1/2-1/2

B4) Rook and Four Pawns vs
Rook and Three Pawns

This is one of the best-known problems in endgame theory: is the attacker winning? Theoretically the answer is no, but in practice it is not at all easy to defend. First of all it must be stressed that just waiting passively is not sufficient:

6.104

M. Botvinnik – M. Najdorf
Moscow Alekhine mem 1956

White has built up a powerful position and can now proceed by creating a passed pawn on the e-file:

1 \textcolor{blue}{\textit{a5}} 2 \textcolor{red}{\textit{a5}} 3 \textcolor{blue}{\textit{e7 d5}} 4 \textcolor{blue}{\textit{e7}} 5 \textcolor{red}{\textit{dxe5}} 6 \textcolor{blue}{\textit{e5}}

After 4...\textcolor{red}{\textit{e4}} 5 \textcolor{blue}{\textit{e7+}} forces a transition into an easily won pawn ending: 5...\textcolor{blue}{\textit{d6}} 6 \textcolor{blue}{\textit{e5+}}
\textcolor{red}{\textit{e6}} 7 \textcolor{red}{\textit{exd7+}} 8 \textcolor{red}{\textit{g6+}} +

5 \textcolor{red}{\textit{e6}}

Threatening 
\textcolor{red}{\textit{d7+}} .

6 \textcolor{blue}{\textit{b4}}

The g-pawn is sacrificed to create shelter for White's king.

6...\textcolor{blue}{\textit{hxg5}}

6...\textcolor{red}{\textit{a7}} and now:

a) Not 7 \textcolor{red}{\textit{d7+}} \textcolor{red}{\textit{a7}} 8 \textcolor{red}{\textit{exa7}} \textcolor{red}{\textit{g6}}
\textcolor{red}{\textit{hxg5} = .

b) Even 7 \textcolor{red}{\textit{g6xh6}} \textcolor{red}{\textit{g6xh6}} 8 \textcolor{blue}{\textit{b5}} \textcolor{red}{\textit{e7}} 9 \textcolor{red}{\textit{b6}}
\textcolor{red}{\textit{a5}} + 10 \textcolor{red}{\textit{a6}} \textcolor{red}{\textit{e5}} 11 \textcolor{red}{\textit{h6}} \textcolor{red}{\textit{d6}} 12 \textcolor{red}{\textit{a6}}
\textcolor{red}{\textit{e5}} (Kopcev) spoils the win.

c) 7 \textcolor{blue}{\textit{b5}} \textcolor{red}{\textit{hxg5}} 8 \textcolor{red}{\textit{e5xg5}} 9 \textcolor{red}{\textit{hxg6}} \textcolor{red}{\textit{e5}} 10 \textcolor{red}{\textit{e4?}}
\textcolor{red}{\textit{a5}} + 10 \textcolor{red}{\textit{g6}} \textcolor{red}{\textit{e7} =} 9...\textcolor{red}{\textit{c7}} 10 \textcolor{red}{\textit{g6}} \textcolor{red}{\textit{a1}}
\[ \text{\( \text{\#xg7 \#xh6 12 \#xe2 13 \#xe5 \#xf2 14 \#g7 \#xe6 15 \#h6 + \#e8 +-- \)} \]
\[ \text{\( \text{\#d7+ \#e8 8 \#f7+ \#g8 9 \#g6 g4 10 h6} \]
\[ \text{\( 10 \#xg7+ \#e8 11 \#h6 g3 12 \#e7 \#a6+ 13 \#h8 +--) \text{\( \text{\#e7} \text{\#a8 12 \#f6 1-0} \)} \]
\[ \text{Black gets mated after 12...g3 13 \#d6 \#e8 14 \#d8 +--.} \]

With the defender's h-pawn on its fourth rank, the attacker's success rate drops a lot:

\[ \text{\( \text{W} \) \]
\[ \text{\( \text{\#a7 f6 2 \#h7?!} \)} \]
\[ \text{\( \text{Forcing Black's h-pawn to h5 is useful as it is more likely that after exchanges he will be left with a rook's pawn and not with, e.g., e- and f- vs f-pawn.} \)} \]
\[ \text{\( 2...h5 3 \#g7 \#g4+ \#h7 \#b4 5 \#f3?! \)} \]
\[ \text{\( \text{Eyecing the f-pawn with 5 \#f7 is more accurate.} \)} \]
\[ \text{\( 5...e4+ 6 \#e2 \)} \]
\[ \text{\( \#g2 is also playable. After 6...e3 fxe3 \#g4 White can defend with 8 \#h6! 8...\#b2+ 9 \#g1 g5 10 \#xf6 =.} \]
\[ \text{\( 6...\#b2+ 7 \#e3 \#h3+ 8 \#e2 \#h2+ 9 \#e3 \#h3+ 10 \#e2 \#g4! \)} \]
\[ \text{\( \text{This king-march is aimed at White's back pawn on f2. Therefore Sokolov starts immediate countermeasures:} \)} \]
\[ \text{\( 11 \#h6! \#h3 12 \#xg6 \#xf3 13 \#h6?} \]
\[ \text{\( \text{Now the f-pawn is lost under unfavourable circumstances. There were two ways to organize the defence:} \)} \]

\[ \text{\a) 13 \#f1 c3 14 \#e2 exf2 15 \#f1 f5 16 \#g5 \#h2 17 \#xf5 \#xf3 18 \#g5+ \#h4 19 \#xf4 20 \#g2 =.} \]
\[ \text{\b) 13 \#g7 f5 (13...\#g2 14 \#xf2+ 15 \#e3 =) 14 \#f1 c3 15 \#c2 exf2 16 \#f1 \#xg3 17 \#g5! f4 18 \#xf5 \#g4 19 \#a5 =.} \]
\[ \text{\( 13...\#g2 14 \#h5 \#xf2+ 15 \#e3 f5 16 \#g5 \#f1 17 \#g4 \)} \]

\[ \text{Or:} \]
\[ \text{\( a) 17 \#xf5 \#xf5 18 \#g4 \#f3+ 19 \#xe4 \#g2= \)} \]
\[ \text{\( b) 17 \#h5 \#f3+ 18 \#d4 e3 19 \#h6 \#e2 20 \#h5 \#g2 21 \#h7 c1 \#w 22 \#h8 \#e3 23 \#d5 \#d3+ 24 \#e6 \#e6+ 25 \#xf5 \#d5+ =.} \]
\[ \text{\( 17...\#f3+ 18 \#d4 e3 19 \#xf5 \#xf5 20 \#xe3 \#f8 0-1} \]

Sokolov resigned as his pawns are lost after 21 \#g5 \#g2 22 \#g6 \#g3 23 \#h5 \#g4 24 \#h6 \#g5 25 \#g7 \#e8+ =.

The difficulty of these endings is emphasized by the following loss by Garry Kasparov:

\[ \text{\( \text{B} \) \]
\[ \text{\( \text{\#h5! 2 \#f4 g6 3 \#e5 \#d3 4 \#h3!} \)} \]
\[ \text{\( \text{Advancing with the king like this is a dangerous plan forcing the defender to play very accurately.} \)} \]
\[ \text{\( 4...\#e3 5 \#h4 \#g7 6 \#g5 \#e1?} \]
\[ \text{\( \text{Staying behind the e-pawn is wrong as White can break through with e6 anyway. It was necessary} \text{\( 6...\#a3 7 \#c7 \#h6! 8 \#e7 \#a5, when White can't break through e.g., 9 \#h3 (9 \#f5 \#xf5 10 \#e6 \#f4+ 11 \#xe4 \#xf6 12 \#xf7+ \#xe6 =).} \)} \]
Emms) 9... \( \text{Bb3} \) d4 g4 hXg4 11 hXg4 \( \text{Bb5} \) 12 f5 \( \text{BXe5} \) !=.

7 \( \text{Bc7} \) \( \text{Be2} \) 8 \( \text{Be7} \) \( \text{Ba2} \)

Now it is too late to improve the position of the rook. However, Black was lost in any case:

a) 8...h6 9 e6 hXg3 10 \( \text{HXf7} + \) \( \text{Bxg8} \) 11 hXg3 \( \text{Bxe6} \) 12 \( \text{Bf6} \) +–.

b) 8... \( \text{Bc4} \) 9 e6! \( \text{Bxe6} \) 10 \( \text{Bxe6} \) fXe6 11 h3 \( \text{Be7} \) 12 \( \text{Bb6} \) \( \text{Bf6} \) 13 g4 \( \text{hXg4} \) 14 hXg4 \( \text{Bf7} \) 15 \( \text{g5} \) +– 14 \( \text{g5} \) \( \text{Bf5} \) 15 \( \text{Bf5} \) \( \text{Bxe4} \) 16 \( \text{Bxe6} \) e5 17 \( \text{Bh5} \) e4 18 g6 e3 19 g7 e2 20 g8=\( \text{W} \)
1\( \text{e1} \) \( \text{Bc6} \) +\( \text{g5} \) +\( \text{f3} \) 22 \( \text{Bxg4} \) +\( \text{e3} \) 23 \( \text{Bxe6} \) +– (Ribli in CBM 76).

9 f5! \( \text{gxh5} \) 10 e6 \( \text{h4} \)
10... \( \text{Bxh2} \) 11 \( \text{Bxf7} + \) \( \text{Bxg8} \) 12 \( \text{Bf6} \) \( \text{Ba2} \) 13 \( \text{Bxg7} + \) \( \text{Bh8} \) 14 \( \text{e7} \) \( \text{Bxe6} \) 15 \( \text{Bf7} \) \( \text{Bxa7} \) 16 \( \text{Bxg5} \) +–.

11 \( \text{Bxf7} + \) \( \text{Bxg8} \) 12 \( \text{Bxe6} \) 1–0

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a) Kasparov's variation continued 18 \( \text{Bb8} \) e4 19 \( \text{Bf8} \) \( \text{c2} \) 20 \( \text{Bf2} \) e3 21 g4 (Illescas added 21 \( \text{Bf1} \) \( \text{Bd1} \) 22 \( \text{Bf8} \) \( \text{d2} \) 23 \( \text{Bf8} \) \( \text{f6} \) 24 \( \text{Bf8} \) \( \text{d2} \) + 25 \( \text{Bf8} \) \( \text{f6} \) + 26 \( \text{Bf8} \) e2 27 \( \text{Bf8} \) \( \text{f3} \) 28 \( \text{Bf8} \) \( \text{f2} \) 29 \( \text{Bf8} \) \( \text{f2} \) 30 \( \text{Bf8} \) \( \text{f2} \) \( \text{f5} \) 31 \( \text{Bf8} \) \( \text{f4} \) → in NfC 8/2000) 21 \( \text{Bf4} \) \( \text{c2} \) 22 \( \text{Bf4} \) \( \text{f2} \) 23 \( \text{Bf4} \) \( \text{e8} \) 24 \( \text{Bf4} \) \( \text{c1} \) + 25 \( \text{Bf4} \) \( \text{e1} \) +–.

b) However, Mathias Feist using Deep Fritz, found the amazing resources 19 \( \text{Bf6} \!), which draws; e.g., 18... \( \text{Bf8} \) + 19 \( \text{Bf6} \) + \( \text{c2} \) 20 g4 e3 21 g5 \( \text{Bd5} \) 22 g6 \( \text{Bd2} \) 23 \( \text{Bf6} \) \( \text{f5} \) + 23... \( \text{Bb4} \) 24 \( \text{Bf6} \) \( \text{c2} \) 25 \( \text{Bf6} \) \( \text{e1} \) 26 \( \text{Bf6} \) \( \text{f2} \) 27 \( \text{Bf6} \) \( \text{e3} \) 28 \( \text{Bf6} \) \( \text{e6} \) = and Black's king lacks shelter.

13 \( \text{Bf6} + \) \( \text{g6} \) 14 \( \text{g8} + \) \( \text{f5} \)

Black could also draw by playing 14... \( \text{Bf7} \) 15 \( \text{Bf5} \) \( \text{c6} \) 16 \( \text{f4} \) exf4 17 \( \text{gxh4} \) \( \text{c2} \) \( \text{Bb2} \) 18 \( \text{Bf1} \) \( \text{h3} \) 19 \( \text{Bf2} \) =.

15 \( \text{Bf8} \) + 1/2–1/2

Kramnik claimed the draw by threefold repetition, which brought him a huge step closer to victory over Kasparov.

Hübner used the defensive method based on f4 in the following game:

---

V. Kramnik – G. Kasparov
London BGN Web (14) 2000

1 \( \text{c4?} \) (or playing f4 on one of the next few moves is a simpler way to draw; e.g., 1... \( \text{Bf5} \) 2 \( \text{c3} \) \( \text{Bxb7} \) \( \text{f5} \) 4 \( \text{Bxf7} + \) \( \text{Bf4} \) 5 \( \text{Bc7} \) =)
1... \( \text{Bf8} \) 2 \( \text{Bb7} \) \( \text{Bxe8} \) 3 \( \text{Bb2} + \) \( \text{c7} \) 4 \( \text{Bf7} + \) \( \text{f1} \) ?
5 \( \text{f4} ? \) !
5... \( \text{e5} \) 6 \( \text{Bb6} + \) \( \text{f5} \) 7 \( \text{Bf7} \) \( \text{f6} \) 8 \( \text{Bxg7} \) \( \text{g5} \)

Black can't make progress without exchanging pawns.

9 \( \text{Bxg5} \) \( \text{fXg5} \) 10 \( \text{Bxg4} \) ?! 11 \( \text{Bf8} + \) \( \text{e6} \) 12 \( \text{Bc8} + \) \( \text{f5} \)

Kasparov claimed shortly after the game on www.KasparovChess.com that 12... \( \text{Bf6} \) would have won. 13 \( \text{fxe5} \) \( \text{hxg4} \) 14 \( \text{Bxg8} \) \( \text{Bf5} \) 15 \( \text{g1} \) \( \text{d2} \) 16 \( \text{g7} \) \( \text{c4} \) 17 \( \text{Bxg4} + \) \( \text{f3} \) and now:

---

1 \( \text{f4} \) \( \text{Bb7} \) 2 \( \text{a5} \) \( \text{f6} \) 3 \( \text{f2} \) \( \text{d7} \) 4 \( \text{Bc3} \) \( \text{Bd5} \) 5 \( \text{a7} \) \( \text{Bb5} \) 6 \( \text{c3} \) \( \text{Bb3} \) 7 \( \text{f2} \) \( \text{c3} \) 8 \( \text{Bb7} \) \( \text{e5} \)
9 \( \text{f3} \) \( \text{e5} \) 10 \( \text{fxe5} \) \( \text{Bxe5} \) 11 \( \text{Bb7} \) \( \text{b6} \) 12 \( \text{Bd6} + \) \( \text{f5} \) 13 \( \text{Bb7} \) \( \text{f6} \) 14 \( \text{Bc4} \) \( \text{g5} \) 15 \( \text{hXg5} \) \( \text{fxg5} \) 1/2–1/2

With doubled f-pawns, the defender can also draw as it is difficult to make progress without exchanging pawns.
6.109  
E. Eliskases – E. Bogoljubow  
Germany (13) 1939

1. e5 e6 2. d4 f5 3. e5 b4 4. c6 f4 5. a6

Since the black king can't penetrate into White's position, Bogoljubow decides to swap two pawns to play on with just e- and f- vs f-pawn:

5...g4 6. hxg4 hXg4 7. fxg4+ gXg4 8. f3

Trying to exchange pawns with 12 f3? leads to disaster after 12...f4! 13. b3 (13. xe4+ xxe4 14. fxe4 xfe4 15. f2+ e5 -++) 13...d2+ 14. b1 d3 =+

12...d2 13. a2 f5

After 13...e3 14. fxe3+ e5 e3 White draws by

15. e3 =+

16...e3 17. a4+ e5 18. e3 f2+ 19

Doubling Black's pawns is a good solution to the problems. 27. a3? is wrong: 27...f3+ 28. b2 a3=

27...exf3+ 28. f2 b2+ 29. e1 h2

29...f2+ 30. f3 g3+ 31. f2 h3+ 32. e3+ xf3+ is stalemate.

30. b5 h5 31. a5 h5 32. f2 e4 33

33. h1! e3 34. h1! f2+ 35. h1 f3 is stalemate.

33...h5?

33...e5? 34. h1 e5 e5 --

34. f2 e4 35. f1 e3 36. e1 ½-½

Exercises
(Solutions on pages 382-3)

Can Black (to move) hold on?

Black played 1...a3 and White resigned. Was that justified?

Is Black (to move) winning?
Can you spot the right defence for Black?

Can White (to move) survive?

C) Pawn Races

While there are winning chances if the attacker has more dangerous passed pawns or if the defending king is passively placed, the drawish tendency of rook endings is also seen when it comes to races, since the defending rook can sacrifice itself for the passed pawn.

In the following diagram, despite Black's obvious advantages Korchnoi could still have saved himself:

1. d2 #g4 2 d4 #f5 3 #e7 #d5
2...#g6 4 #g2 #e+ 4...#e7 5 #d6 #e4 6 #d5 #e6 7 #e5! = 5 #f7 6 #g4 6 #e6 #f3 7 #xg3+ #xg3 8 #d5 #e4 9 #d6 =

4 #d3! 5 #f4 5 #e6 #g5 6 #d5?

Probably Korchnoi missed the following zwischenschach. Otherwise he would doubtless have found 6 #e1! #e4 6...#g6+ 7 #f7 #h6 (7...#d6 8 #e7 #d5 9 #e6 =) 8 #d5 #e5 9 #g1 #h3 10 #d6 #xh6 11 #f6 = 7 #d5 #g6+ 8 #e7

The familiar shouldering-off motif also applies here:

1...#g4?

Black chooses the wrong side of the pawn. 1...#e4 is necessary in view of the coming rook vs pawn battle: 2 #e1+ (2 b7 f5 3 b8= #xb8 4 #xb8 #f4 =) 2...#f4 3 #h1+ #e5 4 #b7 5 #e1+ #f4 6 #b1 (6 #c7 #f8 7 #b8= #xb8 8 #xb8 #g3 =) 6...#c3 7 #b3+ #e4 8 #b8= #xb8 9 #xb8 #f4 10 #e8+ #d4 =.
2 b7 f5 3 b8=\n/xb8 4=\n/xb8 f4 5=\n/d5 f3 6=\n/e4 f2 7=\n/f8=\n/g3 8=\n/e3 1-0

The motif is so characteristic that we give another example:

W

6.112

J.Lautier – S.Movsesian
Malmö 1999

1=\n/f4!
1=\n/h4? \n/e3 (1...e1=\n/ also wins) 2=\n/d8+=\n/c3
3=\n/e8+=\n/d4 → --
1...=\n/d4+ 2=\n/f5! =\n/d5+ 3=\n/f4 e1=\n/ 4=\n/xel =\n/xel 5=\n/g4! \n/e2 6=\n/g5! =\n/d6 7=\n/f5 \n/e3 8=\n/g6 =\n/d8 9=\n/a8 10=\n/f6 =\n/f4 11=\n/f7 =\n/f5 12=\n/g8=\n/xg8 13=\n/xg8 ½-½

However, sometimes it is not possible for the defender to shoulder the attacking king away:

W

6.113

J.Nunn – J.Smejkal
Lucerne OL 1982

1=\n/g5
1=\n/g5 \n/f2 2=\n/e8 e1=\n/1 (2...=\n/g3? 3=\n/e2+ =\n/e2 4=\n/f5 =\n/f5 3=\n/xel \n/xel! 3=\n/xel! 4=\n/f6! =\n/f6 4=\n/f4 (4=\n/f4 \n/e2 5=\n/g5 \n/g3 6=\n/h4 --) 4...=\n/f2 5=\n/g5 =\n/g2! --
1...=\n/f2 2=\n/f8+ =\n/e3
2...=\n/g2?? 3=\n/e8 e1=\n/ + =\n/ 4=\n/xel =\n/xel 5=\n/g6 =\n/f3 6=\n/g5 =
3=\n/e8+ =\n/d3 4=\n/h5 e1=\n/
4...=\n/g3? 5=\n/xel \n/xel 6=\n/g6! =\n/f3 7=\n/f5! =
5=\n/xel =\n/xel 6=\n/g6
6=\n/g6 =\n/g1 =\n/h6 =\n/e4 8=\n/g7 =\n/f5 9=\n/h7 \n/h1+!
(9...\n/i6? 10=\n/g8\n/ +) 10=\n/g8 =\n/g6 11=\n/f8 =\n/f1+ 12=\n/g8 =\n/a1 (12...=\n/i7?? 13=\n/i8 =) 13=\n/i8 =\n/i1+ 14=\n/g8 \n/h7 --
6...=\n/1!! =\n/i7 =\n/e4 8=\n/g6 =\n/f5 9=\n/g7 \n/h1+ 10=\n/g8 =\n/g6 11=\n/f8 =\n/f1+ 12=\n/g8 =\n/a1 0-1

The next procedure is also very typical:

B

6.114

D.Pavasovic – V.Zviagintsev
Portorož 1999

White can only save himself because his pawn is very far advanced:

1...=\n/e4+
1...=\n/e8 2=\n/xf2 =\n/xf2 3=\n/b5 =
2=\n/c5
Or:

a) After 2=\n/b5? Black can successfully interpose his rook: 2...=\n/f4! 3=\n/xf4 =\n/xf4 4=\n/a7 =\n/f1 + + + (Ribli in CBM 72),
b) 2=\n/e3 =\n/a3+ 4=\n/e2 =\n/a2+ 5=\n/ff1 =\n/1+ 6=\n/e2 =\n/e1+ 7=\n/d3 =\n/a1+ 8=\n/xf1 =\n/f1 9=\n/e4! =\n/f5 10=\n/b4! =
2...=\n/a4

6.111

J.Smejkal
Las Vegas 1982
2. 路f4 3 路xf4 车xf4 4 车a7 车f1 车5 车a8 =.
3 车b6 \(\frac{1}{2}-\frac{1}{2}\)

The next example combines this motif with techniques familiar to us from the rook vs pawn material:

6.115
M.Dvoretsky
Secrets of Chess Training, 1991

1...车a1!
Other moves fail:
a) 1...车f5? 2 车b5 车a1 3  车c5+! 车f4 (3...车f6
4 车c6+++) 4 车c4+! 车f3 5 车a4+--.

b) 1...车h5? 2 车b6! and then:
b1) 2...车h4 3 车b5! (3 车c4+? 车c4 4 车a8 车a4+: see Chapter 10) 3...车a1 4 车c4++–.

b2) 2...车a1 3 车c8! 车a7 4 车a7 车g4 (4...车g4
5 车b6 车f3 6 车f8+! 车e3 7 车g8! 车f4 8 车c5
+++) 5 车b6 and here:
b21) 5...车g5 6 车g8! (6 车c5? 车g4!=; body-check!)
6...车h4 7 车c5 车h3 8 车d4 车d4 2 车e3
车h2 10 车f2 ++ and White’s king arrives just in time.

b22) 5...车h4 6 车c5 车g3 7 车d4 车f8+! 8 车a8 车f1=; 8 车e4
++– 8...车c2 9 车g8! 车f3 10 车d3 车g3 11 车f8++–
2 车b6 车h1+ 3 车c6 车a1 4 车b7 车b1+
4...车a7+ 5 车a7 车f5 6 车b6 车g4 7 车c5
车e4!=
5 车c8 车a1 6 车b8 车f5!
6...车g4? 7 车c5+–
7 车a8 车xa8+ 8 车a8 车g4=

If one of the kings can’t support its passed pawn this is usually a large disadvantage. The following very famous study is actually quite typical:

6.117
T.Wedberg – H.Danielsen
Munkebo Z 1998

The additional pawns save White but he has to act very precisely:
1 车c6?
White should choose between:

a) 1...g1 #f7 2 d8 #f1 #f4 3 b7 #xg4+ 4 #h2 #f2 5 #f8+ #f4 =.

b) 1...g6 and now:

b1) 1...g7 2 d6d (2 b7? #xb7 3 #xg5 #b1 4 #e5 #d2 ++) 2...e4 3 b7 #xg4+ 4 #h2 #b4 5 d7 =.

b2) 1...d7 2 e5 #d1 3 e5 e1 w 4 xe1+ #xel 5 #f3 #d2 6 #e4 #b7 7 g5 = (H.Olafsson in CBM 67).

1...d7! 2 b7

2...e5 #d2 3 b7 #xb7 4 #d5+ #xe3 5 #e5+ #d3 6 #d5+ #e4 7 #d8 #b1 8 #e8+ #d3 9 #d8+ #c4 =.

2...#xb7 3 #d6 #b4 0-1

In the next example the extra pawns allow a win, but White has to be careful:

W

6.119

V.Golod – J.Willemze
Vlissingen 1998

1...#b4?

The correct way is 1...#e6! #d4 2 #c7 #g8 3 h8 w #xb8 4 #xb8 #e3 3 #b4+!! #d3 (5...#e5 6 f3 #f5 7 #b5+ #f6 8 #c7 e2 9 #b1 #g5 10 #h1 ++) 6 #xf4 e2 7 #f3+ #d2 8 #e3 ++ (Golod in CBM 66).

1...#f5

1...#e3? 2 f3 #f5 3 #b6 #g5 4 #a7 (4 #b1 #h4 5 #g1 e2 6 #c7 #xb7+ 7 #xb7 #h3 8 #c6 #h2 9 #e1 #g3 10 #xf2 11 #e8 #g2 12 #g8+ #f2 13 #d5 f3 14 #e4 #e2! =)

4...#xb7+ 5 #xb7 #h4 6 #g7 e2 7 #g1 #h3 = (Golod).

2 #c6

Or: 2 #b3 e3 3 fxe3 fxe3 4 #c6 #e4 =; 2 #b5 #g4 3 #d4 e3 4 fxe3 f3 =.

2...e3! 3 f3 #g5 4 #b1

4...#c7 #xb7+ 5 #xb7 #h4 6 #d6 #g3 7 #e5 e2 8 #xb1 #xf3 =.) 5...#h4 6 #xf4+ #g3 7 #f8 e2 8 #e8 #xf3 =.

4...#b4 5 #g1 #h3 6 #c7 #xb7+ 7 #xb7 #h2 8 #g8 e2 9 #e8 #g2 10 #xe2+ #xf3 11 #a2 #e3 12 #c6 f3 13 #d5 f2 14 #a1 #e2 15 #e4 f1 w 16 #a2+ #e1 17 #a1+ #f2 ½-½

6.119

P.Svidler – E.Lobron
Erevan OL 1996

The position is almost symmetrical, but White has already advanced to a5 and c3 and it is his turn. Nevertheless, with very accurate defence Black can hold on:

1 #c6 #h1 2 a6 #a1 3 #b4

After 3 #b5 one sample line runs 3...h4 4 #c4 h3 5 #h4 #b1+ 6 #c6 #a1 7 #b7 #b1+ 8 #a8 #h1 9 a7 h2 10 c4 #e5 11 c5 #d5 12 #b7 #b1+ 13 #c7 #a1 14 #b7 #b1+ 15 #a6 #a1+ 16 #b6 #b1+ 17 #a5 #a1+ 18 #a4 h1 w 19 #a8 w+ #c6 ±.

3...#g4

3...h4? 4 #c5+ #g4 5 #a5 #b1+ 6 #c5 #b8 (6...h3 7 a7 h2 8 a8 w #h1 w 9 #a4+ #g5 10 #g8+ #h5 11 #xf7+ #g5 12 #xf4+ ++) 7 a7 #a8 8 #b6 h3 9 #b7 h2 10 #a1 ++ (Makarychev in MegaBase 2000).

4 #c4+ #g3 5 #b5 h4 6 #a4 #b1+ 7 #c5 #b8 8 a7 #a8 9 #b6 h3 10 #b7 h2 11 #a1 11 #xa8 #h1 w+ 12 #b8 #h8+ 13 #b7 #h1+ =.

11...#a7+ 12 #a7 f5

12...#g2 13 c4 #h1 14 #xh1 #xh1 15 #b6 f5 16 #c5?! f4 17 #b6!! =.

13 #b6
13 c4 f4 14 c5 f3 15 c6 g2 16 c7 h1= 17
xh1 (17 g2+ f2 18 c8 e7+ 19 e8 e4+ =)
17...xh1 18 c8 f2 =.

Lobron resigned here, but the position is
drawn:

13...g2
13...f4? 14 e5 f3 (14...g2 15 d4 h1= 16 xh1
xh1 17 e4+=) 15 d4 f2 16 e3
f2 17 e2+ =.

14 g5 h1= 15 xh1 xh1 16 d4 g2
17 e5 f3 18 xf5 e3 19 e5 d3 20
d5 xc3 =

Two connected passed pawns are extremely
strong, especially when they are far-advanced
and well-supported:

W

6.120

S.Flohr – G.Thomas
Nottingham 1936

White’s attack crashes through:
1 zb4 b5 2 zb7+ zb8 3 e4 a4 4 zb7!?

Halting Black’s pawns, whereas White’s
can’t be stopped in the long run, which makes
all the difference.

4...b4?!

Black makes an interesting pawn sacrifice to
enable the b-pawn to run. The alternatives are
very grim: 4...c4 5 d6 c6 6 b5 7 e5
+- or 4...e8 5 d6 b6 6 f4 b7 7 c5 8 e6 b2
9 e7+ g8 10 b7+ =.

5 xb4 zb5 6 7 f8 7 7 a7+ 8 b7 8
a8+ c7 9 a7+ f8 10 b3 11 b7+ xg8
11...e8 12 h7 (12 d6? c5+ 13 c5 xexe4
14 b7 =) 12...e8 13 d6 b6 14 c5 b2 15 f6
g8 16 h1 =.

12 zb7 b2 13 zb1 a8 14 d6 zb4 15 e5 zb7
16 zd5 zb3 17 e6 e8 18 zb1 zd3+

18...b1 b1 19 zb8#. 19 zb5 ze3+ 20 zb4 zb3 21 zb8+ 1-0

If both kings support their pawns, the race is
usually more interesting:

B

6.121

P.Wells – J.Hector
Oxford 1998

Black has a slight advantage but White’s
counterplay is fast enough:
1...b5 2 g8 b4 3 e8+ d3 4 zb8 e3 5
h4 b3 6 e6 7 a6 8 zb6 9 a1 10 zb6 zb1 11
f4 a5 12 f5 a4 13 h6 =.

8 g3 b2 9 xb2
9 g5? zb6 10 e8+ zb3 =.

9...xb2 10 g5 f1
10...f8 11 g6 g8 12 zb4 a5 13 zb5 a4 14
h6 a3 15 h7 g6 16 zb6 zb2 =.

11 g6 a5 12 zb4 zb1 13 zb5? 13
f4!! zb1 (13...xh5?! 14 zb7 a4 15 zb7
a3 =) 14 zb5 a4 15 h6 =.

13...a4 14 h6
14 g7 a5 15 zb6 zb1+ 16 e6 zb1 17 h6 a2
18 h7 a1 zb1+ 19 zb6 zb6 =.

14...a3 15 zb7 a2 16 zb7 zb1 zb7
17 zb8 zb1+ 18 zb5 zb5+ 19 zb6 zb6-20 f7 zb1+ 21 zb8 zb1+ 22 zb7 zb6+ 23
zb8 zb8#

17 zb1 0-1

It is mate in 9: 18 zb4 zb1+ 19 zb5 zb5+
20 zb4 zb1+ 21 zb3 zb1+ 22 zb2 zb2+ 23
zb3 zb1+ 24 zb4 zb1+ 25 zb3 zb3+ 26
zb2 zb1#

We end with three examples where the dan-
gerous passed pawns have to be created first:
Black’s f-pawn is surprisingly strong, but White should have just enough resources to hold on:

1...\textit{f4!} 2 \text{hxg5}
2 \text{gxh5} \text{fxf4} 3 \text{g1} (3 \text{xf4} \text{gxf4} 4 \text{h5} \text{xe5} \rightarrow) 3 ... \text{gxh4} 4 \text{g7} b6 5 \text{xa7} \text{e5} =
2 ... \text{fxg3!} 3 \text{g1}
3 \text{xf8?} \text{g2} \rightarrow is the point of Black’s combination.

3 ... \text{f3+ 4 e2}
4 \text{e4} \text{f4+ 5 c3} \text{g4 6 f3} \text{g5 7 xg3?} \text{fxg3} 8 \text{hxg3} \text{e5} \rightarrow (Hecht in CBM 66).

4 ... \text{b3 5 g6} \text{xe6 6 c1} \text{xb2+ 7 f1} \text{f6 8 c7} \text{xe6} 9 \text{xb7} \text{f5} (D)

10 \text{d4}
10 ... \text{xb5 11 g2} \text{b3 12 a4 d4 13 a5 a3 14 a6 d3 15 f7 f4 16 a7 a2+ 17 g1 e3 18 e7+ f3 19 f7+ e2 20 e7+ d1 21 f1 d2 (21 ... g2+ 22 g1 d2 23 c7 e2 24 e7+ =) 22 c7 a3 23 g2 =.}
11 \text{g7?}
Otherwise:

a) 11 ... \text{f7+? also loses: 11 ... e6 12 f3 g2+ 13 g1 e5 14 a4 e4 15 f8 d3 =.}

b) 11 d7! is correct: 11 ... g2+ (11 ... e4 12 e7+ f3 13 f7+ e3 14 e7+ d3 15 a4 =)
12 g1 e4 13 e7+ f3 14 f7+ e3 15 e7+ d2 16 b7 d3 17 b6 c1 18 c7+ b1 19 b7 d2 20 d7 c2 21 c7+ d3 22 d7+ e3 23 e7+ f4 24 d7 =.

11 ... d3 12 e1
12 xg3 h1+ 13 f2 d2 =.
12 ... g2 0-1

The next example is easier:

White can create a passed e-pawn which will decide the issue:

1 g6! \text{fxg6}
1 ... b5 2 g7 d8 3 g3 bxa4 (3 ... g8 4 f5 bxa4 5 f6 =) 4 g8wd xg8 5 xg8 a3 6 f5 a2 7 g1 xc3 8 f6 =.
2 e6 \text{d8} 3 e5 b5 4 axb5 a4 5 e7 e8 6 \text{e6} a3 7 d7 a2
7 ... \text{exe7+ 8 xc7} \text{xb5} 9 h4 \text{c4} 10 \text{xc7}
\text{xc3} 11 \text{e2} =.
8 \text{e1}
8 \text{xe8 a1+} 9 f1+ 10 g7 =.
8 ... a8 9 e8 \text{xe8} 10 \text{xe8} \text{xb5}
1...@xc3 11 @d7 @c4 12 @xc7 @xb5 13 @a1 +.
11 @a1 @c4 12 @xa2 @xc3 13 @g2 e5 14 @xg6 1-0

Exercises
(Solutions on pages 383-4)

Black has just captured the g3-pawn with check and it seems that he isn’t far behind in the race. What had White prepared?

1 @e3 @h1+?! 
This only drives White’s king to a better position. 1...@a1 doesn’t waste precious time: 2 @d4 @xf4 3 @xc3 f5 4 @c5 @e4 5 @xc6 f4 6 b5 f3 =.
2 @d4 @xf4 3 @xc3 @e6?
Too passive. 3...f5! still saves Black; e.g., 4 a4 (4 @c5 @e3 =; 4 @xc6 @d1+ 5 @c5 @c1+ 6 @b5 @xc6 7 @xc6 @g4 =) 4...@g4 and now:
   a) 5 a5 f4 6 @xc6 @d1+ 7 @e4 @e1+ 8 @d3 (8 @d5 @d1+ 9 @e6 f3 =) 8...f3 9 @f6 @g3 10 b5 @a1 11 a6 f2 12 @c4 @a4+ 13 @c5 @f4 14 @xf4 @xf4 15 a7 @f1 16 @a8 @f2+ =.
   b) 5 @xc6 @d1+ 6 @e5 @e1+ 7 @d6 @d1+ 8 @c7 @d4 9 @g6+ @h3 10 @b6 f4 11 a5 f3 12 a6 @c4+ 13 @d7 @d4+ 14 @e7 @e4+ =.
4 a4 f5 5 a5 @g4 6 @a3 f4 7 a6 @e8
After 7...f3 8 a7 f2 9 a8= @f1= White has the all-important first check: 10 @g8+ @f5 11 @a5+ @f4 12 @f7+ =.
8 a7 @h8 9 @c5 f3 10 @b6 f2 11 @a1 @e8
11...@g3 12 @b7 @e8 13 @a8= @xa8 14 @xa8 +.
12 @xc6 @e6+ 13 @c5 @e1
White also wins after 13...@e5+ 14 @d4 @e1 (14...@e8 15 b5 ++) 15 @a8= @f1= 16 @xe1 @xe1 17 @e4+ ++.
14 @a8= @f1= 15 @e4+ 1-0
A nice way to finish Black off.

Find the right way to win Black’s rook.
D) One Side Has a Passed Pawn

In most other types of ending, an extra outside passed pawn would be a decisive advantage but the rook is such a strong counterattacking unit that it may not be possible to convert the material advantage into victory. In practice, these endings are particularly important since they often arise after one side manages to win a pawn in the middlegame, and the opponent seeks drawing chances by exchanging pawns and heading for a rook ending.

The material divides into the following three cases, but note that general issues of relevance to all cases are mostly discussed in the context of the rook’s pawn case.

D1: Rook’s Pawn
D2: Knight’s Pawn
D3: Bishop’s or Centre Pawn

D1) Rook’s Pawn

If the attacking king is near the passed pawn and the defending king badly placed, the win is usually within reach:

V.Korchnoi – J.van der Wiel
Wijk aan Zee 1984

White can regroup his pieces successfully:
1...\text{b6+} 2 \text{a}1 \text{g}7 3 \text{a}3 \text{f}6!!

After 3...\text{b}3?? 4 \text{a}2 \text{d}3 5 \text{e}2 \text{h}5 6 \text{a}4 \text{h}4
7 \text{b}1 \text{h}3 8 \text{g}3 \text{xf}3 9 \text{a}2 White’s rook finally
gets behind the passed a-pawn. In Praxis des Turmendspiels, Korchnoi stops here. We take it
a bit further: 9...\text{f}6 10 \text{a}5 \text{a}6 11 \text{c}2 \text{f}6
(11...f5 12 \text{c}3 g5 13 \text{b}4 \text{f}6 14 \text{b}5 \text{a}8 15
\text{a}6 \text{f}4 16 \text{xf}4 \text{xf}4 17 \text{a}3 \text{e}5 18 \text{h}xh3 +–) 12
The role of Black’s rook is especially interesting.

1...g5

1...g5? 2 g4 = with the idea f4 (Hecht in CBM 66) gives White enough counterplay.

2...h7 h5! 3...h6

Or: 3...g3 4 b4+ h5 5 b5 6...a5 7...a4 (4 g4 5...a3 6...a4 7...a5 8...a6 9...a7 10 a5 11 a4 12 a5 13 a6 14 a7 15 a8 16 a9)

2...h7 h5! 3...h6

3...f2 4...g1

4...g2 5...f4 6...e4 7...d3 8...c3 9...b3 10...a4 11...a5 12...a6 13...a7 14...a8 15...a9 16...a10

20...b7 f4 21...gxf4 gxf4 22...c6 +--

The next example provides another illustration of the winning procedure.

6.126

S. Kudrin – A. Onishchuk

Beijing 1998

The number of pawns is reduced, the drawing chances are not bad, especially if the defender has counterplay:

6.127

V. Alatortsev – V. Chekhov

USSR Ch (Tbilis) 1937

White’s rook gets behind the a-pawn and with extremely precise play he can win:

1 a7 a8 2 a2 a8

2...g2 3 a8+ a8 4...a8 5...d4+ a7 6...a6+ a7 7...d2 a8 8...d3+ a7 9...d2 a8 10...d3 a7 11...d4+ a7 12...d3 a7 13...d4+ a7 14...d3 a7 15...d4+ a7 16...d3 a7

White has calculated that ...a7 draws if his king is on the b-file or the sixth rank.
4...\he8+
4...\bf1 5 \hbp b6 \he8 6 \bc6 ++.
5 \bfp b6 \he8?! 6 \bc6!!
This move puts Black in zugzwang. Otherwise:
a) 6 a8\ew? \ep a8 7 \ep a8 \xf e2 8 \c5 \g2 =.
b) 6 \bfp b7 \ec7+ and White is making no progress.
c) 6 \ec2 \ec6+?! 7 \bfp b7? (7 \ec6 \he8 8 \ec2 \ec6+ 9 \c7 \ec8 10 \a2 ++; see the main line) 7...\ec2!! and then:
c1) 8 \xe e2? \f x e2 9 a8\ew (without check!) 9...e1\ew 10 \f d4 \g3 =.
c2) 8 a8\ew \xc e2 9 \g8+ \xf e2 10 \wd5 \ec3 11 \wd2+ \g1 12 \xc3 f2 =.
c3) 8 \ec6 \ec7+ 9 \c7 \ec8 10 \ec8 \ec7+ 11 \c7 \ec8 12 \ec2 \ec2 =.
6...\bf1
White has forced Black’s king to the first rank, so the defence...\ec2 becomes impossible due to \ec1+. For 6...\h8 7 \bfp b7! \bh7+ 8 \bfp b6! \h8 8...\h6+?! 9 \c6! \h8 10 a8\ew +++) 9 \ec2! \ec8 10 \c7?! + (10 \bfp b7? would allow the defensive resource 10...\ec2!! =), see the game.
7 \bfp b7 \ec7+ 8 \bfp b6 \ec8
8...\ec6+ 9 \c5 \ec8 10 a8\ew +--.
9 \ec2! \bg2 (D)

If both kings are still far away from the passed pawn, the drawing chances increase greatly. The following classic is only won due to the very passive position of Black’s rook (see next diagram).

First the rook moves behind the passed a-pawn, forcing Black’s rook to stay at a6:
1 \a4! \f f6 2 \f f3 \e 5 3 \e 3 \h 5 4 \d 3
\d 5 \c 3 \e 5 6 \a 2 \b 5 7 \b 3 \c 5

W

6.128

A Karpov – R Knaak
Baden-Baden 1992
Karpov manages to shepherd his a-pawn up the board without giving Knaak any counterplay:
1 \a 3 \g 5
1...\ec1+ 2 \d 2 \a 1 3 \c 2 ++ (Karpov in Inf 56/485).
2 \d 2 \g 6 3 \c 3 \a 5 4 \a 3 \h 5 5 \c 2 \a 8 6
\b 3 \b 8+ 7 \a 2 \a 8
7...\d 8 8 \c 2 \d 3 9 \a 4 \f 6 10 \b 2 \h 4 11 \a 5 +--.
8 \c 4 \f 5 9 \a 4 \f 6 10 \a 3 \e 5 11 \c 5+ \e 4 12 \a 5 \h 4 13 \a 4 \f 4
13...g4?! 14 \h x g 4 fxg 4 15 \h 5! ++ (Karpov).
14 \c 4+ \e 5 15 \b 4 \d 5 16 \b 5+ \e 4 17
\b 6 \f 4 18 \a 6 \g 4 19 \a 5 \g 3
19...\g x h 3 20 \b 4+ \g 5 21 \g x h 3 +--
20 \b 4+! \e 5 21 \f 3 \f 4 22 \e 4+ \f 5 23 \c 2
\f 6 24 \b 6 1-0
6.129
A. Alekhine – J. Capablanca
Buenos Aires Wch (34) 1927

7...\(\text{xa}5\) 8 \(\text{xa}5+\) \(\text{xa}5\) 9 \(\text{c}4\) \(\text{b}6\) 10 \(\text{d}5\)
\(\text{c}7\) 11 \(\text{e}5\) \(\text{d}7\) 12 \(\text{f}6\) \(\text{e}8\) 13 \(\text{f}4\) \(\text{f}8\) 14 \(\text{f}5\)
++.

8 \(\text{c}3\) \(\text{b}5\) 9 \(\text{d}4\) \(\text{d}6+\)
9...\(\text{b}4\) 10 \(\text{a}1\) \(\text{b}3\) 11 \(\text{c}5\) \(\text{b}2\) 12 \(\text{b}5\)
++.

10 \(\text{e}5\) \(\text{e}6+\) 11 \(\text{f}4\) \(\text{a}6\)
After 11...\(\text{f}6\) White can win with 12 \(\text{a}6\) \(\text{xa}6\)
(12...\(\text{e}8\) 13 \(\text{a}7\) \(\text{a}8\) 14 \(\text{f}3\) \(\text{b}6\) 15 \(\text{g}4\) ++) 13
\(\text{xa}6\) \(\text{xa}6\) 14 \(\text{e}4\) ++.

12 \(\text{g}5\) \(\text{e}5+\) 13 \(\text{h}6\) \(\text{f}5\) (D)

6.129A

14 \(\text{f}4??\)
14 \(\text{g}7\) \(\text{f}3\) 15 \(\text{g}8\) \(\text{f}5\) (15...\(\text{f}5\) 16 \(\text{f}4\) \(\text{f}6\)
17 \(\text{f}8\) \(\text{f}5\) 18 \(\text{g}7\) ++ Alekhine) 16 \(\text{g}7\) \(\text{f}4\)
17 \(\text{xg}6\) \(\text{f}xg6\) 18 \(\text{xg}3\) \(\text{f}xg3\) 19 \(\text{h}5\) \(\text{c}3\) 20
\(\text{a}4\) \(\text{b}5\) 21 \(\text{f}4\) \(\text{xa}5\) 22 \(\text{g}5\) ++ (Nunn in Secrets of Practical Chess).

14...\(\text{c}5\) 15 \(\text{a}3\) \(\text{c}7\) 16 \(\text{g}7\) \(\text{d}7\) 17 \(\text{f}5\)

17 \(\text{f}6\) \(\text{c}7\) 18 \(\text{f}3\) \(\text{xa}5\) 19 \(\text{f}5\) ++ (Averbakh).

17...\(\text{gxf}5\) 18 \(\text{h}6\) \(\text{f}4\) 19 \(\text{gxh}4\) \(\text{d}5\) 20 \(\text{f}7\)
\(\text{f}5\) 21 \(\text{a}4\) \(\text{b}5\) 22 \(\text{e}6\) \(\text{d}6\) 23 \(\text{h}6\)
23...\(\text{g}8\) \(\text{f}6\) 24 \(\text{f}18\) \(\text{xa}5\) 25 \(\text{g}7\) ++ ; 24...\(\text{g}6\) 25 \(\text{xf}7\) \(\text{g}4\) 26 \(\text{e}6+\) \(\text{xa}5\) 27
\(\text{f}5\) \(\text{h}4\) 28 \(\text{f}6\) ++ 25 \(\text{e}7\) ++.

23...\(\text{xa}5\)
After 23...\(\text{xb}7??\) it is harder, but White can reach the previous note with 24 \(\text{f}7\) \(\text{a}6\) 25
\(\text{g}8\) ++.

24 \(\text{e}5\) \(\text{a}1\) 25 \(\text{xf}5\) \(\text{g}1\) 26 \(\text{g}5\) \(\text{h}1\) 27
\(\text{f}5\) \(\text{b}6\) 28 \(\text{xf}7\) \(\text{e}6\) 29 \(\text{e}7\) 1-0

The rook is most often best placed behind the passed pawn, but there are exceptions:

W

6.130
A. Yusupov – J. Timman
Linares 1992

1 \(\text{a}1??\)
This automatic move is wrong as Black can get rid of his weak e-pawn. 1 \(\text{e}4\) was called for:
1...\(\text{a}5\) (1...\(\text{f}5\) 2 \(\text{e}5+\) \(\text{f}6\) 3 \(\text{a}5\) ++) 2 \(\text{e}2\)
\(\text{c}5\) 3 \(\text{e}5\) and now:
a) 3...\(\text{c}3\) 4 \(\text{g}5\) \(\text{a}3\) 5 \(\text{a}5\) ++,
b) 3...\(\text{xe}5+\) 4 \(\text{xe}5\) \(\text{xe}5\) 5 \(\text{e}3\) \(\text{d}5\) 6 \(\text{a}5\)
++,
c) 3...\(\text{c}3\) 4 \(\text{d}3\) \(\text{a}2\) 5 \(\text{a}5\) \(\text{a}3\) 6 \(\text{c}4\)
\(\text{a}6\) 7 \(\text{a}4\) 8 \(\text{a}5\) 9 \(\text{a}6\) 10
\(\text{a}5\) 2 \(\text{e}5\) \(\text{e}4\)
3 \(\text{fxe}5+\) \(\text{xe}5\) 4 \(\text{d}3\) \(\text{d}5\) 5 \(\text{c}3\) \(\text{c}6\) \(\text{b}4\)
\(\text{e}5\) = (Belavsky and Mikhailishin).
3...\(\text{xf}4\) 4 \(\text{xf}4\) \(\text{e}6\) 5 \(\text{e}4\)
5 \(\text{e}2+\) \(\text{f}6\) 6 \(\text{d}4\)
5...\(\text{g}5\) 6 \(\text{hxg}5\) \(\text{g}4\) 7 \(\text{f}3\) \(\text{a}5\) 8 \(\text{e}1+\) \(\text{f}5\)
9 \(\text{e}5\) \(\text{e}5\) 10 \(\text{e}3\) \(\text{a}5\) 11 \(\text{a}3\) \(\text{e}5\) 12 \(\text{e}3\)
\(\text{e}3\) 13 \(\text{e}2\) \(\text{f}6\) 14 \(\text{f}2\) \(\text{e}6\) 15 \(\text{e}3\) \(\text{d}5\)
16 a3 ñc6 17 ñc3 h4 18 g4 ñf6 19 ñf4 ñg6
20 ñf3 ñg5 21 ña2 h3 ½-½

If the attacking rook is in front of the pawn and the defending rook behind it, the position is usually drawn. However, the defender has to create active counterplay if the attacking king approaches the passed pawn.

6.131

V.Akopian – Ki.Georgiev
Las Vegas FIDE 1999

1...ña2 2 ñf3 ñg7 3 ñe3 ña1
3...ñf6 gives Black enough counterplay after both 4 ñf4+ ñg7 5 a4 f6 6 ñb4 g5 and 4 ña6+ ñf5 5 ñf3 ñb2.
4 ña6 ña2 5 ña4 ña1 6 ña6 ña2 7 a4
ña3+??
7...ñf6! a5 g5 9 ña8 gbxh4 10 gbxh4 ña4 11 f4
ñg6 = (Cv.Hansen in CBM 72).
8 ñd4 f6?
8...ña2! was called for (8...ñf3 is also possible) according to Hansen, who analysed:
a) 9 f3 ñg2 =.
   b) 9 f4 ña3 10 a5 ñxg3 11 ñb6 ñf3 12 ñe4 ña3 13 a6 ña5 =.
   c) 9 a5 ñxf2 10 ñc6 ñg2 11 a6 (11 ñc3 ña2
      12 ñc5 ña3 =) 11...ñxg3 12 ñc5 ña3 13 ñb6
      g5! 14 ñxg5 h4 15 ñf3 h3 and here:
      c1) 16 ñh6 ñb3+ 17 ñc7 ñe3+ 18 ñb7 ñh3+
      19 ñb6 h2 20 ñxh3 h1#. 21 ñb8 ñh2+ =.
      c2) 16 ñc5 ñxc3 17 ña8 ñg3 18 ñc6 ñxg5
      19 ñe3+ ñg8 20 ñxh3 ñg6+ =.
9 ña7+ ñh6 10 a5 g5
10...ñf3! 11 a6 ñxf2 12 ñc7 ña2 13 a7 g4
14 ñc5 gxf4 15 gxf4 ñg6 16 ñb6 +–.
11 ñc5 gxf4
11...ñg6 12 ñb4 ±.

12 gxb4 ña4 13 a6 ña2
After 13...ñxb4 it is Black’s undoing that the rook is placed on his fifth rank: 14 ña8 ña4 15 ña7 ñh7 16 ñb6 h4 (16...ñb4+ 17 ña5 ++) 17 ñd8 +–.
14 ña8 ñg6 15 ñb6 ñb2+ 16 ña7
A typical procedure: White’s king seeks shelter behind the a-pawn, which would be impossible if the pawn had already advanced to a7.
16...ñxf2 17 ñb8 ñf4 18 ñb5 ñxb4
18...ñe4 19 ñb7 ñe7+ 20 ña8 ñf5 20...ñe8+ 21 ñb8 ñe7 22 a7 ñf5 23 ñb4 ñe5 24 ñb8
24...ñb6+ ñf7 25 ñe7 f4 23 ñb8 ñe8+ 24 ñb7 ñe7+ 25 ña6 ñe8 26 ñb8 +–.
19 ñb6 ñe4 20 a7 ñe8 21 ña5 h4 22 a8 w
ñxa8 23 ñxa8 ñg5 24 ñc5 h3 25 ñh8 ñg4 26
ñd4 ñg3 27 ñe3 ñg2 28 ñe2 h2
28...ñg3 29 ñg8+ +–.
29 ñg8+! ñh3 30 ñf2! h1#+
30...ñh1 31 ñh8+ ñg4 32 ñxh1 +–.
31 ñf3! ñh2 32 ñg2+ ñh3 33 ñg6 ñh2 34
ñxf6 ñg1 35 ñg6+ 1-0

Advancing the pawn to the seventh rank normally eases the defender’s task as the attacking king then has no shelter in front of the pawn. However, if the defender’s pawn-structure is weakened, he might fall into zugzwang.

6.132

V.Kramnik – J.Timman
Wijk aan Zee 1999

1...ñg7?!
Or: 1...ñxe2 2 ñd8 +–; 1...ña4 2 ñh8 d3+ 3
ñe3 ñxe2 4 ñxe2 ñxa7 5 ñh7+ +–.
2 ñf5 ña5+ 3 ñe4 ña4 4 ñd5! ña1
4...ñh7 5 ñc5 ñg6 6 ñxb6 ñb4+ 7 ña5 ñb7
(7...ñb3 8 ñb8 ++) 8 ña6 +– (Ribli in CBM 69).
5 ♕xd4 1-0
Without the pawns on d4, f6 and e2, 6.132 is drawn, because White’s king has no shelter.

The next example shows good defence:

6.133
A.Chernin – A.Mikhalchishin
USSR Ch (Lvov) 1984

1...g5! 2 ♞f3
2 h5 g4 3 ♛a4 ♜f8 4 a3 ♛a2 5 ♛a6 ♜g7 =.
2...hxc2 3 hxg5 hxg5 4 ♛a5 ♜h7 5 a4 ♛a2 6 ♛g4 ♛xf2 7 ♛f5
Or: 7 ♛xg5 ♛g7 8 ♛c5 f6+ 9 ♛h5 ♛h2+ 10 ♛g4 ♛a2 11 a5 ♛g6 =; 7 ♛xg5 ♛a2 8 a5 f6 9 ♛c5 ♛g6 =.
7...a2 8 ♛xf7+ ♛g6 9 ♛a7 ♛a3! 10 ♛a6+ ♛g7 11 ♛a7+ ♛g6 12 ♛a6+ ♛g7 13 a5 ♛f7 14 ♛a8 ♛g6 15 a6 ♛a4+ 16 ♛f3
16 ♛h3 ♛xf6 17 ♛g7 ♛g7 18 ♛g4 ♛a3+ 19 ♛g2 ♛h7 =.
16...a3+ 17 ♛e4 ♛h5 18 ♛d5 ½-½
A possible continuation is 18...g4 19 ♛c6 ♛xg3 20 ♛b7 ♛b3+ 21 ♛a7 g4 22 ♛b8 ♛a3 23 ♛b5 ♛f2 24 ♛b6 g3=.

D2) Knight’s Pawn
Now we come to the knight’s pawn, which is more favourable for the attacker, as it is nearer to the kingside, so that the king saves tempi approaching it and the a-file gives him additional manoeuvring space. If the defending rook gets behind the passed pawn, the ending should nevertheless be drawn (see following diagram):

1 ♛f3
1 b4 is met by 1...a2 2 ♛f3 h6 ± with the idea ...g5 to force the rook away from its ideal post on f4, where it defends the pawns on b4 and f2 (Beliavsky and Mikhalchishin in Winning Endgame Technique).

1...h6 2 ♛d3 ♛g7 3 ♛f3 ♛b2 4 ♛e3 g5?
This is the wrong way to create counterplay.
Otherwise:

a) 4...f5?! 5 ♛d7+ ♛f6 6 ♛d6+ ♛g7 7 ♛b6 g5 8 h5 is also problematic for Black.
b) 4...h5! 5 f3 f6 6 ♛e4 ♛h6 7 ♛e4 ♛g7 8 ♛d4 g5 gives Black enough play; e.g., 9 hxg5 fxg5 10 ♛e5 h4 11 gxh4 gxh4 12 f4 ♛g6 and now:

b1) 13 f5+ ♛g5 14 ♛e3 ♛e2+ 15 ♛d4 (15 ♛d6 ♛f6 16 b4 ♛b2 17 ♛c5 ♛c2+ 18 ♛b6 ♛c8 19 b5 ♛h8 =) 15... ♛f6 16 b4 ♛e5 =.
b2) 13 ♛e3 ♛b1 14 ♛e4 ♛g1 =.

5 hxg5 hxg5 6 g4?
After 6 f4! White’s rook on d3 covers everything:

a) 6...gxf4+ 7 ♛xf4 ♛f6 8 ♛e4 ♛g5 9 ♛d4 ♛g4 10 ♛c3 ♛b1 11 b4 f5 12 ♛c4 ♛c1+ and then:

a1) 13 ♛c3? ♛xc3+ 14 ♛xc3 ♛xg3 15 b5 f4 16 b6 f3 17 b7 f2 18 b8 ♛h+ ♛g2 =; White’s king is just outside the winning zone.
a2) 13 ♛h3 ♛b1+ 14 ♛c3 ♛h3 (14... ♛c1+ 15 ♛b2 ♛c8 16 ♛b5 ♛b8 17 ♛b3 ♛a8 18 ♛b6 ♛b8 19 ♛b7 ♛h3 20 ♛a3 ++) 15 ♛f3 ♛g4 16 ♛f4 ♛g5 17 ♛d4 ♛g1 18 ♛d3 ♛b1 19 ♛c4 ♛c1+ 20 ♛c3 ++.

b) 6...f6 7 fxg5+ ♛xg5 8 ♛d4 ♛g4 9 ♛c3 ♛g2 10 b4 ++ (Beliavsky and Mikhalchishin).

6...f6?
Black should play 6...f5! 7 gxf5 ♛xf6, and now:

1. Novikov – L.Oll
Lvov Z 1990

6.134

In the next example, the advanced pawn gives White difficult.
a) 8...<f4 <f3xf2 9 <f3xd6+ <h3xf7 10 <g6 (10 <g6<e4 11 <g5<e4+ 12 <f4 <g3 13 <xg3 <f6+ =) 10...<f4+ 11 <e5 <b4 =.

b) 8 f3 <f3xf5 9 <e4d4 (9 <g5d5+ <f6 10 <b5<e2 =) 9...<f4 10 <c3 <f1 = and Black is fast enough (Belavsky and Mikhailchishin).

7...<f6+ <e5 8 <b6 <d5 9 f3 <b1 10 <d3<e5 10...<e5 11 <b5+ <e6 12 <c2 <f1 13 <f5<e4 14<e4 and White wins because his rook occupies an excellent secure outpost on f5.

11 <f6xb3+ 12 <e4 1-0

Black’s kingside pawns are too vulnerable:

12.<f8 (after 12...<f7 Black will lose all his pawns: 13 <d5<e5 14 <xg5<e5 15 <f4+<e4 16 <xh6<xf3 17 <g5 <e4 18 <g7 +) 13 <xf7 <f6 14 <f5<e8 15 <f6+ <e7 16 <a6 <f8+ 17 <xg5 <xf3 18 <g6 +=.

In the next example White’s pawn is further advanced, which makes the defender’s task very difficult.

6...<f6

A.Shariyazdanov – V.Genba
Moscow 1995

1...<e1+!

1...<e6? is wrong due to the passive position of Black’s rook: 2 <f4 ++ (compare 6.129).

2 <g2 <b1 3 <d5<e5?

3...<f6! 4 <e5<e6, as recommended by Hecht in CBM 46, is called for. Black should be able to defend, but it is certainly not easy.

4 <f3 <h3+

After 4...<f6 5 <e4 <e6 6 <e5+ <d6 7 <f5 <e6 8 <d4 the strong outpost on f5 <e6 8 <d4 the strong outpost on f5 gives White a winning advantage.

5 <e4? <xh3 6 <d3

6...<d6+<b3 7 <d6 <b2 (7...<b4+ 8 <d5 <xg4 9 <b7 <b4 10 <c6<e5 11 <d5<e5 12 <d5<e5 13 <d5+ ++) 8 <d5<xf2 9 <b7<e2 10 <c6<e5 11 <d5<e5 ++.

6...<b4 7 f3<e1

7...<f5?! 8 <f5 (8 <e5 hxg4 9 fxg4 <xg4+ 10 <d5<e4 11 b6 <a8 12 b7 <b6 13 <c6<e6 14 <c7<xb7+ 15 <xb7<xb7 =) 8...hxg4 9 <xg4<e5 and now:

a) 9...<h1 10 <xg4 <b1 11 <d5<e6 12 <f4<e6 13 <e5+ and then:

a1) 13...<d6 14 <g5 <b4 14...<f1 15 <f5<e5 16 <b6 <b2 17 <xf6 <xf6 18 <xf6<xf6 19 <xf6<xf6 18 <xf6<xf6 19 <xf6<xf6 19 <xf7+--.

a2) 13...<f1 14 <f3<e5 15 <e5<e4 16 <e4<e4 17 <f6<e6 18 <c5<xf4 19 <b6<e1 20 <e4+--.

b) 9...<h6 10 <xg4 <b6 11 <d5<e6 12 <f4<e6 13 <e4 followed by f4-f5 and White wins with his passed b-pawn.

8 <h3!!

Now the rook occupies an ideal position, supporting the passed b-pawn from behind and protecting the base pawn on f3. Nevertheless, White has to play precisely in order to win.

8...<e1+

After 8...<f1 9 <b6<e8 10 <b7<e1 11 <d5<e5 ++ White is much too fast.

9 <d5<e1+ 10 <e5<e1+ 11 <d7<e1+ 12 <c8<e1+ 13 <b8<e5 14 <b6<xf4 15 <b4<e5

15...<e4 16 <b7<xf4 17 <a7<e4 18 <b6<e6++.

16 <xf5 <h6 17 <b7 <xf4 18 <e7<e7 (NC)

19 <e6?? <b7 20 <xf7??

20...<xf7??

20...<xf7??

20...<xf7??

21 <b5 <f3 22 <e4<e4 23 <d3<e3 24 <e7<e7+<g2 25 <e2<e1 26<e7<e7 27 <f3<e7

28<e7

Not, of course, 28 <xg2?? stalemate.

1-0

Our analysis of the following example relies heavily on Speelman’s notes in Batsford Chess Endings (see next diagram).

White’s king isn’t very active at the moment so Black could have saved the position by the skin of his teeth.

1 <f1<e2 2 <e1<e1 3 <f3<e3 4 <d2<xf3

5 <e2

The critical moment is reached.

5...<f5?
Paradoxically, this move is wrong.
a) 5...\textit{exf3}?! is very risky:
\textit{a1}) 6 \textit{xf7+?} only leads to a draw since after 6...\textit{xf7} 7 \textit{b3} \textit{f3} 8 \textit{b8 wb} \textit{g7} = Black will put his rook on f5 and “can safely pass with his king forever” - Speelman.
\textit{a2}) 6 \textit{c7}! \textit{g2+} 7 \textit{b3} \textit{g1} 8 \textit{b2} \textit{g4} 9 \textit{c4} \textit{xh4} 10 \textit{b7} (10 \textit{e3} \textit{e4} 11 \textit{b7} \textit{e8} 12 \textit{c8} \textit{e3}+ 13 \textit{b2} \textit{c2}+ 14 \textit{c3} \textit{c3}+ 15 \textit{c4} \textit{e4}+ 16 \textit{c5} \textit{e5}+ 17 \textit{b6} \textit{e1} 18 \textit{c6}+ \textit{g7} and Black is still holding on) 10...\textit{b4+} 11 \textit{b3} \textit{xb7} 12 \textit{xb7} and it seems that Black can survive.

b) The seemingly passive 5...\textit{e3}! is right: 6 \textit{c7} \textit{e8} 7 \textit{b7} \textit{b8} 8 \textit{d3} \textit{b1} 9 \textit{xf7+} \textit{g4} 10 \textit{f4+} \textit{g3} 11 \textit{b4} \textit{g5}! (11...\textit{h3}?! 12 \textit{e2} \textit{g3} 13 \textit{e3} \textit{h3} 14 \textit{f4} \textit{h2} 15 \textit{e4} \textit{g3} 16 \textit{d5}++) 12 \textit{hxg5} 1 3 \textit{g6} 3 4 \textit{g7} 15 \textit{h2} 15 \textit{e1} \textit{b6} 1 6 \textit{e4} 17 \textit{e1} 1 8 \textit{d5} \textit{g2} 19 \textit{e6} \textit{g8} =.

\begin{center}
\begin{tikzpicture}
\node (a) at (0,0) {6 \textit{c7} \textit{b6} 7 \textit{b7} \textit{e8} 8 \textit{c3} 9 \textit{b1} 10 \textit{c5} \textit{f5} 11 \textit{xh4} 12 \textit{d5} \textit{g4} 13 \textit{b1} 14 \textit{e4} 15 \textit{g6} 16 \textit{c4} 17 \textit{xh4} 18 \textit{g6} =.}
\end{tikzpicture}
\end{center}

\textit{b7} 17 \textit{xf6} 18 \textit{gh4} 19 \textit{gb8} =.

The pawn-structure f6-g5-h6 vs f3-g4-h3 is very favourable for the attacker as it is not so easy to exchange pawns and the pawns on f6 and h6 are weak. Therefore, Black has to act carefully in the next example.

\begin{center}
\begin{tikzpicture}
\node (a) at (0,0) {1...\textit{d2}?}
\node (b) at (2,0) {2 \textit{g4}! \textit{g5}?! 3 \textit{g2} \textit{e6}}
\node (c) at (4,0) {3...\textit{f7} 4 \textit{b8} \textit{g6} 5 \textit{b4} \textit{b3} 6 \textit{b5} \textit{h5} 7 \textit{b6} \textit{hxg4} 8 \textit{hxg4} \textit{b4} 9 \textit{f3} \textit{g7} 10 \textit{g3} \textit{f3}+ 11 \textit{g2} \textit{b4} 12 \textit{f3} \textit{f2} 13 \textit{f1} \textit{f3} 14 \textit{e2} \textit{f7} 15 \textit{d2} \textit{xf3} 16 \textit{f8}! (16...\textit{d8}?) 17 \textit{f6} 18 \textit{gxf4} 19 \textit{e2} 20 \textit{f1} \textit{f2} = 16...\textit{f3} 17 \textit{xf6} 18 \textit{g7} 19 \textit{g6}+-.}
\end{tikzpicture}
\end{center}
D3) Bishop's or Centre Pawn

While the chances to convert a b-pawn are the best of all the queenside pawns, with the c-pawn there are still a lot of winning positions. However, in the next example the defender manages to create counterplay quickly enough in a typical way (see following diagram).

1 h4 g1 2 g3 f6!

Preparing ...g5 to create counterplay, which is the standard procedure in the given pawn-structure. If White plays hxg5 Black can create a passed h-pawn, while if White allows ...gxh4 his remaining pawns are weaker and Black's king will find it easier to penetrate.

3 Nc4

3...f4 4 e3 c3 5 e8 f5 6 c5 6 d4 e2 7 c5 dxf2 8 c6 c2 9 d5 f4 10 g8 g3 11 g6+ d8 g4 12 g6 f5 =) 6...g5 7 hxg5 f8 6 c6 h4 9 gxh4 gxh4 10 c7 e6 11 f3 d7 =.

3...f6 was called for.
Exercises (Solutions on pages 384-5)

How can Black most smoothly convert his advantage into victory?

Should White bring his king to the queenside or advance the b-pawn immediately?

Reference works:

Winning Endgame Technique, Beliaevsky and Mikhailchishin, Batsford 1995
Praxis des Turmendspils, Korchnoi, Olms 1995
Essential Chess Endings, Howell, Batsford 1997
E) Pawns on Both Wings

We divide the material as follows:

E1: Positional Advantage  233
E2: Material Advantage  241

E1) Positional Advantage

The topics now are:

E1a: Outside Passed Pawn  233
E1b: Seventh Rank  234
E1c: Active King  234
E1d: Space Advantage  236
E1e: Better Pawn-Structure  238

E1a) Outside Passed Pawn

The outside passed pawn can often be a valuable advantage, because the defender’s pieces are distracted further away from the other pawns. In the first example it is especially important that Black’s rook is placed very passively in front of the pawn:

1.\( \text{#f4!} \)

The rook uses its manoeuvring space to stop counterplay.

1...\( \text{#d4} \) 2.\( \text{b3 \#f7} \)

After 2...\( \text{d6} \), 3.\( \text{d4} \) puts Black in zugzwang; e.g., 3...\( \text{e6} \) (for 3...\( \text{f8} \) 4.\( \text{f6} \) 5.\( \text{f7} \) 6.\( \text{e2} \) -- see the game) 4.\( \text{e5} \) 5.\( \text{f6} \) 6.\( \text{e8}+ \) 6.\( \text{d4} \) 7.\( \text{d6} \) 8.\( \text{f8} \) 9.\( \text{e7+} \) 9.\( \text{e5} \) 10.\( \text{e6}+ \) 11.\( \text{f6} \) 12.\( \text{e3} \) --.

3.\( \text{f6} \) 4.\( \text{d6} \) 5.\( \text{e6} \) 6.\( \text{f2} \) (D)

5...\( \text{d6} \)

5...\( \text{xf6} \) 6.\( \text{xf6+} \) 7.\( \text{xd5} \) 8.\( \text{e7} \) 8.\( \text{c5} \) 9.\( \text{xb4} \) 10.\( \text{a5+} \) --.

6.\( \text{a2?} \) 7.\( \text{a6}+ \) 8.\( \text{d7} \) 8.\( \text{b6} \)??
8 \( \text{x}d5 \) also wins since after 8...\( \text{c}3 \), 9 \( \text{a}8 \text{f}3 \) 10 \( \text{f}7 \) is decisive.

1-0

If Black’s king blocks the pawn on f6 and the rook is on e4 in the initial position of 6.139, then it is drawn.

The next example is as famous as the first:

\[ \]

\[ \text{W} \]

\[ \text{B} \]

6.140

M.Botvinnik – M.Euwe
Groningen 1946

1 \( \text{b}4 \text{h}6 \)

1...\( \text{c}5 \) 2 \( \text{e}5 \text{x}d5 \) 3 \( \text{e}3 \text{c}3 \) 4 \( \text{e}6 \text{c}2 \) 5 \( \text{g}5+ \) ?

6 \( \text{x}g5 \text{d}4+ 7 \text{f}4 \text{e}8 \) (7...\( \text{c}5 \) 8 \( \text{e}5 \text{c}1 \) 9 \( \text{g}3= \) (Timman) 8 \( \text{e}1 \text{e}8 \) 9 \( \text{c}1 \) 10 \( \text{g}5= \) (Navara in NiC Magazine 1/02).

2 \( \text{g}5 \text{h}3 \) 3 \( \text{x}e3 \text{e}5 \) 4 \( \text{c}2 \text{c}3 \) 5 \( \text{d}3 \text{d}8+ \)

The pawn ending arising after 5...\( \text{f}4 \) 6 \( \text{x}c3 \) \( \text{x}c3+ \) 7 \( \text{x}e4 \) 8 \( \text{c}4! \) \( \text{f}4 \)

9 \( \text{d}5 \text{g}4 \) 10 \( \text{e}6 \text{h}4 \) 11 \( \text{f}6= \).

6 \( \text{c}3 \)

Not 6 \( \text{e}x \text{c}3 ?? \) \( \text{xe}4 \) and White’s king is cut off because 7 \( \text{d}2= \) loses to 7...\( \text{d}2 \) 8 \( \text{f}2 \) \( \text{f}3 \).

6...\( \text{d}4 \) 7 \( \text{c}3 \text{xe}4+ \) 8 \( \text{f}3 \text{h}4 \) 9 \( \text{c}6! \) \( \text{f}4+ \)

9...\( \text{f}5 \) 10 \( \text{c}5+ \) \( \text{e}6 \) 11 \( \text{c}6= \)

10 \( \text{e}3 \text{e}4+ 11 \text{f}3 \text{f}5 \) 12 \( \text{f}6+ \) \( \text{x}g5 \) 13 \( \text{x}g6+ \) 1/2-1/2

**E1b) Seventh Rank**

A rook on the seventh rank is notoriously strong. This is especially so if the enemy king is on the back rank or if there are a lot of pawns on their initial squares and the defending king and rook are forced into passive positions to defend them (e.g. \( \text{w}g2 \), \( \text{d}1 \), \( \text{a}5 \), \( \text{b}5 \), \( \text{f}2 \), \( \text{g}3 \), \( \text{h}2 \); \( \text{b}8 \), \( \text{a}8 \), \( \text{a}7 \), \( \text{b}7 \), \( \text{f}7 \), \( \text{g}7 \), \( \text{h}6 \); after 1 \( \text{d}7 \) White is clearly better due to his more active rook). We start with a position where the strong rook saved half a point:

\[ \]

\[ \text{W} \]

White is at the moment three pawns up, but his rook is unfortunately placed:

1...\( \text{f}4! \)

This move creates a shelter for the king.

2 \( \text{ex}f4 \)

After 2 \( \text{x}g5 ?? \) White is even in danger of losing: 2...\( \text{f}3 \) 3 \( \text{h}4 \text{a}1+ 4 \text{h}2 \text{xe}3 \) (4...\( \text{a}2+ \)

5 \( \text{h}3 \) \( \text{a}1 \) 6 \( \text{h}2 \) \( \text{a}2+ \) leads to an immediate draw) 5 \( \text{f}5+ \) \( \text{f}4 \) 6 \( \text{f}4+ \) \( \text{d}3 \) 7 \( \text{f}3 \) \( \text{d}2 \) 8 \( \text{h}5 \)

c2 \( \text{h}2 \) \( \text{c}3 \) 10 \( \text{xe}2+ \) \( \text{xe}2 \) 11 \( \text{h}3 \) \( \text{f}3 \) 12 \( \text{h}4= \).

2...\( \text{f}3 \)

White can’t prevent perpetual check:

3 \( \text{h}3 \text{a}1+ \) 1/2-1/2

In the following diagram, both black pawns are hanging but Smyslov ignored them:

1 \( \text{h}7+?? \) \( \text{b}8 \) 2 \( \text{b}6 \)

The b-pawn provides shelter for White’s king, preventing the usual defence with rook checks from behind.

2...\( \text{e}8 \) 3 \( \text{c}6 \text{f}4 \) 4 \( \text{b}7+ \) \( \text{c}8 \) 5 \( \text{a}7 \) 1-0

Due to 5...\( \text{b}8 \) 6 \( \text{c}7+ \) \( \text{e}8 \) 7 \( \text{a}8+ \) \( \text{d}7 \) 8 \( \text{xe}8 \) \( \text{xe}8 \) 9 \( \text{c}8++= \).

**E1c) Active King**

We have already seen that activity is crucially important in rook endings, so active pieces
might even compensate for material deficits. In the following we focus on the king:

\[
\begin{array}{c}
\text{W} \\
\text{6.142} \\
V. Smyslov – A. Konstantinopolsky \\
Leningrad/Moscow 1939
\end{array}
\]

\[
\begin{array}{c}
\text{W} \\
\text{6.143} \\
K. Landa – V. Potkin \\
Moscow 1999
\end{array}
\]

Black’s king is in a very unfortunate position. In the game Evseev even managed to weave a mating-net:

\[
\begin{array}{c}
\text{W} \\
\text{6.144} \\
D. Evseev – A. Fominykh \\
Nizhny Novgorod 1998
\end{array}
\]

\[
1. d4 \text{c2} \\
\text{After} 1...g8 White wins easily by 2 xg8+ xg8 3 c5 +-. \\
2. e5 d2 3 xf6 xg6 4 b3 h6 \\
4...h5? (Hecht in CBM 66). \\
5. b5 d2? \\
5...f6 6 g6 e5 7 xg5 exf4 8 d5 + is certainly better for White, but Black should be able to defend. \\
6. g4! xh7 \\
\text{After} 6...fxg4 7 xg6, Black will be mated on his back rank. \\
7. g5 hxg5 \\
7...g2 8 b7 hxg5 9 fxg5 d2 10 g6+ xh6 \\
11. b8 xh5 12 g7 +-. \\
8. xg5 e5 9 xxe5 f4?! \\
9...d6+ 10 xf5 d4 11 xa5 xh4 12 a7 +-. \\
10 e7+ 1-0 \\
\text{It is mate in three more moves.}
\]
E1d) Space Advantage

Possessing more space is advantageous because pawn breakthroughs become easier and pawn races are often won. However, piece activity is again crucially important.

The d6-pawn is weak and Black’s king is further away from the action than its white counterpart. Together with the right to move, this adds up to a winning advantage for White:

1  \[ \text{e6} \] \[ \text{d7} \] 2  \[ \text{b8} \] \[ \text{f6} \]
2...\[ \text{b7} \]+ 3  \[ \text{c6} \] \[ \text{b3} \] 4  \[ \text{xd6} \] \[ \text{xc3} \] 5  \[ \text{c7} \]
\[ \text{d3} \] 6  \[ \text{d6} \] \[ \text{f6} \] 7  \[ \text{a4} \] \[ \text{xf3} \] 8  \[ \text{d7} \] \[ \text{d3} \] 9  \[ \text{d8} \] \[ \text{+} \]
\[ \text{xd8} \] 10  \[ \text{xd8} \]++.

3  \[ \text{c6} \] \[ \text{d8} \]

After the extremely passive 3...\[ \text{c7} \] 4  \[ \text{a8} \]
(Hecht in CBM 62) puts Black in a fatal zugzwang; e.g., 4...\[ \text{g5} \] (4...\[ \text{c4} \] 5  \[ \text{g5} \] \[ \text{hxg5} \] 6 \[ \text{hxg5} \] \[ \text{f5} \] 7
\[ \text{gxh6} \] \[ \text{xf6} \] 8 \[ \text{xd7} \]+) 5 \[ \text{hxg5} \] \[ \text{hxg5} \] 6  \[ \text{c4} \] \[ \text{f6} \] 7
\[ \text{b8} \]+++.  

4 \[ \text{a7} \] \[ \text{e4} \]

Trying to activate the rook with 4...\[ \text{b8} \] fails as the d-pawn becomes too strong: 5  \[ \text{xd6} \] \[ \text{b3} \] 6  \[ \text{c7} \] \[ \text{xc3} \] 7 \[ \text{d6} \]+.  

5 \[ \text{f4} \] \[ \text{b8} \]

5...\[ \text{h5} \] 6  \[ \text{g5} \]+ \[ \text{xf5} \] 7 \[ \text{xf7} \]+ \[ \text{g4} \] 8 \[ \text{g7} \] (the immediate breakthrough by 8 \[ \text{f5} \] also wins)
8...\[ \text{g4} \] 9 \[ \text{g6} \] \[ \text{g4} \] 10 \[ \text{xd6} \]+.  

6  \[ \text{g5} \] \[ \text{hxg5} \] 7 \[ \text{hxg5} \] \[ \text{xf5} \] 8 \[ \text{xf7} \]+ \[ \text{e4} \] \[ \text{g4} \] 9
\[ \text{xd6} \] \[ \text{b3} \] 10  \[ \text{e6} \] \[ \text{xc3} \] 11  \[ \text{d6} \] \[ \text{d3} \] 12  \[ \text{f5} \] \[ \text{g5} \]
\[ \text{b5} \] 13 \[ \text{g6} \] \[ \text{b3} \] 14  \[ \text{f6} \] \[ \text{d3} \] 15 \[ \text{d7} \] \[ \text{c3} \] 16 \[ \text{g7} \]+-  

The first check after both sides promote is decisive: 16...\[ \text{c2} \] 17 \[ \text{g8} \]+ \[ \text{c1} \] 18 \[ \text{g2} \]+ \[ \text{f3} \] 19
\[ \text{e7} \]+-- (Meulders).

At first sight it looks very good for White, but because of the very closed nature of the position Black can hold on by passive defence, which is unusual for rook endings:

1  \[ \text{g4} \] \[ \text{e7} \]
1...\[ \text{hxg4} \]+? 2  \[ \text{hxg4} \] \[ \text{e7} \] 3 \[ \text{g5} \] \[ \text{f7} \] 4 \[ \text{a3} \]
\[ \text{h8} \] 4...\[ \text{xc8} \] 5 \[ \text{f3} \]+ \[ \text{g7} \] 6 \[ \text{f6} \]+- 5 \[ \text{c3} \]
\[ \text{h5} \] 6 \[ \text{g4} \] \[ \text{f5} \] 7 \[ \text{g7} \]+- (Stohl in CBM 63).

2  \[ \text{g5} \] \[ \text{d7} \] 3 \[ \text{e4} \] \[ \text{e7} \] 4 \[ \text{f4} \] \[ \text{f4} \] 5 \[ \text{xf4} \] \[ \text{d7} \]
6 \[ \text{e4} \] \[ \text{e7} \] 7 \[ \text{d4} \] \[ \text{d7} \] 8 \[ \text{c4} \] \[ \text{c8} \]+ 9 \[ \text{b4} \]+?
\[ \text{b8} \] 10 \[ \text{b5} \]
10  \[ \text{a1} \] \[ \text{e8} \] 11 \[ \text{f1} \] \[ \text{e7} \] 12 \[ \text{f6} \] (12 \[ \text{c1} \] \[ \text{d8} \]
13 \[ \text{c7} \] \[ \text{e7} \])+ 12...\[ \text{g8} \] 13 \[ \text{e6} \]+ \[ \text{d7} \] 14 \[ \text{b5} \]
\[ \text{g7} \] and White can’t make further progress.

10...\[ \text{e7} \]

Black should defend his fortress passively by 10...\[ \text{d8} \]. He probably missed White’s next shot:

11 \[ \text{xb7} \]+! \[ \text{xb7} \] \[ \text{d7} \] 12  \[ \text{a6} \] \[ \text{b8} \]
12...\[ \text{d7} \] 13 \[ \text{b7} \] \[ \text{d8} \] 14 \[ \text{a7} \] \[ \text{e7} \] 15 \[ \text{a8} \]+.  

13 \[ \text{a7} \] \[ \text{c8} \] 14 \[ \text{b7} \] \[ \text{e8} \] 15 \[ \text{b8} \]+ \[ \text{b1} \] 16
\[ \text{b7} \] \[ \text{e1} \] 17 \[ \text{c8} \] \[ \text{c1} \] 18 \[ \text{e7} \]+-  

In the next example a space advantage, together with more active pieces, proves sufficient to win (see following diagram).

White can open up more lines on both wings. In particular, the f5 thrust at the right moment breaks down the defence:

1 \[ \text{h4} \] \[ \text{f7} \]
1...\[ \text{e5} \] 2  \[ \text{xd6} \] \[ \text{d7} \] 3 \[ \text{b6} \] \[ \text{f7} \] (3...\[ \text{f7} \] 4
\[ \text{d6} \] \[ \text{f5} \] 5 \[ \text{f7} \] 6 \[ \text{xd5} \]+) 4 \[ \text{f6} \]+ \[ \text{g7} \]

5 \[ \text{d6} \] \[ \text{g6} \] 6 \[ \text{cxd6} \] \[ \text{xf7} \] 7 \[ \text{f5} \] \[ \text{gxf5} \] 8 \[ \text{g6} \]+-  

2 \[ \text{bxc6} \] \[ \text{bxc6} \] 3 \[ \text{b8} \] \[ \text{e7} \]

Or:

1 \[ \text{b7} \]
6.147

J. Capablanca – R. Michell
Ramsgate 1929

a) 3...\(\text{e}6 4 \text{f}8 \text{g}7 5 \text{f}6 + \text{d}7 6 \text{f}5 \text{gx}f5 7 \text{xf}5 +\).

b) 3...\(\text{g}7 4 \text{f}5 \text{gx}f5 5 \text{hx}5 \text{e}7 6 \text{g}6 \text{f}4 (6...\text{f}6 7 \text{h}6 \text{f}4 8 \text{f}8 + + + 6...\text{e}6 7 \text{h}7 + \text{g}8 8 \text{h}6 \text{e}8 9 \text{g}7 + \text{h}8 10 \text{xf}7 + 7 \text{exf}4 \text{e}3 8 \text{f}5 \text{e}2 9 \text{f}5 \) and White wins as 9...\(\text{e}1 \text{W} 10 \text{f}6# \) is mate.

4 \text{c}8 \text{b}6 5 \text{c}7 + \text{g}8 6 \text{g}3 \text{f}8 7 \text{f}5 \text{gx}f5 8 \text{f}4 \text{e}7 9 \text{xc}6 \text{b}4 10 \text{h}6 \text{g}7 11 \text{hxh}4 1-0

In the next position the advantage isn’t large enough:

6.148

A. Miles – A. Ziegler
Malmö 1996

White’s king occupies a very good position, but with accurate defence Ziegler could have drawn:

1 \text{b}7
b) 5...h4! 6 gxh4+ gxh4 7 hxg7 hxg7 8 xa2 ++.

4 h3?

4 h4 xa2 (4...h7 5 d2 h6 6 xe2 g6 7 f2 =) 5 xh2 f1 6 h3 f6 7 g3 f5 8 g2
5 g3 h5 6 xg5 f1 7 f3 f5 11 f3 f4 12 f2 =.

4...h4! 5 f3

Or: 5 g4 g5 6 f7 g6 7 e7 xa2 8 xe6
8 g2 (8 f3 xh4 9 f4 g5+ =) 8...xh4 9
f2 g5 10 f2 g4 =.

5...xa2 6 gxh4

3...g1 7 g4 d1 8 xa3 xd4+ 9 f3
hxg3 =.

6...b2

6...a1!! 7 f4 a2 8 f2 h5 9 f3 xh4
-

7 g3+ h6 8 f4 a2 9 a3 d2 10 e3
b2 11 a8 b3+ 12 f4 d3 13 h8+

Black also wins after 13 xa2 d4+ 14
f3 e4 =.

13...g6 14 h5+ f7 15 a8 xd4+ 16
g5 d2 17 a7+ g8 18 a8+ h7 19 h6

White will be mated: 21 xa1 g6+ 22 h4
xh6 23 a8 g5#.

E1e) Better Pawn-Structure

We start with an isolated pawn (see following diagram).

Black should be able to hold on despite his pawn weaknesses on b6 and d5 but it is certainly not easy.

1 f3 f8
\(19 \text{ax}6 19 \text{c}5++) 15 \text{bx}5 \text{ax}6 16 \text{e}5 (16 \text{a}6? \text{b}6 17 \text{f}7? \text{ex}f5 18 \text{xd}5 \text{f}4! 19 \text{gx}f4 \text{b}4 20 \text{e}4 \text{h}3!! +++) 16...\text{b}6 17 \text{f}5 \text{ex}f5 18 \text{xf}5 \text{d}4 (18...\text{xe}5 19 \text{e}5++) 19 \text{a}6 \text{d}3 20 \text{a}7 \text{d}2 21 \text{a}8 \text{d}1 22 \text{e}8++.

11...\text{e}6 12 \text{e}3??

Both 12 \text{xe}6+ and Mikhailevski's suggestion 12 \text{e}5?? offer very good winning chances:

12...\text{f}6 13 \text{b}5+ \text{e}7 14 \text{e}7+ \text{d}7 (14...\text{d}8 15 \text{b}7++) 15 \text{e}3 \text{f}5 16 \text{e}3!++.

12...\text{f}6 13 \text{e}7 14 \text{e}6 = (Ribli).

13...\text{f}6 14 \text{f}2 \text{f}5 15 \text{b}5 \text{h}5 16 \text{f}1 \text{h}4 17 \text{f}2 \text{hx}g3 18 \text{hx}g3 \text{b}8 19 \text{g}4?! \text{f}4+ 20 \text{xf}5 \text{e}4 21 \text{e}6 \text{e}7 22 \text{e}2

22...\text{e}3 23 \text{f}4!!!

A very dangerous sacrifice to activate the rook. In the end White tries to win with his g-pawn.

23...\text{gxf}4 24 \text{e}4 \text{f}3! 25 \text{e}4 \text{e}3??

25...\text{e}3! 26 \text{xf}7+ \text{f}8 27 \text{xb}6 (27 \text{d}5 looks more critical, but Black should be able to hold on: 27...\text{e}6 28 \text{e}4 \text{xb}5 29 \text{xf}3 \text{d}5 30 \text{f}4 \text{e}7?) 27...\text{e}6+ 28 \text{f}5 \text{g}6 29 \text{xf}3 \text{g}4 = (V.Mikhailevski).

26 \text{d}6 \text{b}8 27 \text{e}7 \text{e}7 28 \text{g}5 \text{e}5 29 \text{xf}7

Or:

a) 29...\text{g}7 30 \text{f}6+ ++.

b) 29...\text{e}5+ 30 \text{f}6+ \text{d}6 31 \text{g}6 \text{xb}5 (31...\text{e}5 32 \text{xf}3 \text{xb}5?! 33 \text{f}5++) 32 \text{xf}3

\text{xe}7 33 \text{h}6 \text{b}1 34 \text{g}6 \text{g}7 35 \text{h}1+ 36 \text{g}6 \text{g}4+ 37 \text{h}7 \text{h}1+ 38 \text{g}8 \text{b}4 39 \text{f}7+ \text{e}8 40 \text{e}7 \text{h}4 41 \text{b}8++ 42 \text{g}6 \text{e}8 43 \text{e}6+ \text{d}7 44 \text{f}7++.

c) 29...\text{xb}5 30 \text{g}6 \text{e}5+ 31 \text{f}6+ (not 31 \text{f}8+? \text{d}6 32 \text{xf}3 \text{g}5 33 \text{g}7 \text{b}5 34 \text{g}8+ \text{h}8+ 35 \text{xe}8 \text{e}5 =) 31...\text{d}6 32 \text{g}7 and then:

c1) 32...\text{f}3 33 \text{g}6 \text{e}1 34 \text{xf}2 \text{g}1 35 \text{f}6++.

c2) 32...\text{e}8 33 \text{g}6 \text{b}5 34 \text{f}8 \text{f}2 35 \text{xf}2 \text{g}8 36 \text{f}5++.

c3) 32...\text{e}6+ 33 \text{g}5 \text{xe}2 34 \text{xf}3 \text{e}7 35 \text{g}6 \text{g}2+ 36 \text{h}7 \text{h}2+ 37 \text{g}8 \text{b}5 38 \text{f}7+ \text{d}6 (38...\text{e}6 39 \text{d}7 \text{b}2 40 \text{b}6+ \text{h}7 41 \text{h}7++) 39 \text{f}5 \text{b}4 (39...\text{e}6 40 \text{f}7 \text{h}7 41 \text{h}8++ 40 \text{f}7++.

30 \text{g}6 \text{e}5+

30...\text{e}5+ 31 \text{g}7 \text{f}1 \text{xf}1 \text{g}5 33 \text{f}7 \text{b}5 34 \text{g}8++.

31 \text{f}8++! 32 \text{f}6 32 \text{xf}2 \text{g}5

32...\text{hx}5 33 \text{f}6+ \text{e}5 34 \text{f}7++.

33 \text{f}7 \text{e}5 (D)

\[6.150A\]

Having two weak isolated pawns is generally very unfavourable:

\[6.151\]

S.Flourh – M.Vidmar

\textit{Nottingham 1936}

Black is lost because his rook is extremely passive and his pawns are not far advanced:

1 \text{h}4?! \text{e}6 2 \text{g}4 \text{e}8 3 \text{h}5

A typical procedure: White creates another weakness on the kingside.

3...\text{g}5

3...\text{gx}h5+ 4 \text{hx}h5 \text{g}8 5 \text{g}4 \text{d}6 6 \text{xa}6 \text{g}5+ 7 \text{h}4++.
4 g3 a7 5 f3 a8 6 e4 a7 7 e5+ d6
7...xf6 8 c5 c7 9 a5 a7 10 d4 d7+ 11 a5 a3 (11 a5 d5++) 12 xc6 xa5 13 bxa5 f5 14 b6 ++ 12 xa6 xg3 13 xexe6+ f5 14 b5 (14 a4? a3+ 15 b6 xexe6+ 16 xexe6 g4 =) 14...xa3 (14...a3+ 15 b4 ecx6 16 bxc6 e6 17 e5 ++ 15 b6 b3 16 xexe6 g4 17 e6 ++
8 e8 c5
9...a6 10 a5 f7 11 g4 ++ 8...a5 9 h8 e7+ 10 d4 e6 11 bxa5 c5+ 12 c4 a6 13 a4 b6 14 a5 f6 15 g8 ++
9...a8+ c6
9...a7 10 h8 xxb4 11 h7+ b6 12 a7 a8 13 a4 b6 14 b5 ++
10...a5+ b6 11 cxe5 a7 12 a6 c6 13 a6 a5 14 b5 a5 15 b5 1-0

If the isolated pawns are further advanced, the drawing chances increase because the counterplay is faster:

If the defender has several weaknesses and is passively placed, he usually perishes:

\[
\begin{array}{|c|c|}
\hline
W & B \\
\hline
\end{array}
\]

6.152
K. Müller – F. Roeburg
Göttingen 1996

1 e4 a5 2 g2 f5 3 h3 d5 4 a4 a7 5 h4 c5 6 c4
6...hx5?! h6 7 h6 a8 8 h7 a7 =
6...d5 7 e2
7...hxh5 h7+ 8 g5 h2 9 a4 e2 10 a5 f3 11 b4 (11...xg3+ 12 xxf5 xexe6 13 bx5 b4 =)
7...a4 8 xh5 xxb3 9 xxb3 b7 10 g5
10 a3 f7+ 11 g5 xh2 12 f3 h8 13 xxf5+ h4 ±
10...xb3 11 xfx5 d4 12 g4 c4?

12...xf3+! is correct:

a) 13 e6 e3+ 14 d6 c4 15 g5 d3 16 g2 c3 17 g6 c2 18 g1 d2 19 g7 e8 20 g2+ d3
b) 13 g6 c4 14 h4 d3 15 e2 c3 16 h5 c2 17 a1 f4 18 g5 e4 19 h6 c1 w 20 xxe1 xxe1 21 h7 h1! 22 a7 a4 23 g6 f5 =
13 g5 d3 14 e1 b5+ 15 e4 c3 16 g6 d4+ 17 g5 b2
17...c2 18 g7 b1 19 c2 xc2 20 h4 a1+ 21 d1 a2 22 c1 b4 23 c1 f5 24 h6 f6 25 g8 w ++

18 h4 g2+ 19 h6 d2 20 a1 c2 21 g7
19 g4 22 h5 a4 23 g1
23 g8 w xxa1 24 g5+ d3 25 d5+ c3 26 wxc5+, picking up the rook, is also possible.
1-0

Due to 23...g4 24 xg4 c1 w 25 g8 w ++

First Black’s rook moves to the strong outpost b3, and then the advance of the king proves decisive:

1...b5 2 e2 b3 3 f2 f6 4 e1 h6 5 g2
5...d1 d3+ 6 h2 xxd2 7 xxd2 e6 8 c5 d5 9 h3 h5 10 h4 b5 11 e4 a4 12 e4 b3 =
5...d6 e1 d1
6 g6+ d5 7 xxe6 xh2 =
6...d5 7 c2 b3
Not, of course, 7...xd4? 8 e4+ c5 9 h4 =
8 Nh2 d2 e4 9 b1 h5 10 a2 b4 11 f2
xd4 12 f1 b5 13 e2 h3 14 d2+ d3
14...e5, followed by...d6 and ...c5 saves
several moves compared to the game.
15 Nf2 e4 16 c2+ d5 17 g2 h3 18
f2+ e5 19 c2+ b6 20 f2 c5 21 f6+
a5 22 f2 d4?
22...e4 23 axb4+ exb4 was correct, followed
by...c4, ...h4 and ...a3, winning as in the game.
23 g2 c3 24 b4+?
24 bxcl cxc3 25 bxc2 bxc2+ 26 a2 h4 27
f2 h3 28 f6 e3 29 c6 e2+ 30 c1 c6 2 31
f3 c6 32 a1 b4 33 axb4 b5 34 f3
xb4 35 f3 = (see 6.81).
24...cxb3+ 25 f3 c2+!
25...h4? spoils it: 26 c2 b6 27 b4 =.
26...exc2 axa3 27 b2 f3 28 e2 h4 29
f2 (D)

B

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29...h3?!
A slight inaccuracy. It was easier to advance
out of passive moves
29...h3 30 e2 a4 31
c2 b4 32 f2 e3 followed by...h3 and then
...e1-g1-g2.
30 e2
30 a4?! is more tenacious: 30 f2+ 31
b3 h2 32 d3 = (6.80A).
30 a4 31 b1 f1+ 32 c2 b4 33 d3
d1+ 34 c2 g1 0-1
Due to 35 e3 g2+ 36 b1 h2 37 g3
b3 38 g8 g2 followed by...h2 and ...g1+.

E2) Material Advantage
With pawns on both wings the probability that
an extra pawn can be converted into victory is
higher than in the one-wing case. However,
even in won positions accuracy is usually re-
quired due to the drawish tendency of rook end-
ings. The following classic demonstrates that
activity is again crucially important:

6.154
A.Rubinstein – Em.Lasker
St Petersburg 1909
1...d1+ 2 f2!
White gives one pawn back to achieve max-
imum activity. After 2 f1? d2 3 b1 d6
(3...e2?! 4 f1 c3? 5 e1 +++) it would be
very difficult to make progress.
2...d2+ 3 f1 c2 4 a5
Forcing Black's rook back to a very passive
position.
4...b7 5 a6
Cutting off the king along the 6th rank.
5...f8 6 c4 c7 7 h4
7 f4?! c2 8 f3 c3+! would make the
win more troublesome according to Speelman
in Batsford Chess Endings
7...f8 8 g4 f8 9 f4 c7 10 h5 b6
Keeping the pawns on their initial squares
also loses: 10...f7 11 c5 b7 12 g5 f7 13
e5 c7 14 g6 and then:
- a) 14...hxg6+ 15 xg6 f8 16 a4 and here:
a1) 16...h7 17 c6 b8 18 a5 =,
a2) 16...e7 17 c6 c5 (17...e8 18 c8+
d7 19 g8 ++) 18 c8+ c7 19 c7+ f8
20 f7+ ++,
a3) 16...e8 17 d6 b7 18 e6 b4 19 xg7
x a4 20 h5 g4+ 21 x f6 h b4 22 g5 h1 23
d4 ++,
- b) 14...h6 15 a4 e8 (15...b7 16 c6+ d7
17 f6 e8 18 b7 c7 f7+ 19 gxf7+ xf7 20
c6+ e7 21 d5 ++) 16 a5 d7 17 b5 d7
18 b8 d1 (18...c7 19 g8 ++) 19 b7+ ++.
11 \texttt{f5} \texttt{f7} 12 \texttt{e5} \texttt{b7} 13 \texttt{d6} \texttt{e7} 14 \texttt{a6} \texttt{f7} 15 \texttt{d6} \texttt{f8} 16 \texttt{e6} \texttt{f7} 17 a3! 1-0

A nice way to conclude the game. Rubinstein prevents ...\texttt{b4} and puts Black in zugzwang. Several variations from Averbakh and Speelman illustrate that:

a) 17...\texttt{e7} 18 \texttt{g6} \texttt{f8} 19 \texttt{e8}+ \texttt{e7} 20 \texttt{hxg7}+.--

b) 17...\texttt{e7} 18 \texttt{e6}+ \texttt{g8} 19 \texttt{g6} \texttt{e8} 20 \texttt{e7} +--

c) 17...\texttt{a5} 18 \texttt{a6} \texttt{b5} 19 \texttt{a7}+ \texttt{g8} 20 \texttt{a4} \texttt{c5} 21 \texttt{e6}+--.

d) 17...\texttt{f8} 18 \texttt{g6} \texttt{b3} 19 \texttt{e8}+ \texttt{e7} 20 \texttt{hxg7} \texttt{xax3} 21 \texttt{hxh6}+--

Now we deal with an important practical question: how to exploit the extra pawn of a majority on a wing. Fine gave some guidelines in Basic Chess Endings:

If the defender’s king is on the side where the pawns are balanced then the following plan should be adapted:

1) Place the king and rook on the best possible squares;
2) Advance the pawns on the other wing as far as convenient, without actually setting up a passed pawn;
3) Reach a won ending with an outside passed pawn.

Thus, creating an outside passed pawn as quickly as possible is sometimes not the right plan as some positions are drawn. It is better to manoeuvre first and try to create a passed pawn under favourable circumstances. If the defender’s king is on the side with the potential passed pawn, then the decisive manoeuvre is the penetration of the attacking king on the opposite wing. Nunn used the following example in Secrets of Practical Chess to illustrate the procedure (see next diagram).

The black king is ready to halt the majority so we are in the second of the cases mentioned above. According to the rule it is systematic now to transfer the king to the queenside and to try to create inroads there. However, at the moment there are no avenues and so Nunn decides to gain space on the kingside first:

1 \texttt{h4} \texttt{b5}

Fritz immediately gains space, but opens pathways for White’s pieces at the same time.

2 \texttt{g4} \texttt{a5} 3 \texttt{g3} \texttt{a4}

With the idea ...\texttt{b4} and ...\texttt{d1} to attack the pawns, so Nunn puts a stop to that:

4 \texttt{a3!} \texttt{d1} 5 \texttt{h5} \texttt{b1} 6 \texttt{c3}

Nunn has arranged all his pawns in chains, so he only has to defend the bases on b2 and f3.

6...\texttt{g5} 7 \texttt{hxg6}+ \texttt{hxg6} 8 \texttt{f4} \texttt{d1} 9 \texttt{e3}?! (D)

Now Nunn follows Fine’s guideline and tries to penetrate on the queenside with his king. However, the immediate 9 \texttt{e5} is better: 9...\texttt{c6} 10 \texttt{e5} \texttt{d2} (10...\texttt{d6} 11 \texttt{c4} \texttt{bxc4} 12 \texttt{xc4} \texttt{d2} 13 \texttt{xc6} \texttt{xb2} 14 \texttt{a6} +--) 11 \texttt{xc6} \texttt{xb2} 12 \texttt{g5} transposes to the game (at move 15).

9...\texttt{f6}?! (D)

This allows the execution of White’s plan. 9...\texttt{e6}?! (Nunn) was necessary because after 10 \texttt{e2} \texttt{e1}+ 11 \texttt{d4} \texttt{d6} the white king is denied access to c5. Therefore, it is probably best to retreat with 10 \texttt{f4}+.

10 \texttt{d2} \texttt{f1} 11 \texttt{d5} \texttt{c6} 12 \texttt{e5} \texttt{b1} 13 \texttt{xc6}+ \texttt{f7} 14 \texttt{f4} \texttt{xb2} 15 \texttt{g5} \texttt{b3} 16 \texttt{f4}!
In the next example Paulsen uses a nice trick to break through:

![Diagram]

6.156

J.Metger – L.Paulsen

Leipzig 1877

1...g5 2 c2?!
After 2 hxg5!? hxg5 3 c2 Black’s task is much more difficult.
2...f4+ 3 g4
3 h3 d1 4 c7 g1 5 hxg5+ hxg5 6 xb7 g3+ 7 h2 fxg3 8 g1 (8 axa7 d2+ 9 h3 xb2 +++) 8...d3 9 xxa7 g4 +.
3...h5+! 4 h3
4...xh5? 5 h8+! 6 g4 xh4#.
4...g4+! 5 g2
5 fxg4 d3+ 6 g2 hxg4 ++ and the connected passed pawns are decisive.
5...d3 6 c5 d2+ 7 f1 xb2 8 xh5 gxf3
8...g3 also wins.
9 a5 a6 10 g1 e2 11 f1 g6 12 g1
12 g2+! f1 h2 14 a3 xh4 15 xf3 f5
16 b3 h7 17 g2 g4 18 a4
18 b4 c7 19 a4 c2+ 20 f1 g3 +.
18...f3+! 19 f2
19...h2+ 20 xh2 xf3 + +.
19...g1

20 f1 e1 g3 21 xh7 h1+ 22 d2 f2 23
23 g7+! h2 24 xh7+ g2 25 g7+ f1 26 g6
g1 27 xax6 g2 = ++.
20...g3 21 a5 a2 22 b1 g2+ 23 h1
h2+ 24 g1 f2+ 0-1

We conclude this section with two examples showing the drawish tendency of rook endings. The first is very famous:

W

6.157

M.Botvinnik – R.Fischer

Varna OL 1962

1 a3?
1 c7! was necessary as after 1...a4 2 xh7 a3+!! 3 f3 xxa2 a position similar to the game arises.
1...e7?
The faster 1...a5! is called for as the pawn ending after 2 b3 b4 3 xb4 axb4 is won: 4 f4+! f5 5 f3 e6+ 6 e4 (6 g4 h6 ++) 6...d6 7 d4 b5 8 d3 d5 ++ (Botvinnik).
2 f3 c7 3 a4
The game was adjourned here, and the whole Soviet team helped Botvinnik to find the saving path.
3...a5
Botvinnik’s analysis of the alternatives runs: 3...c4 4 a5 bx a5 = (4...b5 5 x f7 a6 6 h4+! h6 7 x d7 =); 3...h6 4 d3! c5 5 h4 a5 6 d4 =.
4 f7 a5 5 x h7 a4 6 h4+! f5
6...f6 7 b7? a5 8 g4 b5 9 f4 a6 10 b6+ g7 11 b7+= (Botvinnik).
7 f7+ e5 8 g7 a1 9 f3 (D)
There was a disagreement about the assessment of this position between Fischer and Botvinnik. Eventually Botvinnik succeeded in
proving the draw even after Black's best try (9...\texttt{d}4):

9...b5?! 10...\texttt{g}xg6 b5 11 h5 b4 12 h6 and now:

a) 12...\texttt{h}1 13...\texttt{g}2!...\texttt{h}5 14...\texttt{e}6 b3 15...\texttt{e}a7...\texttt{x}e6 16...\texttt{b}7...\texttt{c}4 17...\texttt{f}3 = (Botvinnik); e.g.,

17...\texttt{e}c6 18...\texttt{e}4...\texttt{c}3 19...\texttt{f}4...\texttt{e}c4+ 20...\texttt{e}5...\texttt{b}4

21...\texttt{c}7+ (21...\texttt{h}7? b2 22...\texttt{h}1...\texttt{b}5+ 23...\texttt{e}6...\texttt{d}4 24 f5...\texttt{b}6+ 25...\texttt{e}7...\texttt{e}5 26 f6...\texttt{b}7+ --)

21...\texttt{d}3 22...\texttt{d}7+...\texttt{c}2 (22...\texttt{e}3 23 f5 b2 24...\texttt{d}1+) 23...\texttt{h}7 b2 24...\texttt{h}1 =.

b) 12...b3 and then:

b1) 13 h7...\texttt{h}1 14...\texttt{g}7 a5 15...\texttt{g}2...\texttt{h}6 16

\texttt{g}3 a4 17...\texttt{h}3 (17...\texttt{g}4+...\texttt{e}5 18...\texttt{a}4 b2 19

\texttt{a}5+...\texttt{b}6 20...\texttt{e}8...\texttt{h}7+ --) 17...\texttt{h}7 18...\texttt{h}7

a3 19...\texttt{h}3...\texttt{c}4+ --.

b2) 13...\texttt{g}4+...\texttt{c}5?! (13...\texttt{c}3 14...\texttt{h}4!...\texttt{e}1

15...\texttt{h}7...\texttt{e}8 16...\texttt{h}8...\texttt{h}8+...\texttt{b}8 17...\texttt{h}8 b2 18...\texttt{e}8+

++; 13...\texttt{d}3 14...\texttt{b}4...\texttt{c}2 15...\texttt{c}4+ =) 14...\texttt{g}5+ and here:

b21) 14...\texttt{b}4 15...\texttt{g}7! b2 (15...\texttt{a}5 16...\texttt{g}2!

++) 16...\texttt{h}7...\texttt{h}1 17...\texttt{a}7...\texttt{b}3 18...\texttt{b}7+...\texttt{c}2 19

\texttt{c}7+...\texttt{d}2 20...\texttt{h}7 = (Fischer).

b22) 14...\texttt{c}6 15...\texttt{g}6+...\texttt{b}7 16...\texttt{g}7+...\texttt{a}6?! 17...\texttt{g}6+ (17...\texttt{g}2? b2 18...\texttt{h}7...\texttt{b}1 19...\texttt{b}6...\texttt{w}4+ --)

17...\texttt{a}5 18...\texttt{g}5+...\texttt{a}4 19...\texttt{g}4+...\texttt{a}3 and White has finally run out of checks. However, it is not over yet: 20...\texttt{h}4 b2 21...\texttt{h}7...\texttt{b}1 22...\texttt{b}8 and...

Botvinnik had assessed this position as drawn in his initial analysis. Fischer continued with 22...\texttt{b}3+?? 23...\texttt{c}2! (23...\texttt{f}4?...\texttt{f}7+ --; 23...\texttt{g}2?...\texttt{d}5+ 24...\texttt{f}3...\texttt{g}5+ 25...\texttt{f}4...\texttt{d}4 26...\texttt{g}3

\texttt{g}1+ 27...\texttt{h}4...\texttt{h}1+ ++) 23...\texttt{d}1+ 24...\texttt{e}3\texttt{b}1! but there is still a defence. In fact there are two: one given by Botvinnik himself and one found by the 13-year-old Garry Kasparov in Botvinnik's chess school:

b221) 25...\texttt{c}3+?...\texttt{h}3 +.

b222) 25...\texttt{h}3? ...\texttt{a}2 26...\texttt{c}8 (26...\texttt{g}8+...\texttt{b}3+ ++) 26...\texttt{h}3+ 27...\texttt{f}4...\texttt{d}4+ 28...\texttt{g}5

\texttt{e}5+ 29...\texttt{g}4...\texttt{e}4+ 30...\texttt{g}5...\texttt{b}5+ 31...\texttt{h}6

\texttt{b}6+ 32...\texttt{g}5...\texttt{g}6+ 33...\texttt{f}4...\texttt{f}7+ --.

b223) 25...\texttt{c}4 (Kasparov) 25...\texttt{b}3 26...\texttt{c}3

\texttt{e}1+ 27...\texttt{d}3...\texttt{f}1+ 28...\texttt{d}2...\texttt{w}xf2 29...\texttt{d}3 = is also drawn.

b224) 25...\texttt{f}8+...\texttt{a}2 and Fischer thought that White was defenceless. However, Botvinnik had the last word: 26...\texttt{c}5+ and Black can't make progress.

10...h5?!

After this nice trick Botvinnik had no particular difficulties saving the draw:

10...\texttt{a}3+ 11...\texttt{g}2...\texttt{g}5 12...\texttt{d}6 13

\texttt{b}5 b4 14...\texttt{f}4...\texttt{c}6 15...\texttt{h}8 h3+ 16...\texttt{a}2...\texttt{a}5 17

\texttt{f}5...\texttt{c}7 18...\texttt{b}5...\texttt{d}6 19...\texttt{f}6...\texttt{c}6 20...\texttt{b}6+...\texttt{f}7

21...\texttt{a}6...\texttt{g}6 22...\texttt{m}6 a4 23...\texttt{a}6...\texttt{f}7 24...\texttt{e}6

\texttt{d}3 25...\texttt{a}6 a3 26...\texttt{g}1 1/2-1/2

In the second, White again managed to turn the game into a drawn pawn race:

\begin{figure}[h]
\centering
\includegraphics[width=0.5\textwidth]{example.png}
\caption{Example Diagram}
\end{figure}

6...\texttt{a}8

6...\texttt{a}8 can never win;

a1) 7...\texttt{b}4 and...

a2) 11...\texttt{h}4+ --;

b) 7 b7 loses; e.g.,

12...\texttt{f}6...\texttt{h}6

\texttt{b}6+ --;

12...\texttt{h}7...\texttt{h}3

g3 16...\texttt{d}d 17...\texttt{h}6 20...\texttt{a}8

10...\texttt{a}8 11...\texttt{a}7 and the unfortunate pawns can...

b1) 11...\texttt{a}7

=) 13...\texttt{a}6

b2) 11...\texttt{a}7

\texttt{g}3 15...\texttt{g}5

b3) 11...\texttt{a}7

\texttt{g}5

\texttt{c}6 12...\texttt{f}4

h2 15...\texttt{h}6

15...\texttt{h}1

18...\texttt{b}3+...\texttt{a}3

\texttt{h}3 =.
6...h8! g5
6...g4?! is a very dangerous try, but White can nevertheless hold on:
   a) 7 b6? f4+ 8 e5 g5 9 b5 h4 10 b6 b4 and now:
      a1) 11 d6 h3 12 c5 (12 c7 h2 13 h8 h4 ++) 12...b2 13 h8 g4 --.
      a2) 11 b7 h3 12 d5 h2 --.
   b) 7 b5 h4 8 b6 b4 h9 (moving the king loses; e.g., 9 f6 b5 h5 10 h7 g4 11 xg6 h3
      12 h6 f2 13 h8 g3 14 g8+ f4 15 h8 h6+ --; 9 d6? g5 10 c7 g4 11 h8 h5
      12 h7 h3 13 b8 b8 14 b8 b4 15 c7 g3 16 d6 g2 17 e5 h2 18 f4 h5 19 h5
      h6 20 xg6 h7 21 g7+ h8 ++) 9...g7 10 h8 b7 11 h4 and Black's pieces are so
      unfortunately placed that the connected passed pawns can be stopped:
      b1) 11 h5 b5 12 g4 g5 (12...h5 13 a7+ =) 13 h6 =.
      b2) 11 h6 h6 12 h8 h8+ h7 13 h8 h3 14 g3 g5 15 a5+ f6 16 a6+ =.
      b3) 11 h3 12 xg2 h5 13 h4 =.
      7 h5 h1 8 b5 h1 9 b6 h4 10 b7 h3 11 c6 g4 12 h8 g5 13 f8 b8 14 f8 b2 15 xh8!
      15...h1 e3 16 f3+ g2 17 f2++ h3 18 h3+ h4 19 b1 g4 20 d5 g3 21 h1 d1
      h3 --.

15...g3 16 d5 g4
16...g2 17 e4 h1 18 xh1 h1 19 h5 =.
17 e4 g2 18 f4 g3 19 g4 h2--

F) Principles of Rook Endings

In rook endings, activity is a crucial factor. Sometimes it is even possible to sacrifice material in order to bring the pieces to better positions. We start with a famous classic:

6.158A

W

J.Capablanca – S.Tartakower
New York 1924

White's king has to be activated to support the g-pawn:
1 g3 xxe3+ 2 h4 f3
Or: 2...x c1 3 h5 c5 (3...h1+ 4 g6 ++) 4
7 cxd4 5 xxd5 d1 6 h6 d3 7 h6 ++;
2...c4 3 g6 xxd4 4 xg5 xxe4 5 xf5 d4 6 d7
Ec5+? 7...f6 g6+ 8 h5 h6+ 9 g7+ g8 10 xxd6 cxd6 11 g6 ++.
3 g6 xxf4+ 4 g5 e4
4...xd4 5 xf6 e8 6 xxc7 xxa4 7 g7 g4
8 xxe7+ xed8 9 xxa7 --.
5 f6 g8 6 g7+ h8
6...f8 7 xxc7 xxe8 8 xxf5 c4 9 g6 f4+ 10 xg5 g4 11 g7+ ++.
7 xxc7 xxe8 8 xxf5 c4 9 f6 f4+ 10 e5 g4 11 g7+ g8
11...xg7 12 xg7 xg7 13 xxd5 f7 14
12 c6 c7 15 b7 b6 16 xxa7 c7 17 d5 ++.
12...xa7 13 xxd5 xee1 14 xde6 c2 15
13...a6 14 c7 c7 17 c6 cxa4 18 d6 1-0

Rook activity is very important in almost all rook endings as the rook is such a powerful unit:
The London team conceded the game but Smyslov and Levenfish proved that Black could still have drawn by activating the rook:

1...\(\texttt{c6}!\)

Waiting passively is wrong: 1...\(\texttt{a7?} 2 \texttt{e4} \texttt{a6} 3 \texttt{d4} \texttt{a7} 4 \texttt{f4} \texttt{a6} 4 \texttt{d6} 5 \texttt{b6}+ \texttt{c7} 6 \texttt{c5} \texttt{c7}+ 7 \texttt{b5} \texttt{c1} 8 \texttt{g5} \texttt{f5} 9 \texttt{gxg6} \texttt{f1} 10 \texttt{xax5} \texttt{xf4} 11 \texttt{xg6} \texttt{f1} 12 \texttt{b6} \texttt{f4} 13 \texttt{a5} \texttt{g1} 14 \texttt{xg4} \texttt{h5} 15 \texttt{a6} \texttt{g6}+ 16 \texttt{b7} \texttt{g1} 17 \texttt{b4}+ 18 \texttt{f5} \texttt{gxf5}+ 6 \texttt{b6}+ \texttt{c7} =

2 \texttt{xax5} \texttt{b5}+ 3 \texttt{b4} \texttt{c7} 4 \texttt{a4} \texttt{a6} 5 \texttt{c5} \texttt{a4} 6 \texttt{a6} \texttt{b6} 7 \texttt{c4} 1-0

Short missed the possibility to activate his rook and remained passive:

1...\(\texttt{c6}?!\)

1...\(\texttt{c5}!\) was called for: 2 \texttt{a5} (2 \texttt{e3} \texttt{c4} 3 \texttt{a5} \texttt{xe4}+ 4 \texttt{d3} \texttt{d5}! 5 \texttt{a6} \texttt{d8}! = is also safe for Black) 2...\texttt{c3}+ 3 \texttt{d4} \texttt{c4} 4 \texttt{b4} \texttt{c5} 5 \texttt{a7} \texttt{g8}+ followed by 6...\texttt{a8} is a straightforward draw.

2 \texttt{e3} \texttt{d6}

2...\texttt{d5} 3 \texttt{d3} and Black has to give way with his king or rook.

3 \texttt{d4} \texttt{d7} 4 \texttt{e4} \texttt{c6} 5 \texttt{b4} \texttt{e5} 6 \texttt{c1}+ \texttt{b6} 7 \texttt{c4} 1-0

Short threw in the towel as he can’t stop White’s king-march into the centre to support the e-pawn.

\textbf{6.162}  

\begin{center}
\includegraphics[width=0.3\textwidth]{chessboard.png}
\end{center}

\texttt{B}

\texttt{C.Schlechter – Em.Lasker}  
\texttt{Vienna \textit{Wch (1) 1910}}

The great defender Lasker managed to save a valuable half-point by activating his rook:

1...\(\texttt{c6}!\)

Otherwise:

\begin{enumerate}
\item a) 1...\texttt{e5} 2 \texttt{c6} \texttt{b5}+ 3 \texttt{xg5} \texttt{xg5} 4 \texttt{d6} \texttt{h5} 5 \texttt{a4} \texttt{c4} 6 \texttt{b4} \texttt{xh4} 7 \texttt{a6} and now:
\begin{enumerate}
\item a1) 7...\texttt{f7} 8 \texttt{c7}+ 9 \texttt{d5} \texttt{xg5}+ (or 9...\texttt{h6}+ 10 \texttt{c7} \texttt{h7}+ 11 \texttt{b6}++ 10...\texttt{c6} 11 \texttt{b5} \texttt{b4}+ 12 \texttt{c7} \texttt{c6} 13 \texttt{c6} \texttt{c6} 14 \texttt{c8}++ 15 \texttt{c6} \texttt{d5} 16 \texttt{c6} \texttt{d6} 17 \texttt{c6} \texttt{c6} 18 \texttt{c6}++)
\item a2) 7...\texttt{d5} 8 \texttt{d5} \texttt{e7} 9 \texttt{c6} \texttt{d6} 10 \texttt{e5} \texttt{d5} 11 \texttt{e6} \texttt{d6} 12 \texttt{d5} \texttt{d5} 13 \texttt{a5}++
\end{enumerate}
\item b) 1...\texttt{e7}+ and then:
\begin{enumerate}
\item b1) 2 \texttt{xg5}+ and here:
\begin{enumerate}
\item b11) 2...\texttt{a5}+ 3 \texttt{xh5} \texttt{f1}+ 4 \texttt{xg5} \texttt{h1} 5 \texttt{xg5} \texttt{xg5}+ 6 \texttt{g5}+ \texttt{h5} 7 \texttt{a5} 8 \texttt{a5} 9 \texttt{h5} 10 \texttt{d5}+ \texttt{c8} 11 \texttt{c6} \texttt{c6} 12 \texttt{a6} \texttt{d5} 13 \texttt{d5}++
\end{enumerate}
\item b12) 2...\texttt{a4}+ 3 \texttt{h1} 4 \texttt{e5} \texttt{d5} 5 \texttt{d5} 6 \texttt{xh5} 7 \texttt{c5} 8 \texttt{d5} 9 \texttt{g5} 10 \texttt{a5}+ 11 \texttt{h5} \texttt{c6} 12 \texttt{d5} \texttt{d5} 13 \texttt{f5}++
\end{enumerate}
\end{enumerate}
b2) 2...\textit{a}4! 3 \textit{h}5 and then:

b21) 3...\textit{g}7?? 4 \textit{g}6+ \textit{h}7 (4...\textit{f}7 5 \textit{g}5 \textit{f}6 6 \textit{h}6 +--) 5 \textit{f}6 \textit{a}1 6 \textit{a}6 \textit{a}4 7 \textit{c}4 \textit{g}7 8 \textit{g}6+ \textit{f}4 \textit{h}7 9 \textit{a}6+ --.

b22) 3...\textit{c}4! 4 \textit{a}xa5 \textit{f}6 5 \textit{h}6 \textit{xc}2 6 \textit{a}6+ \textit{g}5 7 \textit{h}7 \textit{h}2 =.

b2) 2 \textit{xf}4 \textit{f}1+ 3 \textit{e}5 \textit{f}3 4 \textit{c}4 +. A possible continuation would be 4...\textit{f}x\textit{g}3 5 \textit{x}f5 \textit{f}3+ 6 \textit{e}5 \textit{h}3 7 \textit{h}6 \textit{g}7 8 \textit{a}6 \textit{h}4 9 \textit{c}5 \textit{f}7 10 \textit{a}7+ \textit{e}8 11 \textit{d}6 \textit{d}4+ 12 \textit{c}7 \textit{a}4 13 \textit{c}6 +.

2 \textit{c}5

2 \textit{c}4 \textit{a}4 3 \textit{c}5 \textit{c}4 4 \textit{a}6 \textit{xc}5 5 \textit{xa}4 \textit{g}6 6 \textit{a}6+ \textit{h}5 7 \textit{f}6 \textit{a}5 8 \textit{f}4 \textit{a}4+ 9 \textit{xf}5 \textit{a}3 10 \textit{xf}4 \textit{f}3+ 11 \textit{xf}3 is stalemate.

2...\textit{f}6 3 \textit{xa}5 \textit{e}4! 4 \textit{a}6+ \textit{e}5 5 \textit{a}5+ \textit{f}6 6 \textit{a}6+ \textit{e}5 7 \textit{a}5+ \textit{f}6 8 \textit{a}2

By his active play Lasker has forced his opponent's pieces into passive positions and now he manages to draw:

8...\textit{e}5 9 \textit{b}2 \textit{c}3+ 10 \textit{g}2 \textit{f}6 11 \textit{h}3 \textit{c}6

11...\textit{f}4? 12 \textit{b}3! \textit{xc}2 13 \textit{f}3 +--.

12 \textit{b}8 \textit{xc}2 13 \textit{b}6+ \textit{g}7 14 \textit{h}5 \textit{c}4 15 \textit{h}6+ \textit{h}7 16 \textit{f}6 \textit{a}4 1/2-1/2

Lasker's handling of the following game was not so accurate:

\begin{center}
\textbf{B}
\end{center}

\begin{center}
6.163
\end{center}

A. Shneider – D. Komarov
\textit{Donetsk Z 1998}

1...\textit{f}7

Seeking activity with 1...\textit{f}6! was also possible: e.g., 2 \textit{fx}4 \textit{fx}4 3 \textit{xa}7 \textit{h}6 4 \textit{d}3 \textit{d}h2 5 \textit{e}4 \textit{g}2 with counterplay.

2 \textit{d}5 \textit{e}7?

This lands Black in a very passive position. Now 2...\textit{f}6?! was essential: 3 \textit{fx}4 \textit{fx}4 4 \textit{xe}5 \textit{d}h6 5 \textit{g}5+ \textit{f}7 6 \textit{f}5+ \textit{e}6 7 \textit{f}2 \textit{e}5, when Black's active pieces compensate for the material deficit.

3 \textit{e}4!

Fixing the e5 weakness and trying to open a path for the king.

3...\textit{h}5

Or:

a) 3...\textit{xe}4? 4 \textit{fx}4 leaves Black tied down.

b) 3...\textit{xf}3+?? 4 \textit{xf}3 \textit{fx}4+ 5 \textit{d}xe4 \textit{f}7 6 \textit{d}8+ \textit{g}7 7 \textit{h}8+ \textit{e}5 \textit{f}2 gives Black some play, but White's advantage is still very clear.

4 \textit{xf}5 \textit{xf}3 5 \textit{e}x\textit{f}3 \textit{e}4+ 6 \textit{d}e3 \textit{f}7 7 \textit{d}6 7 \textit{f}6?! is also good: 7...\textit{xe}6 8 \textit{h}hx5 \textit{d}5 9 \textit{e}5 \textit{h}7 10 \textit{h}4 \textit{g}7 11 \textit{f}4 ++.
7...\( \text{h5} \) 8 \( \text{g6} \)!
8 \( \text{xh}4 \) is much more precise:
   a) 8...\( \text{e}3 \) 9 \( \text{e}6 \) ++
   b) 8...\( \text{xh}6 \) 9 \( \text{e}8 \) \( \text{e}8 \) 10 \( \text{e}3 \) ++
   c) 8...\( \text{xh}4 \) 8 \( \text{xe}8 \) 9 \( \text{f}6 \) 10 \( \text{h}3 \) \( \text{c}3 \) 11 \( \text{d}4 \) \( \text{hxg}4 \) 12 \( \text{hxg}4 \) \( \text{xe}4 \) 13 \( \text{xe}4 \) \( \text{c}4 \) 14 \( \text{f}4 \) \( \text{e}1 \) \( \text{g}5 \)\# 10 \( \text{e}3 \) ++
8...\( \text{xf}5 \) 9 \( \text{xe}4 \) \( \text{g}6 \) 10 \( \text{f}4 \) \( \text{e}5+ \) 11 \( \text{e}4 \) \( \text{f}5 \) 12 \( \text{e}7 \) \( \text{g}5 \) 13 \( \text{g}7+ \)!

Preventing Black’s counterplay on the kingside.

13...\( \text{xh}6 \) 14 \( \text{xa}7 \) \( \text{e}5+ \) 15 \( \text{d}3 \) \( \text{e}6 \) 16 \( \text{a}4 \) \( \text{d}6+ \) 17 \( \text{c}3 \) \( \text{e}6 \) 18 \( \text{a}6 \) \( \text{f}5 \) 19 \( \text{a}5 \) \( \text{e}3+ \) 20 \( \text{d}2 \) \( \text{e}4 \) 21 \( \text{d}3 \) \( \text{b}5 \) 22 \( \text{f}6+ \) 1-0

Since the pawn endgame is lost: 22...\( \text{xf}6 \) 23 \( \text{xe}4 \) \( \text{g}5 \) 24 \( \text{h}3 \) \( \text{a}4 \) 25 \( \text{d}5 \) ++

We have just seen that rook activity is crucial. Therefore, preventing counterplay usually has a high priority in rook endings:

1 \( \text{e}6 \)!
Karpov wisely decides to take the d-pawn. After 1 \( \text{f}7 \)?? \( \text{g}6 \) 2 \( \text{xa}7 \) \( \text{e}2 \) Black has some counterchances.

1...\( \text{e}7 \) 2 \( \text{a}6 \) \( \text{g}7 \) 3 \( \text{g}1 \) 1-0

Black is completely tied down and can only wait. A possible continuation is 3...\( \text{f}7 \) 4 \( \text{b}4 \) \( \text{b}7 \) 5 \( \text{a}3 \) \( \text{f}7 \) 6 \( \text{b}5 \) \( \text{b}7 \) 7 \( \text{a}4 \) \( \text{f}7 \) 8 \( \text{g}3 \) \( \text{d}7 \) \( \text{g}4 \) \( \text{h}4 \) 10 \( \text{g}2 \) \( \text{c}2+ \) 11 \( \text{f}3 \) \( \text{c}3+ \) 12 \( \text{g}4 \) \( \text{c}4+ \) 13 \( \text{g}5 \) ++.

In the next example the black rook does a marvellous job: it simply protects everything, making counterattacks useless.

\[ \text{W} \]

6.164
A.Karpov – G.Kasparov
New York/Lyons Wch (7) 1990

Rules and comments

We conclude the rook endings with:
1) Study position 6.35 often in practice.
2) Make sure the rooks are drawn.
3) Tarrasch’s principle: a great deal depends on whether you exchange the king or not.
4) Play ...\( \text{f}6 \) and ...\( \text{h}8 \) on the king side.
5) The rooks must be placed behind the pawns, whether they are passed or not.

References

Rook Endings
Comprehensive Chess Encyclopedia
Endings Volume
Secrets of the Chess Endgame
Praxis der Endspiele

Lehr and Stein 1960
Batsford 1971
Averbakh and Petrov 1975
Gambit/Evergreen 1995

6.3 Doubled Rooks

Naturally, doubled rooks are very similar to en passant moves but as two
Black can’t make much progress without losing his extra pawn; e.g., 6...\textit{c}a1 (6...\textit{e}f4 7 \textit{g}g6 =) 7 \textit{g}g4 \textit{a}3 8 \textit{x}xg5 \textit{a}2 9 \textit{h}h5 =.

Rules and Principles: Rook Endings

We conclude the very large section on pure rook endings with some remarks and principles:

1) Study Philidor’s (6,33) and Lucena’s position (6,35) very carefully! They occur quite often in practice.

2) Make yourself familiar with the checking distance (see, e.g., 6,43).

3) Tarrasch’s aphorism “All rook endings are drawn” is not really a rule, but it contains a great deal of truth as a drawish tendency is inherent in many rook endings. So be careful when you exchange your last rook in an inferior position!

4) Play actively! It might even be justified to sacrifice a pawn in order to activate the rook or the king (see, e.g., 6,161).

5) The rook is a bad blockader. It is better placed behind a passed pawn (regardless of whether the pawn is friendly or not).

Reference works

\textit{Rook Endings}, Levenfish and Smyslov, Batsford 1971

\textit{Comprehensive Chess Endings}, Volume 5, Averbakh and Kopaev, Pergamon 1987

\textit{Encyclopaedia of Chess Endings}, Rook Endings Volume 1, Belgrade 1985


\textit{Praxis des Turmendspiels}, Korchnoi, Olms 1995

\textit{Lehr- und Handbuch der Endspiele}, Volume 1, 2nd edition, Cheron, Engelhardt Verlag, Berlin 1960

\textit{Technique for the Tournament Player}, Dvoretsky and Yusupov, Batsford 1995


\textit{Batsford Chess Endings}, Speelman, Tisdall and Wade, Batsford 1993

6.3 Double-Rook Endings

Naturally, double-rook endings have many similarities to endgames with just one pair of rooks, but as two rooks form a powerful attacking force all on their own, some differences come into play (our treatment is based in part upon that by Emms in \textit{The Survival Guide to Rook Endings}):

1) A small material advantage can more often prove decisive than in a single-rook ending. One of the reasons is that the extra pawn may provide shelter for the king.

2) Lone pawns are more vulnerable to attack due to the increased firepower on the board.

3) Most importantly, the safety of the kings plays a more crucial role as mating attacks and perpetual check become themes. The increased value of the 7th rank is of great relevance.

Thus our material divides into the following topics:

A: Positional Advantage/
Seventh Heaven 249

B: Material Advantage 251

C: Defensive Resources 253

A) Positional Advantage/
Seventh Heaven

Two rooks on the seventh rank can cause havoc, especially if the enemy king is trapped on the back rank. They can weave a mating-net or quickly wipe out pawns that are still on their initial squares. Our first few examples demonstrate this:

\begin{center}
\includegraphics[width=0.5\textwidth]{diagram.png}
\end{center}

\textbf{6.167}

\textbf{J.\textit{van der Wiel} – S.\textit{Ernst}}

\textit{Dutch Ch (Rotterdam) 1998}

1 \textit{c}e7 \textit{h}2
1...\textit{h}5 2 \textit{g}7+ \textit{h}8 3 \textit{h}xg6 +– (V.\textit{Mikhalevski} in CBM 66).
2.\[\text{h}7+\text{f}8\]
2...\[\text{f}8?\] 3.\[\text{d}7+\text{g}8\] 4.\[\text{d}8\] 5.\[\text{g}8+\text{h}7\] 6.\[\text{d}4+\text{h}4\]

The \text{h}-\text{pawn} is coming to support the attack—an important motif.

4.\[\text{g}4\] 5.\[\text{d}7+\text{f}8\] 6.\[\text{b}7\] 7.\[\text{g}7\] 8.\[\text{h}6\]

Threatening \text{h}6 followed by \text{h}8#.
8...\[\text{b}4\]
9.\[\text{g}5\]
9.\[\text{h}6\] =
9...\[\text{g}6\]
10.\[\text{e}5\] 11.\[\text{c}6\] 12.\[\text{e}2\] 13.\[\text{d}3\] 14.\[\text{c}5\] 15.\[\text{b}5\] 16.\[\text{e}7\] 17.\[\text{h}7\] +

Renewing the threat of \text{h}8#. 10...\[\text{e}5\] 11.\[\text{c}6\] 12.\[\text{e}2\] 13.\[\text{c}5\]
13...\[\text{xb}2\] 14.\[\text{c}8\] #.
14.\[\text{c}5\] 15.\[\text{a}7\] 16.\[\text{b}6\]
15...\[\text{xb}2\] 16.\[\text{a}8\] 17.\[\text{h}7\] +

Black resigned due to 16...\[\text{h}5\] 17.\[\text{d}7\] 18.\[\text{h}6\] +

Note that with Black’s \text{g}7 pawn still on \text{g}7, he would have had ...\[\text{g}2\] as a defence against \[\text{e}e7\]. This kind of defence is acceptable because on \text{g}2 the rook remains active.

If the king supports the attack, the rooks can often weave a mating-net:

\[
\begin{array}{c}
\text{W} \\
\text{6.169} \\
\text{D.Barua – A.Khalifman} \\
\text{Las Vegas FIDE 1999}
\end{array}
\]

White uses his queenside pawn-majority to break through:
1.\[\text{c}5\] \[\text{g}5\]

Or: 1...\[\text{x}c5\] 2.\[\text{x}c5\] \[\text{dx}c5\] 3.\[\text{g}6\] 4.\[\text{h}4\] 5.\[\text{e}6\] +

1...\[\text{dxc}5\] 2.\[\text{dxc}5\] 3.\[\text{g}6\] 4.\[\text{h}5\] 5.\[\text{e}6\] 6.\[\text{f}3\] 7.\[\text{g}6\] 8.\[\text{h}5\] 9.\[\text{g}5\] 10.\[\text{h}7\] +

(\text{Tsesarsky in CBM 72.)}
2.\[\text{c}6\] \[\text{h}7\]

After 2...\[\text{bxc}6\] 3.\[\text{dxc}6\] White wins the \text{a}-\text{pawn}.
3.\[\text{b}4!\] \[\text{c}f7\]

After 3...\[\text{bxc}6\] Tsesarsky analysed 4.\[\text{xc}6\]:
   a) 4...\[\text{g}6\] 5.\[\text{dxc}6\] and then:
      a1) 5.\[\text{h}1\] 6.\[\text{a}6\] 7.\[\text{b}5\] 8.\[\text{c}2+\] 9.\[\text{e}1\] 10.\[\text{b}6\] 11.\[\text{a}6\] 12.\[\text{h}8\]
B) Material Advantage

With one pair of rooks removed, the position would be drawn. As it is, White’s situation is just hopeless:

1...\( \text{e}8 \) 2 h4

After 2 \( \text{c}7 \) Black can drive White’s king to the queenside and then exchange a pair of rooks:

2...\( \text{f}8 + 3 \text{e}5 \text{c}1 + 4 \text{d}6 \text{d}8 + 5 \text{c}6 \text{c}1 + 6 \text{b}7 \text{c}7 + 7 \text{c}7 \text{d}1 ++.

2...\( \text{f}8 + 3 \text{e}5 \text{g}4 4 \text{h}3 \text{e}8 + 5 \text{d}5

Or 5 \( \text{d}15 \text{e}4 + 6 \text{e}5 \text{f}4 + 7 \text{e}6 \text{h}4 ++.

5...\( \text{h}5 6 \text{d}6 \text{h}6 7 \text{c}1 \text{d}8 + 8 \text{e}5 \text{d}4

9 \text{h}1 \text{g}6

9...\( \text{e}4 + 10 \text{f}5 \text{e}8 11 \text{g}1 \text{d}4 12 \text{g}6 + \text{h}7 ++.

10 \text{g}3 \text{d}4 + 11 \text{d}5 \text{f}5 12 \text{g}3

12 \text{f}3 + \text{f}4 13 \text{f}4 + \text{f}4 14 \text{g}1 \text{h}4 15 \text{h}7 \text{g}4 ++.

12...\( \text{a}4 13 \text{f}3 + \text{g}6 14 \text{f}3 \text{h}6 15 \text{e}5 \text{d}4 16 \text{e}6 \text{g}6 0-1

The h-pawn is lost owing to the threat of...\( \text{g}4 +.

Finkel claims in CBM 63 that the endgame in the following diagram is definitely drawn, although Emmis’s remark that it is an ordeal to defend certainly stands:

1 \( \text{d}1 \text{g}5 2 \text{h}5 + \text{g}5

2...\( \text{f}5 + 3 \text{d}6 + \text{h}5 4 \text{h}7 +.

3 \text{d}7 \text{b}2

3...\( \text{b}8!? (Finkel).\)
4 \( \text{g}2 \text{g}8 \text{5 h}7+ \text{g}6 \text{6 h}4 \text{h}5 \text{7 f}4 \text{a}8 \text{h}h7 \text{b}3? \)

8...\( \text{b}2+?? \) comes strongly into consideration: 9 \( \text{h}3 \text{f}5 \text{10 c}7+ \text{h}6 \text{11 f}6 \text{g}6 \text{12 h}h4 \text{g}2+ \text{h}h6 \text{13 g}5 \text{h}2+ \text{h}h2 \text{g}a2+ 15 \text{g}1 \text{g}2+ =. \) White can’t escape the desperado rook.

9 \( \text{e}7+ \text{f}5 \text{10 h}5+ \text{e}6 \text{11 e}5 \text{d}6!!? \)

12 \( \text{c}2 \text{a}3 \)

12...\( \text{f}5 \) should also lose. One sample line runs 13 \( \text{c}2 \text{a}5 \text{14 g}6+ \text{d}7 \text{15 g}5 \text{b}4 \text{16 h}3 \text{b}1 \text{7 g}7+, \) and now:

a) After 17...\( \text{d}8 \text{18 h}4 \text{b}3 \text{19 f}7 \text{c}3 \text{20 e}5 \text{x}e5 \text{21 f}xe5 \text{f}3 \) White can win by using the f-pawn as a shield: 22 \( \text{x}g5 \text{x}g5+ \text{f}2 \text{23 f}6 \text{f}4 \text{24 e}6 \text{e}3 \text{25 d}7+ \text{e}8 \text{26 d}2 \text{f}1 \text{27 e}7 \text{e}4 \text{28 f}7 \text{f}4+ \text{29 g}6 \text{c}4+ \text{30 d}6 \text{e}1 \text{31 c}2+ \text{b}7 \text{32 f}2 --.

b) 17...\( \text{d}6 \text{18 h}4 \text{b}3 \text{19 g}6+ \text{d}7 \text{20 h}6 \text{c}3 \text{21 f}7+ \text{d}6 \text{22 f}e7 =.

13 \( \text{h}3 \text{e}6 \)

Now it is too late for 13...\( \text{e}3 \text{14 e}3 \text{g}3 \text{15 h}4 \text{g}5 \text{15 g}6 \text{f}5+ \text{d}6 \text{17 f}7 \text{f}c4+ \text{18 h}5 \text{e}5 \text{19 g}4+ ) 16 \text{f}5 \text{b}5 \text{17 f}7 \text{f}b4 (17...\text{e}5 \text{18 e}7+ \text{f}3; \text{18 h}5 \text{c}5 \text{19 g}4 \text{b}6 \text{20 g}6 \text{f}4 \text{21 a}7 \) (White must avoid 21 \( \text{x}f6? \) \( \text{g}8 = ) \text{22 f}x\text{f}6? \text{b}6+ \text{22 g}7 \text{g}4 \text{23 f}f6 \text{b}8 \text{24 f}f7 \text{g}5 \text{25 f}6 \text{b}6! = ) \text{21 h}6 \text{22 a}4+ \text{e}5 \text{23 g}5 \text{f}x\text{g}5+ \text{24 g}x\text{g}5 \text{b}1 \text{25 a}5+ \text{d}6 \text{26 g}6 =. \)

14 \( \text{h}4 \text{f}3?! \)

14...\( \text{f}5?! \) is much more stubborn as it keeps both rooks on the board: 15 \( \text{c}4 \text{e}6 \text{15 g}4 \text{e}6 \text{17 f}5+ \text{d}6 \text{18 b}3 \text{xc}3 \text{19 h}h5 \)

+– 16 \( \text{c}6+ \text{f}5 \text{17 g}4+ \text{xf}4 \text{18 x}f6+ \text{e}5 \text{19 g}5 = (\text{Finkel}). \)

15 \( \text{c}6+ \text{f}5 \text{16 g}4+! \text{xf}4 \text{17 x}f6+ \text{e}5 \text{18 x}f3 \text{e}f3 \text{19 g}5 \text{e}6 \text{20 h}h5 \text{a}3 \text{21 g}6 \text{a}8 \text{1}–\text{0}

6.171

O.Korneev – D.Lima

Elgoibar 1997

6.172

T.Petrosian – B. Larsen

Biel IZ 1976

With one pair of rooks removed it would be an easy draw, but now the black king comes under fire:

1 \( \text{d}8+ \text{f}7 \text{2 h}h8 \text{b}7 \)

2...\( \text{e}4 \text{b}3 \text{3 d}7+ \text{e}6 \text{4 x}g7 \text{g}2 \text{5 e}8+ \text{d}6 \text{h}3+ \).

3 \( \text{h} f 8+ \text{e} 7 \)

3...\( \text{g}6 \) 4 \( \text{f}5+ \text{h} 7 \text{5 h}h8#.

4 \( \text{f} 5 ! \)

White’s king joins the attack as it is quite safe near the pawns.

4...\( \text{b} 3 \text{5 g} 4 \text{g} 3 \text{6 d} \text{e} 8+ \text{d} 6 \text{7 g} 5 \text{f} 5 \text{8 x}g5 \text{b} 5+ \)

8...\( \text{a} 3 \text{9 g} 6 \text{a} 7 \text{10 e} 1 \text{b} 4 \text{11 f} 7+ --. \)

9 \( \text{g} 6 \text{1}–\text{0} \)

Larsen resigned since his g-pawn is doomed:

9...\( \text{b} 7 \text{10 f} 7 \text{x} f 7 \text{11 x} f 7 \text{x} d 7 \text{12 e} 4+ –. \)

The defending king is safer in the next example but the 4 vs 3 majority nevertheless gives White excellent winning chances (see following diagram):

1 \( \text{g} 4 ! \)

Grabbing space on the kingside and preventing a defensive set-up with...\text{g}6 and...\text{h}5.

1...\( \text{a} 4 \text{2 h} 3 \text{h} 5 ? \)

2...\( \text{g}5 ! \) offers better chances to hold on according to Emms.

C) Deprived of Motifs

In this situation motifs:
• attachment
• perpetual
• stalemate
3 g5! g6 4 g2 aa8!? Setting a trap.
5 e6!
After 5 g3? ac8 6 d7 cd8 White is forced to exchange one pair of rooks.
5...ab8 6 bc7 cb5 7 h4 ba4 8 f3 cb8
8...xh4? 9 e4 a8 10 f6 ea2+ (10...e5 loses to 11 e3 h1 12 xf7, whereupon 12...xg5+? is refuted by 13 f4 ea5 14 ef8+ gh7 15 ef7+ gh6 16 h8#) 11 e3 hh2 12
fx7 ++ gives White ‘Seventh Heaven’.
9 ef6 gh7
This gives away the vital f-pawn, but 9...f8 10 e4 eb5 11 e3 a5 12 ec7 “with the plan of e5-e6 was no better for Black” (Emms).
10 xf7 ec7 11 ecx7 xb4 12 ec4
Finally a single-rook endgame has arisen but now the structure is winning for White.
12...ef8 13 ec8+ gh7 14 ec7+ gh8 15 ec1 Threatening to trap the rook.
15...f4 16 ec8+ gh7 17 ec7+ gh8
17...f7 18 xf7+ ef7 19 ef6 ec6 20 gh3
e7 21 ef7 22 gh3 23 f6 24 ec2 25 gh3
18 ef6 gh7 19 ef7+ gh8 20 gh3 ef8 21
f4 ec8 22 ef4 ed8 23 ec5 ec8 24 ef3 ab5
25 f3+ 26 ef4 e2 27 ec8+ gh8 28 ef7 f6+ ef7
29 ef7+ ef8 30 eg7 1-0

C) Defensive Resources

In this section we illustrate the following three motifs:
- attacking lone passed pawns
- perpetual check
- stalemate themes involving a desperado rook

Black is a pawn down and White’s rook on d7 is quite active. However, Zviagintsev managed to secure the draw quite easily:
1...ec1+!
1...xd7? 2 xd7 xe4 3 fxg6 fxg6 4 xa7 ± (Ribli in CBM 65).
2 ef2
2 xd1 xd1+ 3 xd1 gxh5 (3...xe4 is also possible: 4 fxg6 fxg6 5 ef7 ef4+ 6 ec2 ef7 7
xf7 xf7 8 xd3 xe4 9 xd3 ±, but the pawn ending has to be calculated precisely) 4
exf5 ec5 5 f6 ef5+ 6 ec2 xf6 7 xd7 a6 =.
2...xf5 3 ef5 a5 4 zd7 d5
4 xd8 xd8 5 zd8+ eg7 = (Ribli).
4...a4!
Zviagintsev creates more weaknesses for his rooks to attack.
5 bxac4 ec4 6 a5
6 xf5 xd4 7 xd4 ec2+ 8 eg3 xa2 ± (Ribli).
6...a4 7 ec2 ec3 8 ec2 1/2-1/2
White can’t make real progress; e.g., 8...ec4
9 ec2 eg7 ±.

The next example shows a battle where both kings can easily come under fire (see following diagram).

Black’s far-advanced passed d-pawn counterbalances White’s attack:
1...d2
1...g6 2 dd6+ f6 3 a6e6 a5c5 4 xf6+ eg7 5 ef3 =.
2 dd7 xc5?!
2...b1! 3 xf7+ g6 4 g7+ f6 5 gf7+ g6 =.
We finish with two examples where a stalemate motif saved the defender:

R. Grau – L. Piazzini
Argentine Ch (Buenos Aires) 1935

3...hxf7+ g6! 4...xf7 f6

6...d7 5...g7+ (5...d6+ f5 6...d5+ e6 7...d7 bb2 =) 5...f6 6...xh7 bb2 7...h6+ e5 8...d6 g4 9...f4+ gxh3+(9...f5?? 10...f7+ e4 11...e7+ f5 12...e8#) 10...xf3 d1=+ 11...xd1= xh2 ±.

5...xb7

5...e2 bb2 6...e2 d2 7...xd2 ± is a drawn ending.

5...e2 6...h7f7+

6...h6+! e5 7...d6+ bb2 8...d5+ f6 9...d6+ e7 10...f3 d1=+ 11...xd1= xh2± offers some winning chances.

11...f3?? was trying, since the double-rook ending arising after 11...d1=+ 12...xd1= e2+ 13...g4= xh2 14...d6+ f7 15...d5= b6± offers some winning chances.

11...e2 f7 12...f4

12...f1 13...e1= xh2+ 14...f4= xh2 15...d6+ e7 16...d7+ e6 17...d4= e5

17...d1=?. 18...e4+ f5 19...f4+ g6 20...xd1= +.

18...d5= e6 19...d6+ e7 20...d7+ e8 21...h7= b1

21...d1=?. 22...xd1= xf2+ 23...g1 and now the rook protects h2 so that Black can’t force an immediate draw.

22...d7 1/2–1/2

White’s perpetual check saves the day after 22...e2c1.

V. Kramnik – P. Leko
Tilburg 1997

1...xb5!!

Otherwise:

a) 1...d2 2...d5 +–.

b) 1...d6? 2...f7 xh7 3...e5 4...h6 5...h6 6...g5 7...d6 8...d4 9...h6 7...f8+ 8...e6 9...f6 10...b4=+ 11...c4= d1=+ 12...xb5

2...xb5 d2 3...d5 d1=+ 4...xd1 d6+! =.

2...d2

2...d6+? 3...f7 d2 4...b8+ xh7 5...h5 6...h6 7...h8+ xh8 8...h6# (Stohl in CBM 61).

3...bd5 d1=+

3...xd5?? 4...e8=.

4...xd1 d6+= 5...xd6 (stalemate) 1/2–1/2

One year later another stalemate resource played a crucial role in a game between the same players (see following diagram):

1...b7?

Or:

a) 1...f3? 2...xe6+! xexe6 3...a6+ f5 4...a5+ g4 5...a4+ c3 6...a3+ f2 7...a2+ g1 8...g2+ h1 9...g1+ c2 10...e1+= c3 11...d1+ c3 12...d3+ h4 13...d4+= (Leko in CBM 66).

b) 1...e3 is Leko’s suggestion to prevent the stalemate defence but after 2...xe7 f3 3...e4 it is difficult:

4...xe4+

5...xe5 4...e5

c) 1...d3 4...e2+

5...b1 5...xb1

8...xe2 ±.

2...e4

Now the thoughts that could have prevented

4...xa7
g2 f5 8...xe2 ±.
Rook Endings

V. Kramnik – P. Leko
Dortmund 1998

6.177

\[ \text{B} \]

\[ \text{E6.52} \]

**+

Black can create huge problems for White. How?

\[ \text{B} \]

\[ \text{E6.53} \]

**+

White threatens to activate his second rook. Can you do something about that?

Exercises
(Solutions on pages 385-6)
7 Rook vs Minor Piece(s)

One of the great topics of debate in chess is how much the advantage of an exchange is worth. In certain types of middlegame positions, it can be no advantage at all, but in most endgame situations there are enough open files for the rook to overpower a minor piece unless there are compensating factors, such as one or more healthy extra pawns for the side with the minor piece.

Of course, a rook still struggles against bishop and knight unless it is supported by some useful extra pawns, or can make good use of its long-range abilities or a lack of coordination between the two minor pieces.

This chapter is divided into the following topics:
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7.2: Rook vs Bishop 269
7.3: Bishop and Knight vs Rook 292

7.1 Rook vs Knight

Rook and knight move in completely different ways. The rook is a long-range piece, which is usually very strong when there is play on both wings. It is worth approximately a knight and two pawns. When the play is only on one wing, the knight, as a short-range piece, has better chances to organize a defence. Our subjects are:
A: Rook (+ Pawns) vs Knight 256
B: Knight + Pawns vs Rook 259
C: Rook + Pawn vs Knight + Pawn 260
D: Several Pawns on One Wing 264
E: Pawns on Both Wings 268

A) Rook (+ Pawns) vs Knight

The lone rook usually can’t win against a knight. However, there is considerable danger for the defender when the knight can be separated from the king, or when the king is near a corner. The general outcome is nevertheless a draw (see following diagram).

Although the king seems to be in great danger, White’s attack doesn’t crash through:
Moravec study. 9...\textit{\text{\textcopyright{}a}\text{6}} doesn’t save the knight either: 10 \textit{\textcopyright{f}3!} \textit{\textcopyright{g}1} 11 \textit{\textcopyright{g}5+ \textcopyright{h}2} 12 \textit{\textcopyright{g}2+ \textcopyright{h}3} 13 \textit{\textcopyright{g}6 +--}.

\textit{\textcopyright{f}3 \textit{\textcopyright{g}1} 11 \textit{\textcopyright{g}5+ \textcopyright{h}2} 12 \textit{\textcopyright{g}2+ \textcopyright{h}3} 13 \textit{\textcopyright{g}8 +--}}

The original position of the Moravec study is:

\textit{\textcopyright{d}1}

Taking away all the knight’s squares.

1...\textit{\textcopyright{b}8} 2 \textit{\textcopyright{a}6}

Not 2 \textit{\textcopyright{b}6?}, when Black draws by 2...\textit{\textcopyright{c}8!}

3 \textit{\textcopyright{c}1+ \textit{\textcopyright{b}8!} 4 \textit{\textcopyright{h}1 \textit{\textcopyright{d}8} =.}}

2...\textit{\textcopyright{e}5+}

2...\textit{\textcopyright{c}7} 3 \textit{\textcopyright{c}1+! \textit{\textcopyright{b}8} 4 \textit{\textcopyright{h}1 \textit{\textcopyright{a}8} 5 \textit{\textcopyright{b}6 \textit{\textcopyright{b}8} 6 \textit{\textcopyright{c}6 \textit{\textcopyright{a}8} 7 \textit{\textcopyright{c}7 \textit{\textcopyright{a}5} 8 \textit{\textcopyright{a}1 +--}.}}}

3 \textit{\textcopyright{b}6 \textit{\textcopyright{a}4+} 4 \textit{\textcopyright{c}6 \textit{\textcopyright{c}3 5 \textit{\textcopyright{e}1 \textit{\textcopyright{a}7} 6 \textit{\textcopyright{e}3 \textit{\textcopyright{d}1 7 \textit{\textcopyright{d}3 \textit{\textcopyright{f}2 8 \textit{\textcopyright{d}7+ \textit{\textcopyright{b}8 9 \textit{\textcopyright{b}7+ \textit{\textcopyright{c}8 9...\textit{\textcopyright{a}8} 10 \textit{\textcopyright{b}6 \textit{\textcopyright{e}4 11 \textit{\textcopyright{h}7 +--.}}}

10 \textit{\textcopyright{f}7 +--}

With Black to move, the win presents greater difficulties:

1...\textit{\textcopyright{b}8} 2 \textit{\textcopyright{c}6! \textit{\textcopyright{a}5+} 3 \textit{\textcopyright{b}6! \textit{\textcopyright{c}4+} 4 \textit{\textcopyright{b}5! \textit{\textcopyright{e}5}}}

Or:

a) 4...\textit{\textcopyright{d}6+} 5 \textit{\textcopyright{c}6! \textit{\textcopyright{c}4 6 \textit{\textcopyright{h}8+ \textit{\textcopyright{a}7} 7 \textit{\textcopyright{h}4 \textit{\textcopyright{a}5+} 8 \textit{\textcopyright{b}5 \textit{\textcopyright{b}7} 9 \textit{\textcopyright{d}4 \textit{\textcopyright{b}8 10 \textit{\textcopyright{a}6! \textit{\textcopyright{e}5+ 11 \textit{\textcopyright{b}6 \textit{\textcopyright{e}6 12 \textit{\textcopyright{d}6 +--.}}}

b) 4...\textit{\textcopyright{d}2 5 \textit{\textcopyright{c}6 \textit{\textcopyright{f}3 6 \textit{\textcopyright{d}5 (this configuration of pieces is typical: the knight can’t
escape) 6...c7 7 xb3 d2 (after 7...g1 8 x3 the rook controls all the knight's squares) 8 xd3 xf1 9 ce4 xc6 10 xf4 xc5 11 xd1 gh2 12 g3 ++.

5 x1c1! f3 6 x3 g5 7 c6 a7 8 d5

9...c7 10 x3 f7 11 g7! ++.

10 x3 h7 11 c5 a4 12 c4 a5 13

Rook and pawn against a knight can be quite tricky if the pawn is blocked and the attacking king can't easily protect the pawn. Then the drawing chances are not bad.

7.04A

L.de Labourdonnais – A.McDonnell
London (55) 1834

1 x4 (in the game, 1 d5? allowed a tactical rescue: 1...b5! 2 b3 xax6! 3 c5 x7! 4 b8 x5! \(\frac{1}{2}\)=\(\frac{1}{2}\)) 1...c6 2 d5 (now the king can start its journey to a8) 2...a7 3 d6

If the rook protects the pawn from the side there are again fortresses, as in the next classic:

7.04

J.Berger, 1922

Berger correctly evaluated the position as drawn, but he didn't give the right method of defence. It was found by Frink in 1927.

1 b4?! a5!

...d6? 2 e5! b7 3 e6 c5+ 4 e7! b7 5 c1 a5 6 c8 b7 7 d7 c4 was given by Berger, but Cheron continued 8 b4!

2 c4

2 e5 c5! 3 b1 (3 b7 c6+! 4 c4 bx4 =) 3...c4+! 4 c6 bx6! =.

2...b7? 3 e5 c5! 4 f5 d7 5 b7 c7 6 b1 b8! 7 e5 c6+ 8 d5 b8! =

The position is won if it is shifted one file to the left:

7.05

Em.Lasker – Ed.Lasker
New York 1924

1...e4 2 a4 d4 3 b2! f3 4 a4!

The 'au' due to 7...g1

(10 c5 g3 10...d3! c3 14 g1
7...e4 7...e2
8 b4

Naturally attacking king)
The 'automatic' 7 \( \text{Qb}2 \) is a serious mistake due to 7...\( \text{Qe}2 \) 8 \( \text{Qc}4 \) \( \text{Nh}3 \) 9 \( \text{Qa}3 \) \( \text{Nc}3 \) 10 \( \text{Qa}5 \) (10 \( \text{Qe}5 \) \( \text{Qe}3 \) 11 \( \text{Qh}2 \) \( \text{Qd}4 \) 12 \( \text{Qf}7 \) \( \text{Qe}3 \) \( \text{a}+ \) ) 10...\( \text{Qd}3 \) 11 \( \text{Qb}2 \) \( \text{Nc}5 \) 12 \( \text{Qxb}3 \) \( \text{Nh}5 \) 13 \( \text{Qa}2 \) \( \text{Nc}3 \) 14 \( \text{Qc}1 \) \( \text{Qe}2 \) = -.

7...\( \text{Qe}4 \)

7...\( \text{Qe}2 \) 8 \( \text{Qc}5 \) \( \text{Qd}2 \) 9 \( \text{Qb}2 \) = .

8 \( \text{Qb}4 \) \( \text{Qd}4 \) 9 \( \text{Qb}2 \) \( \text{Nh}3 \) 10 \( \text{Qa}4 \) ! \( \text{Qd}3 \) 11 \( \text{Qxb}3 \) ! \( \text{Qd}4+ \) \( \frac{1}{2} \)-\( \frac{1}{2} \)

Naturally, there are drawn positions if the attacking king is far away from the action:

\[ \text{W} \]

\[ \text{B} \]

\[ \text{G. Kasparian, 1947} \]

B) Knight + Pawns vs Rook

Winning against a rook is not so easy. Even two connected passed pawns on their sixth rank fail to win in the following old position:

\[ \text{W} \]

\[ \text{T. von der Lasa, 1843} \]

The king stops the pawns from the front and the rook keeps Black busy from behind:

1 \( \text{Qe}1 \) \( \text{Qe}4 \)
1...\( d2+ \) 2 \( \text{Qe}2 \) \( \text{Qe}4 \) 3 \( \text{Qc}8+ \) \( \text{Qb}3 \) 4 \( \text{Qd}8 \) \( \text{Qc}3+ \) 5 \( \text{Qxe}3 \) = .

2 \( \text{Qf}8+ \) \( \text{f}3 \) 3 \( \text{Qf}8+ \) \( \text{Qf}4 \) 4 \( \text{Qf}7 \) =

Black can't strengthen his position further.

With separated pawns it is similar:

\[ \text{W} \]

\[ \text{B} \]

\[ \text{F. Meyer – A. Bigot} \]

\[ \text{Germany 1994/5} \]

Although White's pieces occupy very strong positions, Black is able to defend:
1 d5 Kb4 2 d6 Kc5 3 Qd7 Kb7 4 Kh6+ Kc8
4. Kh8 5 a5 Kd7 6 b5 and now:
a) 6...e7? a6 and then:
a1) 7...Qd7 8 c4 Qc8 9 Kb6 Qb8 10 Qe5
b7+ 11 Kc5 Qg7 12 Qc6+ Kd8 (12...Kc8 13
b6 Qd7 14 a7 Qg8 15 Qb8+ ++) 13 Ke7
Kg5+ 14 Kd5 Qg8 15 d7 Qa7 16 Qb4+--
a2) 7...a6 8 Qc4 Qa8 9 Qe5 Qb8+ 10 Qc6
Qc8+ 11 Qb7 Qc1 12 a7 Qb1+ 13 Qc6 Qc1+ 14
Qd5 Qa1 15 Qb6+--
b) 6...Kd7 7 Qc8 and here:
b1) 8 d7 Qc7 9 a7 Qg8 10 Qc8 Qg5+ 11
Kb6+ Qc1 (11...Qg6+? 12 Kb6! Qg8 13 Qd5--+
++) 12 Kb7 Qxd7 =
b2) 8 Qc4 Qc8 9 Kb6 Qb8 10 Qc5 Qa8 11
b5 (11 d7 Qxd7 12 Qxd7 stalemate) 11...Qg2
12 d7 Qd2 13 Qc4 Qd6 14 Qc5 Qd1=,
5 a5 Hb6 6 Qd7+ Qa7 7 Qc5 Qb8 8 Qa6+
Qc7 Qh7?
The threat of...Qxc7+ backfires. For 9...Qb8?
10 Qb5 Qc8 11 a6 Kb1 12 a7 Qc1= see the
game.
10 Qb6?
White misses 10 Qc6! a7 11 Qc5 Qc7+ 12
Qb6 Qc7 13 d7+ Qd8 14 a6+-.
10...Qh6
10...Qd7 11 Qb5 Qh8 12 a6 Qb8+ 13 Qc5
Qc8+ 14 Qd5 Qb8 15 Qc7 Qh8 16 a7 Qh5+ 17
Qc4 Qd5=.
11 Qb5 Qh1 12 a6 Qb1 13 a7 Qa1 14 Qc7
Qb1+ 15 Qc5 Qc1+ 16 Qd5 Qd1+ 17 Qe5
Qe1+ 18 Qf6 Qf1+ 19 Qe7 Qe1+ 20 Qf6
20 Qe6 Qb7 21 d7 Qd1=.
20...Qd1+ 21 Qe5 Qe1+ 22 Qd5
22 Qe4 Qf1+ 23 Qe3 Qa1 24 a8W+ Qxa8 25
Qxa8 Qd7=
22...Qd1+ 23 Qe6 Qc1+ 24 Qb6 Qb1+ 25
Qb5 Qa1 1/2-1/2

C) Rook + Pawn vs Knight + Pawn

There are three cases to consider:
C1: Pawns on the Same File 260
C2: Pawns on Adjacent Files 262
C3: Passed Pawns 263

C1) Pawns on the Same File

If the defender’s pieces occupy good positions
he can hold the draw ([see following diagram]).
One of the two black pieces is obliged to de-
defend the pawn, which stops him launching any
successful attack.

3 Qd8?
Not 3 Qd4--
1-0

If the rook can’t capture directly, it is a draw.

J.Smejkal – H.Ree
Wijk aan Zee 1972

1...Kxb5
1...a5 2 Qg4 Qg8 3 Qg2 Qc6 4 Qh4 Qe5 5
Qd3=,
2 Qg4 Qa6 3 Qf3 Qb6 4 Qg4 Qe8 5 Qf3
1/2-1/2

One rank further up the board (from the
rook’s viewpoint), it is a similar story:

7.09

Z.Kožul – D.Glavas
Bihac 1999

Black already has a fortress, so he should
simply stay put.
1...Qxd4?
This knight sacrifice is misguided. After
1...Qe7!! 2 Qb7 Qd7 3 Qh5 Qd6 4 Qh6 Qd7 =
White can’t make any progress.
2 Qxd4 Qc5
2...Qc6 3 Qd1 Qd6 4 Qd8 Qe5 5 Qc7+—.
3 \( \text{d1} \) \( \text{d4} \) 4 \( \text{e7}!! \)

Not 4 \( \text{e7}?? \) \( \text{e5} \) 5 \( \text{e7} \) \( \text{e5} \) =.

1-0

If the defender's pawn is further back, the rook can win because simplification into a pawn ending becomes possible.

The next example emphasizes the importance of the fact that the defending pieces must occupy ideal positions. If they can't reach them, the attacker prevails:

1 \( \text{d4} \) \( \text{d8} \) 2 \( \text{e4} \) \( \text{d7} \) 3 \( \text{h7} \) \( \text{d8} \) 4 \( \text{xe7} \)

\( \text{xe7} \) 5 \( \text{b5} \) \( \text{f6} \) 6 \( \text{b6} \) !!

With blocked rook's pawns, the plan has to be changed.

In this situation White can even sacrifice his pawn thanks to the miserable position of Black's knight on \( b7 \):

1 \( \text{h6} \) \( \text{d8} \) 2 \( \text{e5} \) \( \text{b7} \) + 3 \( \text{c6} \) ! \( \text{xa5} \) + 4 

\( \text{e7}!! \) \( \text{e4} \)

4... \( \text{b3} \) 5 \( \text{b6} \) \( \text{c5} \) (5... \( \text{d2} \) 6 \( \text{b7} \) + \( \text{h8} \) 7

\( \text{b2} \) \( \text{e4} \) 8 \( \text{c6} \) \( \text{c3} \) 9 \( \text{b7} \) \( \text{b5} \) 10 \( \text{d7} \) \( \text{b8} \) 11 \( \text{b6} \) \( \text{c8} \) 12 \( \text{d3} \) \( \text{c7} \) 13 \( \text{f3} \) +++) 6 \( \text{c6} \)

\( \text{e4} \) 7 \( \text{b7} \) + \( \text{a8} \) 8 \( \text{e7} \) \( \text{c3} \) 9 \( \text{b3} \) \( \text{b5} \) 10

\( \text{b6} \) \( \text{d6} \) 11 \( \text{e6} \) \( \text{c4} \) + 12 \( \text{c5} \) \( \text{d2} \) 13 \( \text{f2} \)

\( \text{f3} \) 14 \( \text{b6} \) +--

5 \( \text{h4} \) \( \text{d2} \) 6 \( \text{d4} \) \( \text{d3} \) 7 \( \text{d5} \) \( \text{e1} \) 8 \( \text{c6} \)

\( \text{f3} \) 9 \( \text{d7} \) + \( \text{h8} \) 10 \( \text{d5} \) \( \text{e1} \) 11 \( \text{e7} \) \( \text{d3} \) 12

\( \text{e3} \) \( \text{b4} \) + 13 \( \text{f3} \) \( \text{a5} \) 14 \( \text{e7} \) \( \text{c8} \) 15 \( \text{a7} \)

\( \text{d3} \) + 16 \( \text{c6} \) \( \text{f2} \) 17 \( \text{xa5} \) \( \text{b7} \) 18 \( \text{a4} \) \( \text{d3} \)

19 \( \text{a3} \) \( \text{f4} \) 20 \( \text{f3} \) \( \text{c2} \) 21 \( \text{a5} \) \( \text{c6} \) 22 \( \text{e3} \)

\( \text{c1} \) 23 \( \text{d4} \) ! \( \text{d5} \) 24 \( \text{e3} \) ! \( \text{a2} \) + 25 \( \text{b3} \)!

\( \text{c1} \) + 26 \( \text{b2} \) +--

1 \( \text{d4} \) \( \text{h3} \) ?

Surprisingly, this is wrong due to the unfortunate position of the rook. The immediate

1... \( \text{g6} \) is called for. Only after 2 \( \text{f3} \) \( \text{h8} \) 3

\( \text{d4} \) should Black play 3... \( \text{h3} \), since now the king is protecting the f5-pawn: 4 \( \text{f2} \) \( \text{d3} \) 5

\( \text{e2} \) \( \text{h5} \) --.

2 \( \text{f2} \) \( \text{g6} \) 3 \( \text{c2} \) ?

Missing the chance to regroup with 3 \( \text{f3} \):

a) 3... \( \text{h5} \) 4 \( \text{g2} \) \( \text{g4} \) 5 \( \text{e3} \) + \( \text{h4} \) 6 \( \text{g6} \) + =.

b) 3... \( \text{h8} \) 4 \( \text{e1} \) \( \text{h5} \) 5 \( \text{f3} \) \( \text{a8} \) 6 \( \text{g2} \)

\( \text{a3} \) + 7 \( \text{e3} \) =.

c) 3... \( \text{h1} \) 4 \( \text{g3} \) \( \text{h5} \) 5 \( \text{f4} \) \( \text{g} \) 1 + 6 \( \text{f2} \)

\( \text{g4} \) 7 \( \text{f3} \) \( \text{g6} \) 8 \( \text{c2} \) =; the knight will finally reach the desired c3 post.
3...a3 4 e2
Or 4 a2 a5 5 f3 h5 6 e5 h4 ++; 4 f7 c3 b5 6 a5 h4 +; 4 f7 c3 b5 6 a5 h4 +; 4 f7 c3 b5 6 a5 h4 +;
4...a2 5 d3 a4!
A nice point: if the king protects the pawn, the e3-square is blocked.
6 a3
6 a3 allows Black’s king to penetrate:
6...a5 7 c2 (7 c4 a3 ++) 7...h5 8 e3 h4 ++.
6...e4 7 d4 e3 8 e2
8 f2 d3 9 f3 h5 10 g3 a3 ++.
8...e5 9 f3 h5 10 e5 e3 11 f2 h4 12 g2 h3 0-1
Shirov resigned due to 13 f2 (13 h2 b2+ 14 g1 g3 15 f1 f2+ ++) 13...h3 14 a2 g3 15 d3 a3 16 a3 a3 a3 a3 a3 a3.
7.12
B.Larsen – M.Tal
Bled Ct (7) 1965

1 f3 f7 2 g3 e6 3 f4 a4 4 f3 e5 5 f3 h5! (D)
This drawing formation given by Averbakh is worth memorizing.
5...a8 6 e3 h8 7 f3 e8
White also draws after 7...h8 8 a3 h4 9 f5 (9 h5! f5 ++) 9...h3 10 g3 h8 11 f3 e4 12 a3 h5 =.
8 f4 d4 9 h5 c1 10 e2 a4 11 f3 e5 12 g3 e3+ 13 f2 h3 14 g2 h7
7.12B
A.Alekhine – M.Fox
Bradley Beach 1929

C2) Pawns on Adjacent Files

If the pawns are on adjacent files it is similar. To form a drawing formation the defending pieces have to be on good squares:

After 1 h5!
1...g6
Kasparov
6 h7 10 c4 12 e1
7 d4+ a8
11...c4
12 d4+ c4
The following draw due to:

7.13
M.Jones

1 a7+ a1 a6
...and the draw by
Averbakh for the Black side won by 2.
1 a5 a5 a5 a5 a5 a5
a) 3...a4
6 a5 a5 a5 a5 a5 a5
b) 3...a4
8...a5 a5 a5 a5 a5 a5
10 d4 e5 a4 a4 a4 a4 a4
12 f5 b5 b5 b5 b5 b5
C3) Passed Pawn

If both sides have passed pawns, usually much the same...

7.12A
After 1 a5?! g6 2 a6 c7 = Black has reached a drawing formation.

1...g6 2 a5 d7 3 f3 d6 4 a7 f8 5
g4 g6?

Kasparov found the saving move 5...g6! =.
6 h7 f8 7 h6+ c7 8 g5 d7 9 h7+
d6 10 h1 c7
10...d6 11 h6 d5 12 f5 c7 13 f6 ++,
11 g6 b6
11...c5 12 e1 d3 13 e4 c5 14 e3
c7 15 b4 a6 b4 16 c2 .
12 e1 d7 13 f7 d5 14 e4 c7 15
d4+ c8 16 c4 1-0

The following pawn formation allows no
draw due to the proximity of the edge:

W

7.14

O.Schuls – R.Cheutshenko
Estonian Ch (Tallinn) 1999

1 b2?!  
This is good enough to win, but White must follow up very accurately. Otherwise:

a) 1...xg5? 2 b3 3 c6+ c7 5 f5 c4+ .
b) 2 c5! c3 4 c6+ c7 5 f5 c4+ .

1 a7+ f8 2 f5?

...and the game was drawn. Bronstein and Averbakh found later that Taimanov could have won by 2 d7! g8 3 c6+! , and now:

a) 3...d4+ 4 e3 h8 5 e5++ but 6 h8
b) 3...d4+ 4 e3 h8 5 xg6 6 f4+ 6
g5 7 e4 f4 8 d4 9 g4+ f8 10 h4
g8 11 g6 h8 12 h4 c3 13 e4
c2 14 e3+ 15 f6 e5 16 c3 (15...g3 16
c4 h1 17 f3 ++) 16 c6 ++.

C3) Passed Pawns

If both sides have passed pawns, the rook is usually much stronger than the knight (see following diagram):
b) 3...c6 4 h5 e5 5 d5+ e6 6 d4 ++.

c) 3...c6 4 f3 g4+ 5 e3 d7 6 d4 d6 7 d8 h8 f5+ 8 e4 d6+ 9 d3 e5 10 d8 g3 11 e8 ++.

d) 3...c7 4 f2 b7 5 e3 g4 6 d4 d6 7 c5 f7 8 d5 h6 9 h6 f5 10 f6 ++.

3...c6 4 h5 e5! 5 d5+ e6! 6 e5 d6! 7 f5 xc5 8 xe6 ½-½

D) Several Pawns on One Wing

With an equal number of pawns, the rook usually wins.

\[\text{Diagram B}\]

7.15

H. Reddmann – K. Müller
Hamburg 1988

Black can save himself due to the fact that White’s king needs time to come back.

1...f6?

1...g5? also loses: 2 d3 gxf4 3 gxf4 h4 4 d5 f6 5 e4 g4 6 g5 f6+ 7 f5 ++.

Black can draw by 1...f1! 2 d3, and then:

a) 2...g5? 3 d4 (3 fxg5? gxh4 4 d4 g4 5 e5 d6 6 h2 c4 7 f2 h6 8 e3 h4 =) 3...h4 4 g4 h4 5 c4 ++.

b) 2...f6 3 d4 c5 4 d3 (4 e3 g4 5 e5 c5 g4 6 h6 h4 7 h6 c4 8 d5 d5 =) 9 h6 h3 10 h2 f5 = 4...h2 5 h2 g4 6 g4 h4 7 h4 g4 8 g4 h4 9 h4 c2 10 h1 g4 11 e3 g4 12 f2 f2 c6 13 f1 f1 =.

2...d6? 2 d5 f1 3 g5 c3+ 4 d3 c5 5 e4 d6+ 6 f6 c5+ 7 f3 c7 8 c7 f6 9 f6 f6+ 10 d5 ++.

2...f5 3 d5+ f6?

The active 3...e4! was called for: 4 d6 (4 e5 f3 5 d5+ f6 6 gxf4 c5 7 g8=) 4...f3+ 5 e6 c5 6 e3 g4 7 d3 h4 8 g4 h5 9 e4= 10 g3 =.

4 d3 c4 4...f1 5 c5 f5 6 e4 c4+ 7 f4 ++.

5 c4 d6+ 6 f6 g4 7 a5 h8 8 c6 e6 9 c5 f5+ 10 d5 ++.

D) Several Pawns on One Wing

With an equal number of pawns, the rook usually wins.

\[\text{Diagram B}\]

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Black can save himself due to the fact that White’s king needs time to come back.

1...f6?

1...g5? also loses: 2 d3 gxf4 3 gxf4 h4 4 d5 f6 5 e4 g4 6 g5 f6+ 7 f5 ++.

Black can draw by 1...f1! 2 d3, and then:

a) 2...g5? 3 d4 (3 fxg5? gxh4 4 d4 g4 5 e5 d6 6 h2 c4 7 f2 h6 8 e3 h4 =) 3...h4 4 g4 h4 5 c4 ++.

b) 2...f6 3 d4 c5 4 d3 (4 e3 g4 5 e5 c5 g4 6 h6 h4 7 h6 c4 8 d5 d5 =) 9 h6 h3 10 h2 f5 = 4...h2 5 h2 g4 6 g4 h4 7 h4 g4 8 g4 h4 9 h4 c2 10 h1 g4 11 e3 g4 12 f2 f2 c6 13 f1 f1 =.

2...d6? 2 d5 f1 3 g5 c3+ 4 d3 c5 5 e4 d6+ 6 f6 c5+ 7 f3 c7 8 c7 f6 9 f6 f6+ 10 d5 ++.

2...f5 3 d5+ f6?

The active 3...e4! was called for: 4 d6 (4 e5 f3 5 d5+ f6 6 gxf4 c5 7 g8=) 4...f3+ 5 e6 c5 6 e3 g4 7 d3 h4 8 g4 h5 9 e4= 10 g3 =.

4 d3 c4 4...f1 5 c5 f5 6 e4 c4+ 7 f4 ++.

5 c4 d6+ 6 f6 g4 7 a5 h8 8 c6 e6 9 c5 f5+ 10 d5 ++.

The superiority of the rook is also demonstrated in the next example:

\[\text{Diagram W}\]

7.16

W. Steinitz – A. Anderssen
London (14) 1866

1 b6 g6 2 h2 e5 3 g3 d7

After 3...g5 White wins by 4 h4 gxf4+ (or 4 gxf4 5 h5 h7 6 e6 c3 7 e7+ g8 8 g4 c4 9 g3 d5 10 e5 f6+ 11 f5 =) 5 exf4 gxf4+ 6 d4 g7 7 e7 h8 8 f7 e5+ 9 h5 ++.

4 d6 c6 5 f4 g8 6 g4 c7 7 h4 c6 8 g3 c7 9 e6 c6 10 h5 h8 11 e7 c8 12 f4

1½-½
12 \( \text{Rc}8 + \text{Ah7} 13 \text{g5} \text{g6} (13...\text{hxg5} 14 \text{fxg5} 15 \text{h6} + -) 14 \text{gxh6} \text{gxh6} 15 \text{Ah4} \text{g6} + 16 \text{g5} + -.

12...\text{Qf7} 13 \text{Qf5} \text{Qf8} 14 \text{Aa7} \text{g8} 15 \text{Qc7} \text{g5} 16 \text{Qg6} \text{Qe6} 17 \text{Qc8} + \text{Qf8} + 18 \text{Qf5} \text{Qf7} 19 \text{Aa8} \text{Qg8} 20 \text{Qe5} \text{Qf7} 21 \text{Qa7} + \text{Qg8} 22 \text{Qd6} \text{Qh7} 23 \text{Qe6} \text{Qf6} 24 \text{Qf5} \text{Qh7}

24...\text{Qh7} 25 \text{Qd6} \text{Qg5} + (25...\text{Qd6} 26 \text{g5} \text{Qh8} 27 \text{Qg6} + -) 26 \text{Qe7} \text{Qe4} 27 \text{Qa8} + \text{Qh7} 28 \text{Qf8} \text{Qg5} 29 \text{Qe6} \text{Qh8} 30 \text{Qg6} \text{Qh7} + 31 \text{Qf7}

\text{Qg5} + 32 \text{Qxg5} \text{hxg5} 33 \text{Qg6} + -.

25 \text{Qe7} \text{Qd5} 26 \text{Qd6} \text{Qc7} 27 \text{Qe5} \text{Qa6} 28 \text{Qe6} \text{Qb4} 29 \text{Qf7} \text{Qd3} 30 \text{Qf4} \text{Qf4} 31 \text{Qf8}

\text{Qd5} 32 \text{Qe5} \text{Qf4} 33 \text{Qf7} \text{Qh3}

Or 33...\text{Qg6} 34 \text{Qe4} \text{g5} 35 \text{Qe3} \text{Qg2} 36 \text{Qe7} + -.

34 \text{Qg3} \text{Qg5} +

34...\text{Qf2} 35 \text{Qf8} \text{Qxg4} 36 \text{Qg3} \text{Qe5} 37 \text{Qxg7} + \text{Qh8} 38 \text{Qe7} \text{Qf3} 39 \text{Qf7} + -.

35 \text{Qf8} \text{Qh8} 36 \text{Qe7} \text{Qh7} + 37 \text{Qf7} \text{Qf6} 38 \text{Qg6} \text{Qg8} 39 \text{Qxg7} \text{Qf6} 40 \text{Qa7} \text{Qg8} 41 \text{Qh7#} (1-0)

With three pawns for each side, it is no different:

If the knight has an extra pawn, there are good drawing chances if a fortress can be created. It is especially important that the knight should have an outpost or that it is on a good circuit, able to defend its own pawns and to attack the opponent's if appropriate. Leykin demonstrates that it is possible to hold the following position by using this technique (see Averbakh):

\[ \text{W} \]

7.18

M.Vidmar – A.Alekhnine
San Remo 1930

1...\text{Qf8} 2 \text{h4} \text{e7} 3 \text{Qe4} \text{h6} 4 \text{Qf2}?

The key mistake. 4 \text{Qh3} \text{Qe6} (4...\text{Aa3} 5 \text{Qg4} \text{Qc6} 6 \text{Qf4} \text{g6} 7 \text{f4} = ) 3 \text{g4} \text{Qe5} 6 \text{Qg3} \text{g6}

Averbakh demonstrates the following win if White simply waits passively: 10 \text{Qf4} \text{Qe2} 11

\text{Qh3} \text{Qd2} 12 \text{Qf4} \text{Qa2} 13 \text{Qh3} \text{Qd4} 14 \text{Qf4}

\text{e3} 15 \text{Qe6} \text{Qa7} 16 \text{Qf4} \text{Qa6} 17 \text{Qh3} \text{Qc2} 18

\text{Qf4} + \text{Qf1} 19 \text{h5} (19 \text{Qh3} \text{Qa2} 20 \text{Qf4} \text{g5} 21

\text{hxg5} \text{hxg5} 22 \text{Qe6} \text{Qxg4} + 23 \text{Qh3} \text{Qg2} + -) 19...\text{Qa5} 20 \text{Qh2} \text{Qf2} 21 \text{Qh3} \text{Qh5} 22 \text{Qh4}

\text{Qe3} + -.

10...\text{Qe2} 11 \text{Qf4} \text{Qe2} 12 \text{Qh3} \text{Qd4} 13 \text{Qf4}

\text{e3} 14 \text{Qe6} \text{Qd5} 15 \text{f4}

15 \text{Qh4} \text{Qe5} 16 \text{Qxg7} \text{Qf4} 17 \text{Qh3} \text{Qe1} 18

\text{Qh2} \text{Qe7} 19 \text{g3} + \text{Qg5} + -.

15...\text{Qf5} 16 \text{Qg4} \text{Qd6} 17 \text{f5}

17 \text{Qxg7} \text{Qxf4} + 18 \text{Qg3} \text{Qf7} 19 \text{Qe6} \text{Qe7} 20

\text{Qf4} \text{Qe5} 21 \text{Qh3} \text{Qxh5} + -.

17...\text{Qf7} 18 \text{g3} ?!

18 \text{Qd8} \text{Qf6} 19 \text{Qe6} \text{Qe4} 20 \text{Qxg7} \text{Qf7} 21

\text{Qe6} \text{Qxh5} 22 \text{Qh4} \text{Qe5} 23 \text{Qd8} \text{Qg5} 24 \text{Qf7}
We now present a selection of fortresses to sharpen the reader's eye for this important subject:

1. \( \text{f4} \) 2 \( \text{f3} \) \( \text{g7} \) 3 \( \text{f2} \) g5 4 \( \text{e3} \) e4 5 \( \text{e4} \) \( \text{g6} \) 6 \( \text{b8} \) h6 7 \( \text{a8} \) f4 8 h4 \( \text{g6} \) 9 hxg5 hxg5 10 \( \text{a1} \) \( \text{f4} \) 1/2-1/2

The following pseudo-fortress can easily be broken using zugzwang:

1 \( \text{d6} \) \( \text{g5} \) 2 \( \text{b3} \) \( \text{f8} \) 3 \( \text{e3} \) \( \text{h7} \) 4 \( \text{d7} \) \( \text{g5} \) 5 \( \text{d8} \) \( \text{g7} \) (5...\( \text{h7} \) 6 \( \text{e8}+ \) \( \text{g7} \) 7 \( \text{e7} \) \( \text{g5} \) 8 \( \text{f8} \) \( \text{xh3} \) 9 \( \text{xf7+} \) --) 6 \( \text{e7} \) \( \text{h7} \) \( \text{e3} \) \( \text{g5} \) 8 \( \text{e4} \) \( \text{e4} \) 9 \( \text{e6} \) \( \text{g5} \) 10 \( \text{xf6} \) \( \text{xh3} \) 11 \( \text{xf7+} \) \( \text{h6} \) 12 \( \text{f6}+ \) \( \text{h7} \) 13 \( \text{e6} \) \( \text{f4} \) 14 \( \text{f7} \) 1/0

The rook's superiority is also demonstrated in the next example:
The extra c-pawn doesn’t save the game for Black:
1...\(\text{e6}\) 2 \(\text{xe3}\) Certainly not 2 \(\text{xa7+ f6 3 xh7??}\) losing to 3...\(\text{g5+ -}\).
2...\(\text{f6}\) 3 \(\text{a7 h6 4 xh7 h5 f4 f3 6 xd3}\) After 6 h4? c4 7 \(\text{xa7 c5 8 xd4 c4 9 xxc3 g4 10 xd5 c4! 11 xaa6 c5 12 xxe5 f7 13 c7+ c8 =}\) Black’s fortress is impregnable.
6...h4? Or:
   a) 6...g5 7 \(\text{h6+ c7} 8 \text{xh6+ c6} 9 \text{f5+ e5} 10 h4 c7 c4 12 g6 ++ .
   b) 6...f8 7 c7 f6 (7...e6 8 h4 d4 9 c4 c2 10 a3 +--) 8 gxf6 dxf6 9 c3 c4 10 \(\text{xc7 c6} 11 \text{cd7 f8}\) (11...c4 12 cxd4 cxd4+ 13 cxd4 c6 14 c5++) 12 c6d6+ c6 13 c5d5 f7 14 h5 ++ .
7 h4 c7 8 c3 e3 8 c4 c4 9 cxc5 and then:
   a) 9...\(\text{c5}\) 10 \(\text{d5 c1}\) (10...cxd4 11 g4h4 \(\text{xe6} 12 \text{dxe6 f7} 13 \text{c3 f7} 14 \text{h5 + -}) 11 \text{h6 f3} 12 c7 c6 13 d4 c3 14 g3 f3 14 gxf5 c5 15 h5 c6 16 h8 c7 17 c8d8++ .
   b) 9...c2 10 c4 f6? (10...cxf4 11 gxf5 g5 12 \(\text{g4 c3} 13 \text{d4 c6} 14 \text{g4} 15 \text{g5} 16 \text{xe3} +--) 11 g5 + \(\text{xe7} 12 \text{c4 c3} 13 \text{d5 c2} 14 \text{g5 c1} (14...c1 15 \text{c4} \text{c2}) 16 \text{c3 c3} 17 \text{c6 c4} 18 c4h4 \text{c3} 19 c3\) f3 c3h5 20 c8h8 +--) 15 c6h6 c3 16 c6d6 c1 17 h4 c3d3 18 h5 g6h5 19 c6e6 +--.
8...c4 g4 (D)
9...g5
9...c3? and now:
   a) Not 10 g5\: 10 d4 11 c6 c6 12 c3 cxf4+ 13 cxc3 c6 14 h4 (14 h4 c8d8 15 h5 g6h5 16 d4 c7 17 c8h5 c6 =) 14...c5 =.
   b) 10 gxf6 c2 11 c2d2 (11 f6?? c6f6 12 c2 c6f5 13 cxc2 cxf4 =) 11...c5f5 12 cxc2 c8 13 c8h5 c6 14 c2 cxf4 15 c8h4 c6 16 c8a4 c6h6 17 c3 c8e5 18 c3 c8f3 c8e5c5 19 c3 c8e3 c6 20 h4 c8h5 21 c8a7 f4 22 c8h3 +--.
10 c5f5 10 cxf5 f4 11 c2d2 f3 12 c8h6 c3 13 cxc3 (13 cxc2 cxf5 14 c6 c4 15 c8f5 c6 c8f5 15 c8f5 c6 16 c8h8 c7 17 c8d8++) 12 c6d6+ c6 13 c6d5 c7 14 c8h5 c3 c6 15 c8d4 c5 c6 16 c8c4 c6 17 c8c4 c6 18 c8f5++ .
   a) 14...c6 15 c6 c3 16 c3 c6 17 c8xf5 c5 18 c5 c6 19 c8c4 ++.
   b) 14...c8c4 15 c6 c4 16 c8f5++ .
14...cxf5 15 c8xf5 c5 16 c8xf5 c8h4 17 c8c4 c8h3 18 c8c2 c8d5 19 c8e6 c8g7 20 c8g6 c8f7 (20...c8h7 21 c8g5 +--) 21 c8h6++ .
   a) 16...c8c7 17 c8g5 c8g7 17...c8f5c7 17 c6c6 c8g4 18 c8d4! c8b5+ 19 c8e5 ++ .
   b) 14...c8c5 15 c8f5 16 c8xf5 c8c7 17 c8g5 18 c8e6 c8f7 (20...c8h7 21 c8g5 +--) 21 c8h6++ .
16...c8d7 17 c8c7 18 c8b3 c8g5 19 c8xf5 c8g4 20 c8f8 +-- .
17...c8c5 18 c8d3 c8g5 19 c8xf5c5 20 c8g4 21 c8f8 +-- .
18 c8c3 c8h3 19 c8f2
19 f6 \( \text{Qg6} \) 20 f7 h2 21 \( \text{Rf1} \) \( \text{g4} \) 22 \( \text{d5} \) \( \text{g3} \) 23 \( \text{e6} \) \( \text{g2} \) 24 \( \text{f6} \) \( \text{f8} \) + 25 \( \text{e7} \) \( \text{h1} \) \( \text{W} \) 26 \( \text{xf8} \) = (Hecth).

19...\( \text{Qxf5} \) 20 \( \text{Qxf5+} \) \( \text{g4} \) 21 \( \text{Rf1} \) 21 \( \text{f8} \) h2 22 \( \text{Rh8} \) \( \text{g3} \) 23 \( \text{e3} \) \( \text{g2} \) 24 \( \text{g8} \) + \( \text{h1} \) =.

21...h2 22 \( \text{Aa1} \) \( \text{g3} \) 23 \( \text{e3} \) \( \text{g2} \) 24 \( \text{h1} \) \( \text{Aa} \) 25 \( \text{f2} \) \( \frac{1}{2}-\frac{1}{2} \)

E) Pawns on Both Wings

The rook is much stronger when the fight is on both wings as the knight is a short-range piece. If a passed pawn can be created, the knight usually faces insurmountable problems:

\begin{center}
\text{7.25}
\text{V.Korchnoi – N.Short}
\text{Wijk aan Zee 1997}
\end{center}

In spite of Black’s huge advantage, he has to be careful not to spoil the win.

1 \( \text{a}2 \) \( \text{b}3 \) 2 \( \text{a}1 \) \( \text{d}4 \) + 3 \( \text{d}3 \) \( \text{d}5 \) 4 \( \text{c}1 \) \( \text{xf3} \) 5 \( \text{e}7 \) \( \text{e}4 \) 6 \( \text{a}4 \) \( \text{g}5 \) 7 \( \text{f}7 \) \( \text{c}7 \)

"White has managed to activate his rook and even though Black has strong passed pawns in the centre, he now has to play very accurately because the rook is much stronger in this kind of endgame than the knight." (Cu.Hansen in CBM 57).

7...\( \text{d}4 \) \( \text{f}3 \) \( \text{a}5 \) 9 \( \text{c}1 \) \( \text{e}6 \)?

9...h7! 10 \( \text{h}5 \) \( \text{c}4 \) 11 \( \text{b}7 \) \( \text{xf6} \) 12 a5 e3 13 a6 b5 14 f3 b3! + (Cu.Hansen).

10 \( \text{a}7 \) \( \text{c}5 \) 11 \( \text{h}6 \) \( \text{d}3 \) + 12 \( \text{d}1 \) e3??

After 12...h3! 13 \( \text{f}7 \) (13 a5 e3 14 \( \text{d}7 \) \( \text{f}3 \) 15 \( \text{c}7 \) \( \text{h}4 \) 16 \( \text{h}5 \) b2 — +) 13...\( \text{c}3 \) 14 \( \text{h}7 \) f2 15 \( \text{f}7 \) \( \text{f}4 \) 16 \( \text{xf4} \) \( \text{xf4} \) 17 \( \text{e}2 \) b2 18 \( \text{h}8 \) f1 \( \text{f}1 \) + 19 \( \text{axf1} \) b1 \( \text{W} \) + 20 \( \text{a}2 \) “Black is of course better but it is not clear to me whether he can win” (Cu.Hansen).

13 \( \text{c}7 \) !

Surprisingly, White’s h-pawn now decides the outcome in his favour.

13...f2 14 \( \text{e}2 \) \( \text{f}4 \) + 15 \( \text{f}1 \) \( \text{h}5 \) 15...g5 16 h7 \( \text{g}6 \) 17 \( \text{g}7 \) \( \text{h}8 \) 18 \( \text{g}8 \) \( \text{f}7 \) 19 \( \text{f}8 \) + —.

16 \( \text{f}7 \)! 1-0

Rules and Principles:

Rook vs Knight

1) The pawnless ending \( \text{Qh}+\text{R} \) vs \( \text{Qh}+\text{N} \) is drawn if the knight can’t be separated from its king and the king is not trapped in the corner.
2) With pawns only on one wing, the player with the knight can sometimes construct a fortress, but he has to be careful not to fall into zugzwang, which is, as we already know, a typical fighting method against a knight.

3) The rook is very strong with pawns on both wings, especially if it can create and support a passed pawn (see 7.24 and 7.25).

Reference works:
Springer gegen Läufer und Turm gegen Leichtfigur, Averbakh, Sportverlag 1989
Encyclopaedia of Chess Endings, Rook Endings Volume 2, Belgrade 1986

Exercises
(Solutions on pages 386-7)

White’s a-pawn is a major force, but how should he deal with Black’s counterplay?

How can Black’s c-pawn be stopped?

7.2 Rook vs Bishop

Rook and bishop are both long-range pieces but the rook is nevertheless much stronger as it can visit all the squares on the board and it can cut off the enemy king all on its own. Our material is divided into:
A: Rook (+ Pawns) vs Bishop 269
B: Bishop + Pawns vs Rook 273
C: Rook + Pawn vs Bishop + Pawn 274
D: Several Pawns on One Wing 281
E: Pawns on Both Wings 286

A) Rook (+ Pawns) vs Bishop

A lone rook normally cannot win against a bishop, especially if the defending king is in a corner opposite to the bishop’s colour (see following diagram).

At first sight it looks dangerous for Black but stalemate saves him in all variations:
4...\textit{\textbf{d6}}
4...\textit{\textbf{d4}} 5 \textit{\textbf{d}c3} \textit{\textbf{f}f8} 6 \textit{\textbf{f}f3}! +--
5 \textit{\textbf{d}d3} \textit{\textbf{c}e7}
5...\textit{\textbf{a}c7} 6 \textit{\textbf{c}c3} \textit{\textbf{d}d8} 7 \textit{\textbf{e}c8} +--
6 \textit{\textbf{c}c3} 1-0
Tarrasch resigned as he loses his bishop after 6...\textit{\textbf{f}f8} 7 \textit{\textbf{e}c8}+! \textit{\textbf{d}d8} 8 \textit{\textbf{x}d8}+! +--

Kling and Horwitz discovered the winning formation 7.27 in 1851 (see, e.g., Av 321).

Sometimes a "friendly" pawn can hinder the defending bishop:

\begin{center}
\begin{tabular}{c}
\textbf{7.27A} \hline
\textbf{S.Birnow, 1946} \\
\end{tabular}
\end{center}

1 \textit{\textbf{g}g5}+! \textit{\textbf{f}f8} 2 \textit{\textbf{h}h5}! \textit{\textbf{c}c7} 3 \textit{\textbf{d}d7}! \textit{\textbf{b}b6} 4
\textit{\textbf{b}b5} \textit{\textbf{a}a7} 5 \textit{\textbf{a}a5}!
5 \textit{\textbf{b}b7}? \textit{\textbf{c}c5}! 6 \textit{\textbf{b}b5} \textit{\textbf{a}a3}!=
5...\textit{\textbf{b}b6} 6 \textit{\textbf{a}a8}+ \textit{\textbf{f}f7} 7 \textit{\textbf{c}c6}! +--

Rook and pawn usually win against a bishop, but it is worth noting that the king and rook should be activated before the pawn advances too far. In most cases the position remains won, but there are some exceptions, especially with a rook's pawn and a queening square of the opposite colour to the bishop.

The following diagram shows the standard winning technique:

1 \textit{\textbf{a}a1}

\begin{center}
\begin{tabular}{c}
\textbf{7.27} \hline
\textbf{G.Breyer – S.Tarrasch} \\
\textbf{Berlin 1920} \\
\end{tabular}
\end{center}

White wins no matter where Black's bishop is (as long as it is on a dark square, of course!).

1...\textit{\textbf{g}g1} 2 \textit{\textbf{f}f1} \textit{\textbf{h}h2} 3 \textit{\textbf{h}h1} \textit{\textbf{g}g3} 4 \textit{\textbf{h}h3} .
Forcing the bishop out of the safe zone behind the kings.
White also wins with the pawn on d5, but it is harder:

7.28A
B. Guretzky-Cornitz, 1860

1 a4 a6 2 a2 c5 3 c5 d6+ 4 d4
db5 5 a3 f4 6 f3 h2 7 f6 g1+ 8 e4
e2 9 f7+ d6 10 g7
White was aiming for this zugzwang.
10...c5 11 g6 d6 12 e6 h2 13 c6+
+-

The next position is even drawn (see following diagram):

The pawn has advanced too far, taking the e6-square away from its own king:
1 b6 d4+! 2 b5 c5!
2...b7 3 h5 f2 4 g5 e3 5 g8+ c7
e4 g7 e4 c7 8 d5 f6 9 f4 e3
10 h4 f2 11 h3 e1 12 f3 b4 13 h7+ c8 14 c7 b7 15 e6! c8 16 h7 a5 17

d6 b7 18 f7 b6 19 c8+ x8 20 c6+
+-.

3 c5 f4 4 c7!

This tricky pawn sacrifice doesn't lead to victory because of the proximity of the 'right' corner (i.e. the right corner from Black's perspective).
4...b7! 5 c8+!
5 b5 g3 =.
5...xc8 6 c6 b8 7 b6 a8 = (7.26)

With the 'wrong' (from the attacker's viewpoint) rook's pawn, it is more or less the same:

7.29A
E. del Rio, 1750

1 b5 d4 2 a7 a7! 3 a6 b8 4 b6
e5 5 e7 g3 = (7.26)

In the case of a rook's pawn, it again depends on whether the bishop controls the queening square. If it does, it follows that the defending
king is in the wrong corner and the pawn can be sacrificed in order to reach the winning formation 7.27:

Not 1 h5?, when Black draws by 1...d3 2
\[\text{h6} \text{g8} 3 \text{g8}+ \text{f7} 4 \text{b8} \text{c2} 5 \text{g5} \text{g7} 6 \text{h6}+ \text{h7} = (7.29A).
\]
1...\[\text{g8} 2 \text{g7}+ \text{f8}
2...\[\text{h8} 3 \text{e7} \text{+} \text{and now:
\]
\[\text{a) 3...d5} 4 \text{g6} \text{c4} 5 \text{h7}+ \text{g8} 6 \text{d7} \text{h8} 7 \text{h5} \text{a2} 8 \text{b7} \text{d5} 9 \text{h7}+ \text{g8} 10 \text{e7}! \text{h8} 11 \text{h6} \text{c4} 12 \text{h7} \text{d3}+ 13 \text{h6}! \text{g6} 14 \text{d7} \text{e8} 15 \text{b7}++.
\]
\[\text{b) 3...c6} 4 \text{h5} \text{b5} 5 \text{c7} \text{g8} 6 \text{c3} \text{a4}
7 \text{c2} 8 \text{c1} \text{f6} 9 \text{c2} \text{b3} 10 \text{c1} \text{f6} 11 \text{c2} \text{f7} 12 \text{c3} \text{f6} \text{h8} 11 \text{h7}++.
\]
3 \[\text{g5} \text{f7} 4 \text{g3} \text{c2} 5 \text{h5} \text{b1}
\]
Or:
\[\text{a) 5...\text{f6} 6 \text{c3} \text{b1} (6...\text{d1}+ 7 \text{h6}! \text{f7}
8 \text{g5} \text{g7} 9 \text{h5}++) 7 \text{c7} \text{d3} 8 \text{h6} \text{b1} 9 \text{h5} \text{d3} 10 \text{c3} \text{e4} 11 \text{c4} \text{d3} 12 \text{f4}++.
\]
\[\text{b) After 5...\text{d1}+ 6 \text{g5} \text{g7} 7 \text{c3} the bishop can't return to the b1-h7 diagonal in time:
7...\text{c2} 8 \text{h5} \text{h7} 9 \text{f1} 10 \text{c7}+ \text{h8} 11 \text{h7}++.
\]
6 \[\text{g5} \text{c2} 7 \text{g4}! \text{b1} 8 \text{f4} \text{f6}
\]
8...\[\text{c2} 9 \text{e5} \text{d3} 10 \text{h5} \text{c2} 11 \text{h6} \text{g6}
12 \text{g3} \text{c2} 13 \text{g7}+ \text{f8} 14 \text{f6}++.
\]
9 \[\text{h5} \text{c2} 10 \text{h6} \text{b1} 11 \text{g7} \text{c2} 12 \text{c7}
\text{d3} 13 \text{h7}++.
\]

We end this section with two positional draws:

Both White's pieces must defend the pawn and there is no way to release them from this duty. The same motif can work if the pawn is protected from the side. In 1978, Averbakh gave the following example: \[\text{w}5 \text{e5}, \text{g6}, \text{d6};
\text{b}6 \text{c6}, \text{d}6.
ROOK VS MINOR PIECE(S)

273

D. Elekes (end of a study), 1936

White’s king can keep its opposite number at bay, while the rook has to protect the pawn: 1...e1. 2 d6 3 c7 4 b6 5 b4! =.

B) Bishop + Pawns vs Rook

The case with one pawn is usually uninteresting as the rook can simply sacrifice itself in order to draw. Thus we start with two connected pawns:

In order to draw White has to play actively with his rook:
1...e7
1...e4?! makes it easy as 2 xe4+ draws immediately.
1...g5 2 h5+ f4 3 h4+ f3 4 h5 e4+ 5 c2 e5 6 xexd5 e2 7 d1 (7 e5? c3 8 f5+ c4 9 g4+) 7...f2 8 b1 =.
2 h1 e4+

0...f5 3 f4 4 d7 e4+ 5 e2 d4 7 f5 b6 8 d6 =.
3 d4 f6 4 e3 d8 5 h6+ c5 6 h5+ d6 7 h6+ c5 8 e6 9 e2 f4 10 e2 d4 11 e2 =.

This line was given by Averbakh. The rook is now strongly placed behind the pawns. This is also an essential point in the next example:

W/B

Y. Averbakh (after A. Chéron, 1926)

White has to act precisely to save himself: 1 d8+ e6 (1...d3+?! 2 e3 e6 3 h8 f5 4 h5+ g4 5 xe4 =) 2 d2 b4+ 3 e2 c5 4 d2 b5. Black threatens to improve his position decisively by ...c4 so White has to play 5 e8! e3+ 6 d3 =.

With Black to move, the pawns go through:
1...d3+! 2 e3
2 e1 c5 3 d8+ c4 4 h8 e3 5 h2 c3 6 d1 d6 7 g2 d4 8 e1 c4 9 f1 f3 10 g2 g4 11 a2 g3 12 g2 f3 13 f2+ e4 14 g2 f2 15 g8 d4 16 a8 g3 17 a2 c3 18 a2+ c2 19 a2+ c1 20 a1+ b2 =.

2...c5+ 3 d2 3 e4? d2 4 d8+ d6+ =.
3...d4+ d8+ c2 4 e4 5 d6+ e8+ 6 d1 c5 7 e1 d4 8 e4+ c4 9 e8+ c5 10 d1

Now Black wins by transferring the bishop to b4, thereby supporting the pawns and shielding the king by protecting f8; e.g.: 10...f4 11 e7 (11 c3 12 f1 b4 13 e6 f3 14 e6+ f4 15 e6+ f4 -- +) 11...d6 12 b4 13 f6+ c5 =.

There is some hope even if the pawns are further advanced:
7...d5 8...d1?
This move is met by a neat tactical refutation. If White doesn’t concede ground he is still drawing: e.g., 8...g2 h3 (8...f5 9 f3 f4 10 d2 =) 9 f3! d4 10 e2 f6 11 g2 =.
8...g2! 9 e2
9 f2 h3 10 xd5 g3+ 11 g1 h2+ 12 f2 g1+ --.
9...h2 10 d4+ h3 11 d3+ g3 12 d1 0-1
Boriss resigned due to 12...d4 15 f5 h2
14 e4 g1= 15 xg1 xg1 --.

C) Rook + Pawn vs Bishop + Pawn

This is an important topic. We consider the same three distinct cases as with rook vs knight:
C1: Pawns on the Same File 274
C2: Pawns on Adjacent Files 278
C3: Passed Pawns 279

C1) Pawns on the Same File

If the pawns are blocked, it depends on the colour squares they are on. If the bishop can attack the enemy pawn, it has good chances to draw, as the following classical example shows:

If White were to move, he could draw quite comfortably with 1 e4.
In the game it was Black’s turn to move, enabling him to create more problems:
1...f5 2 g1 g4 3 f1+ f4 4 d4 g3 5 d3 g4
5...d5?! loses the d-pawn after 6 d4 =.
6 g1 e5 7 e3
7 e4?! doesn’t allow the immediate advance of the d-pawn.

The rook or the king has to defend the g5-pawn so no real progress is possible:
1...g7
1...d4 2 d2 e5 3 d3 d6 4 d4+ g6
5 e3 (5 e5 d6 =) 5...b8 6 d2

M.Boriss – W.Watson
Bundesliga 1996/7

7.36 =/=
Rook vs Minor Piece(s)

If the pawns are blocked the other way round (i.e. the bishop cannot attack the enemy pawn), the rook usually wins:

1...\(\Box a2 + 2 \Box g1 \Box c2\)
2...\(\Box a5?\) is a step in the wrong direction: White draws by 3 \(\Box g2 \Box xg5? 4 \Box xg5 \Box xg5 5 \Box g3! =.

3 \(\Box d8\)
3 \(\Box e7 \Box e2\) and now:

a) 4 \(\Box d8 \Box g3 5 \Box c7 + \Box f3 6 \Box d8 \Box g2 + 7 \Box h1 (7 \Box f1 \Box d2 --+) 7...\(\Box g3 8 \Box f6 \Box h3 9 \Box e7 \Box e2 10 \Box b4 \Box b2 --\) (Hecht in CBM 67).

b) 4 \(\Box f6 \Box g3 5 \Box f1 \Box d2 6 \Box c7 (6 \Box c5 +\)
3...\(\Box g3+\! 4 \Box f2+ 5 \Box g1 \Box d2!\)
Winning the pawn. The rest is easy:

Extending the g-file from the rook’s viewpoint the attacker wins by a completely different technique:

1 \(\Box a7+ \Box h6\)
1...\(\Box f8 2 \Box f6 \Box g8 (2...\Box e8 3 \Box a8 + \Box d7 4 \Box g8 + --) 3 \Box a8 + \Box h7 4 \Box f7 ++\); Black will shortly be mated as his bishop is overworked.
2 \( \text{f6} \) \( \text{e3} \) \( \text{a3} \)
Or 3 \( \text{a2} \) \( \text{f4} \) 4 \( \text{a3} \) \( \text{h7} \) 5 \( \text{f7} \) +--.
3...\( \text{d4} \) 4 5 \( \text{f7} \) \( \text{f2} \) 5 \( \text{b3} \)+
5 \( \text{g8} \) mates in short order, and is far more efficient.
5...\( \text{b4} \) 6 \( \text{h1} \) \( \text{h7} \) \( \text{gxf4} \) \( \text{gxh4} \) 48 \text{g5 1-0}

With rooks’ pawns, matters are much more delicate as the simplification into a pawn ending only works when the defending king is cut off far away. In the next example it is even wrong to drive the defending king away from its pawn. The correct method is to bring about a decisive zugzwang situation:

\[
\text{W} \\
7.40 \\
\text{J.Gallagher – O. Lehner} \\
\text{Mitropa Cup (Baden) 1999}
\]

1 \( \text{c4} \) ?
After 1 \( \text{b5} \) Black falls into zugzwang very soon:

a) 1...\( \text{b7} \) 2 \( \text{d7} \) \( \text{b8} \) 3 \( \text{c8} \) 3 \( \text{c6} \) \( \text{c3} \) (3...\( \text{b8} \\
4 \( \text{b6} \) \( \text{c8} \) 5 \( \text{d1} \) +--) 4 \( \text{d5} \) \( \text{b4} \) 5 \( \text{b6} \) \( \text{e1} \) 6 \( \text{d3} \) \( \text{b4} \) 7 \( \text{d1} \) +--.

b) 1...\( \text{e1} \) 2 \( \text{d3} \) \( \text{b4} \) 3 \( \text{d1} \) \( \text{b7} \) (3...\( \text{c3} \\
4 \( \text{e1} \) +--) 4 \( \text{d7} \) \( \text{b8} \) 5 \( \text{c6} \) \( \text{c3} \) 6 \( \text{d5} \) \( \text{b4} \\
7 \( \text{b6} \) \( \text{e1} \) 8 \( \text{d3} \) \( \text{b4} \) 9 \( \text{d1} \) +--. This way to win was discovered by Maizelis (see Av 436).

1...\( \text{f6} \) 2 \( \text{b6} \) \( \text{d5} \) 3 \( \text{c6} \) \( \text{e1} \) 4 \( \text{b5} \) \( \text{b4} \)
5 \( \text{g6} \) \( \text{d2} \) 6 \( \text{g8} \) \( \text{b4} \) 7 \( \text{d8} \) \( \text{e6} \) 8 \( \text{c6} \\
9 \( \text{d3} \) \( \text{e8} \) 10 \( \text{f7} \) \( \text{e7} \) 11 \( \text{e3} \) +--

After 12 \( \text{d7} \) \( \text{f6} \)! 13 \( \text{e6} \)+-- \( \text{f5} \)! Black is saved by the fact that his bishop controls d6 and can’t be put into zugzwang. White’s king can’t come around to d5 without letting Black’s back to f7.

12...\( \text{f6} \) 13 \( \text{d7} \) \( \text{f5} \) 14 \( \text{e6} \) \( \text{c3} \) ?

Allowing White’s king to reach d5 is a decisive mistake. After 14...\( \text{f8} \) 15 \( \text{c2} \) \( \text{b4} \) 16 \\
\( \text{c6} \) \( \text{f6} \) 17 \( \text{d5} \) \( \text{f7} \) = White can’t make further progress according to Baranov (see Av 436).

15 \( \text{d6} \) \( \text{b4} \) 16 \( \text{d5} \) \( \text{c3} \) 17 \( \text{e3} \) \( \text{b4} \\
18 \( \text{f3} \) \( \text{g6} \) 19 \( \text{c6} \) \( \text{g7} \) 20 \( \text{b6} \) \( \text{g6} \) 21 \\
\( \text{b5} \) \( \text{g7} \) 22 \( \text{a6} \) \( \text{g6} \) 23 \( \text{b6} \) \( \text{g5} \) 24 \( \text{f7} \\
\( \text{c3} \) 25 \( \text{b5} \) 1-0

White didn’t fall into 25 \( \text{a7} \) +--. \( \text{d4} \)+.
Lehner resigned due to 25...\( \text{g6} \) 26 \( \text{a7} \) \( \text{f6} \\
27 \( \text{xa5} \) \( \text{xa5} \) 28 \( \text{xa5} \) \( \text{e7} \) 29 \( \text{b6} \) \( \text{d7} \) 30 \\
\( \text{b7} \) +--.

With pawns on a5 and a6 (i.e., the attacker’s pawn on its fifth rank) and a light-squared bishop, the method applied by Gallagher would lead to success.

The situation with the attacker’s pawn blocked further back (on its third rank or on its initial square) is extremely difficult. Again it is crucially important whether the defending king can be confined to the right areas of the board.

\[
\text{B} \\
7.41 \\
\text{W} \]

We will need this position later, which is why we have chosen a quite favourable set-up for the attacker.

1...\( \text{h5} \) ?
Trying a stalemate trick, but White now just continues according to plan:

2 \( \text{e5} \) \( \text{g6} \) 3 \( \text{g4} \) \( \text{d4} \)

Or:

a) 3...\( \text{f7} \) 4 \( \text{f5} \) \( \text{d8} \) 5 \( \text{d5} \) \( \text{c7} \) (5...\( \text{c7} \\
6 \( \text{d4} \) \( \text{e8} \) 7 \( \text{e6} \) +--) 6 \( \text{d7} \) \( \text{f8} \) 7 \( \text{c6} \) +--.

b) 3...\( \text{g7} \) 4 \( \text{f5} \) \( \text{d4} \) 5 \( \text{c4} \) \( \text{f2} \) 6 \( \text{g5} \\
\( \text{g3} \) 7 \( \text{d4} \) \( \text{f8} \) 8 \( \text{e4} \) \( \text{f7} \) 9 \( \text{e2} \) \( \text{g7} \) 10 \( \text{d7} \) +--
\( \text{f8} \) 11 \( \text{f6} \) \( \text{f2} \) 12 \( \text{e4} \) \( \text{g3} \) 13 \( \text{g6} \) +--.
This zugzwang is one of the main winning weapons.
4 \text{e}6+ \text{f}6 5 \text{d}6 \text{f}7
5...\text{g}7 6 \text{e}5 \text{c}3 7 \text{g}5 \text{e}1 8 \text{e}6 \text{c}2 9 \\
\text{e}2 10 \text{e}7+ \text{f}8 11 \text{f}6 \text{f}2 12 \text{e}4 \\
\text{a}6 13 \text{e}6 \text{d}8 14 \text{g}4 \text{e}7 15 \text{f}4+ \text{e}8 16 \text{e}4+--.
6 \text{e}5 \text{c}3
6...\text{e}7 7 \text{d}7+ \text{f}8 8 \text{e}6 and now:
a) 8...\text{g}5 9 \text{d}5 \text{c}3 (9...\text{e}7 10 \text{h}5++)
10 \text{f}6 \text{g}8 (10...\text{b}6 11 \text{g}5++) 11 \text{w}6 \text{f}8 12 \text{h}5++.

b) 8...\text{b}4 9 \text{f}7+ \text{g}8 10 \text{f}6 \text{e}1 11 \\
\text{g}6 \text{g}3 12 \text{e}7 \text{f}8 13 \text{h}4++.

7 \text{d}7+ \text{e}8
7...\text{f}8 8 \text{d}3 \text{e}1 9 \text{g}6 \text{a}5 10 \text{d}5 \text{c}3+ 11 \\
\text{g}6 \text{e}7 12 \text{h}5 \text{f}6 13 \text{f}5 \text{f}7 14 \text{h}7+ \\
\text{g}8 15 \text{g}6 \text{d}8 16 \text{d}7 \text{b}6 17 \text{b}7++.

8 \text{d}3 \text{b}4 9 \text{d}4 \text{e}7 10 \text{e}6 \text{f}8 11 \text{d}7 \\
\text{g}5 12 \text{d}5 \text{e}7 13 \text{h}5++--.

8...\text{g}6 \text{c}3 9 \text{e}6 \text{b}2 10 \text{a}7

Chéron had proved that White could win this position, but thought that he needed more than fifty moves. Andersson and Timman were able to refine the process, and Timman managed to win the game within the fifty-move rule.

10...\text{e}8 11 \text{f}5 \text{f}8
11...\text{d}8? 12 \text{e}6 \text{c}8 13 \text{d}6 \text{b}8 14 \\
\text{d}7 \text{c}8 15 \text{e}6 \text{c}1 16 \text{d}3 \text{b}2 17 \text{b}6++ puts Black in zugzwang.

12 \text{e}6 \text{g}8 13 \text{f}7 \text{c}3 14 \text{f}3 \text{b}2
14...\text{b}4 15 \text{g}3+ \text{f}8 15...\text{e}7 16 \text{f}6 \\
\text{c}5 17 \text{g}6 \text{d}4+ 18 \text{f}7 \text{b}2 19 \text{c}6 \text{d}4
20 \text{a}4 \text{f}2 21 \text{c}2 \text{g}1 22 \text{c}1 ++ 16 \text{b}3
\text{c}5 17 \text{c}3 \text{b}4 18 \text{c}7 \text{c}2 19 \text{f}7+ \text{g}8
(19...\text{e}8 20 \text{a}7 ++ 20 \text{f}6 \text{c}3+ 21 \text{g}6 \\
\text{b}2 22 \text{f}3 \text{c}1 23 \text{c}3+--.

15 \text{c}5 \text{h}4 19 \text{g}8 \text{c}5
19...\text{c}3 20 \text{h}4 \text{h}4 21 \text{h}3 \text{h}3 (21...\text{h}5
22 \text{g}2 \text{c}1 23 \text{c}2 \text{b}4 24 \text{h}2 \text{a}xb2 25 \\
\text{a}xb2 \text{g}6 26 \text{a}4++) 22 \text{g}6 \text{c}1 23 \text{c}6 \text{b}2
24 \text{c}4 \text{g}3 25 \text{a}4 \text{f}3 26 \text{c}a3 \text{a}3 27 \\
a\text{a}3 \text{e}4 28 \text{h}4++.

20 \text{d}5 \text{b}2 21 \text{c}4 \text{f}6
21...\text{e}5 22 \text{b}3 \text{d}6 23 \text{g}6 \text{f}8 24 \text{c}4 \\
\text{h}5 25 \text{g}8 \text{e}7 26 \text{g}2 \text{d}6 (26...\text{h}6 27 \\
\text{d}5 \text{f}6 28 \text{g}3 \text{b}2 29 \text{c}4 \text{h}5 30 \text{b}4
\text{h}4 31 \text{a}3 ++ 27 \text{d}5 \text{b}4 28 \text{g}3 \text{h}4 29 \\
\text{b}3 \text{f}8 30 \text{f}3 \text{e}7 31 \text{a}6 \text{c}5 (31...\text{g}4
32 \text{c}3 \text{f}8 33 \text{h}6 34 \text{c}4+ \text{h}5 35 \text{f}5++)
32 \text{d}3! \text{f}8 (32...\text{g}4 33 \text{c}3 \text{f}8 34 \\
\text{c}8 \text{h}6 35 \text{c}4+ \text{g}5 36 \text{f}7 \text{f}5 37 \text{d}3+ \\
33 \text{f}6 \text{c}5 34 \text{f}7 \text{g}4 35 \text{c}3 \text{d}6 36 \\
\text{c}6 \text{f}8 37 \text{c}8 \text{h}6 38 \text{c}4+ ++--.

22 \text{g}6 \text{g}5 23 \text{d}5 \text{c}1
23...\text{h}5 24 \text{c}6 \text{d}2 25 \text{e}6 \text{g}5 26 \text{c}4 \\
\text{h}6 27 \text{c}2 \text{e}1 28 \text{h}2+ 29 \text{g}5 29 \text{h}3 \text{b}4
30 \text{f}3 \text{h}5 31 \text{f}5 \text{h}6 32 \text{g}3 \text{c}5 33 \text{g}4!
\text{h}5 34 \text{c}4 \text{d}6 35 \text{c}8 \text{h}4 36 \text{c}6++

24 \text{e}4 \text{b}2 25 \text{f}5 \text{h}5 26 \text{d}6 \text{h}4 27 \\
\text{d}3 \text{c}1 28 \text{c}3 \text{b}2 29 \text{e}3 \text{c}1 30 \text{e}1 \text{d}2
30...\text{b}2 31 \text{g}1 \text{h}3 32 \text{f}4 \text{h}2 33 \text{g}4 \\
\text{h}3 34 \text{f}3 \text{h}2 35 \text{g}2 36 \text{f}6 (35...\text{h}3 36 \\
\text{a}4++ 36 \text{e}4 \text{d}8 (36...\text{h}1 37 \text{g}3 \text{c}3 38 \\
\text{a}4 \text{b}2 39 \text{f}2++ 37 \text{e}6 \text{h}4+ 38 \text{f}3 \\
\text{g}5 39 \text{g}4 \text{d}8 39...\text{c}1 40 \text{e}2+ \text{g}1 41 \\
\text{e}1+++) 40 \text{e}3++--.

31 \text{h}4+ \text{g}3 32 \text{d}1 \text{b}4 33 \text{d}3+ \text{f}2 34 \\
\text{e}4 \text{e}2 35 \text{d}4 \text{c}5 36 \text{c}4 \text{f}7 \text{h}3 \\
\text{d}6 38 \text{b}3 \text{f}8 39 \text{h}8 \text{d}6 40 \text{a}8 1-0

Velimirović resigned because he loses his bishop after 40...\text{a}3 (or 40...\text{d}2) 41 \text{d}8 and
otherwise White can take on a3. A splendid achievement by Timman!

C2) Pawns on Adjacent Files

If the pawns are situated on adjacent files, the correct assessment of the position is very difficult:

7.43

H. Danielsen - T. Hillarp Persson
Copenhagen 1997

Black can hold on if he activates his king immediately:
1...\texttt{Wh}5!

Not:
a) 1...g5? allows White to create a passed pawn: 2 \texttt{W}e5 \texttt{g}4 3 f5 ++.

b) 1...\texttt{W}g7?? 2 \texttt{W}e5 \texttt{c}c2 (2...\texttt{W}h6 3 \texttt{W}f6 \texttt{W}h5 4 \texttt{W}a5 \texttt{W}g4 5 \texttt{W}xf5 \texttt{g}x\texttt{f}5 6 \texttt{W}e3 ++) 3 \texttt{W}a7+ \texttt{W}h6 (3...\texttt{W}f8 4 \texttt{W}f6 \texttt{W}f5 5 \texttt{W}g7 \texttt{d}d3 6 \texttt{W}g6 +) 4 \texttt{W}a2 \texttt{b}b1 5 \texttt{b}b2 \texttt{a}d3 6 \texttt{W}f6 \texttt{Wh}5 7 \texttt{W}g2 \texttt{b}d1 8 \texttt{W}g5+ \texttt{Wh}6 9 \texttt{W}g4 \texttt{Wh}5 10 \texttt{W}g3 \texttt{c}c4 11 \texttt{W}g7 \texttt{c}c2 12 \texttt{W}g5+ \texttt{W}h4 13 \texttt{W}xg6 ++.

2 \texttt{W}a1 \texttt{g}4 3 \texttt{W}e3 \texttt{W}e6 4 \texttt{W}e4

4 \texttt{W}g1+! \texttt{W}f5! 5 \texttt{W}g5+ \texttt{W}f6 6 \texttt{W}a5 \texttt{W}d7 =. It is not possible to drive Black’s king to a passive position (Hecht and Stohl in CBM 59).

4...\texttt{W}f5+ 5 \texttt{W}e5 \texttt{W}f3 6 \texttt{W}c1 \texttt{W}g3 7 \texttt{W}g1+ \texttt{W}f3!!

7...\texttt{W}h4? 8 \texttt{W}f6 ++ (Stohl and Hecht).

8 \texttt{W}a1 \texttt{g}3 9 \texttt{W}a4+ \texttt{W}g4 10 \texttt{W}a4+ \texttt{c}c2 11 \texttt{W}b4 \texttt{g}5 12 \texttt{W}f6 \texttt{W}h4?!

This sad error spoils a good defensive effort. Otherwise:
a) 12...\texttt{c}c2?? is also bad since 13 f5+ \texttt{W}h5 14 \texttt{W}xg6 \texttt{W}xg6 15 \texttt{W}b5+ \texttt{W}h6 16 \texttt{W}b2 ++ wins the bishop (Stohl).

b) 12...\texttt{W}g3 survives: 13 \texttt{W}g5 \texttt{W}f3 14 \texttt{W}b3+ \texttt{W}g2 (14...\texttt{W}f4? 15 \texttt{W}b5 ++) 15 \texttt{W}b5 \texttt{W}e4 (not 15...\texttt{e}d3? 16 \texttt{W}b6 \texttt{W}f3 17 \texttt{W}b3 ++) 16 \texttt{W}b6 \texttt{W}f3 = (Stohl).

c) 12...\texttt{W}f3! is another way to hold on: 13 \texttt{W}g5 \texttt{W}e3 14 \texttt{W}b5 \texttt{W}c2 15 \texttt{W}d5+ \texttt{W}f3 16 \texttt{W}xg4 \texttt{W}h4 17 \texttt{W}e2 \texttt{W}f2 19 \texttt{W}b3 \texttt{W}f5 20 \texttt{W}b5 \texttt{W}c4! 21 \texttt{W}b6 (21 \texttt{W}g4 \texttt{W}f3+ =) 21...\texttt{W}f3 = (Hecht).

13 \texttt{W}b5 1-0

After 13...\texttt{W}g4 14 \texttt{W}xf5 \texttt{gxf}5 15 \texttt{W}e5 + it is all over.

With central pawns it is different. The rook only wins if the king can advance to the square directly in front of the defender’s pawn.

7.44

M. Palac - A. Lysenko
Vinkovci 1993

Here White can force the king’s advance, as Lysenko showed in CBM 39:
1 \texttt{W}b2?

This lets the chance pass by. 1 \texttt{W}b8! is necessary:
a) 1...\texttt{c}c4 2 \texttt{W}f8+ \texttt{W}e7 (2...\texttt{W}g7 3 \texttt{W}c8 \texttt{d}d5 4 \texttt{W}e5 ++) 3 \texttt{W}e8 \texttt{a}2 4 \texttt{W}e5 \texttt{d}d7 5 \texttt{W}a8 \texttt{d}d5 6 \texttt{W}a7+ \texttt{W}c6 7 \texttt{W}c7 +.

b) 1...\texttt{W}g2 2 \texttt{W}h8 \texttt{d}d5 3 \texttt{W}h6+ \texttt{W}g7 4 \texttt{W}g5 \texttt{c}c4 5 \texttt{W}h3 \texttt{W}f7 6 \texttt{W}c3 \texttt{a}a5 7 \texttt{W}c7+ \texttt{W}e8 8 \texttt{W}f6 +.

1...\texttt{e}c4! 2 \texttt{W}h2

2 \texttt{W}b8 \texttt{d}3 =.

2...\texttt{d}d3 3 \texttt{W}h6+ \texttt{W}g6 4 \texttt{W}g4 \texttt{W}f7 5 \texttt{W}g5 \texttt{f}5 6 \texttt{W}h8

More direct moves also fail to impress: 6 \texttt{d}5 \texttt{W}e7 7 \texttt{W}f4 \texttt{d}6 = or 6 \texttt{W}f6+ \texttt{W}e7 7 \texttt{W}xf5 \texttt{e}f5 8 \texttt{W}xf5 \texttt{d}6 =.

6...\texttt{W}e6 7 \texttt{W}f6+ \texttt{W}d5 8 \texttt{W}c4 14 \texttt{W}c8 \texttt{W}e4 15 \texttt{W}c4 \texttt{d}e4 21 \texttt{W}d8 \texttt{W}e8 ½-½

If the duty falls on the bishop’s shoulder, however, White’s king will prove this...

7.45

W

M. Palac - A. Lysenko
Vinkovci 1993

Here White can force the king’s advance, as Lysenko showed in CBM 39:
1 \texttt{W}c5+

1...\texttt{W}f7+ now take a look at \texttt{W}h5 \texttt{b}3++.

8 \texttt{W}xf7+ \texttt{W}g6 2 \texttt{W}g2

The first move!

2 \texttt{f}3? \texttt{W}a4 to bishop a6.

2...\texttt{W}c2!

Threatening the king to pen the \texttt{W}g5...

11...\texttt{W}b5 \texttt{W}c2 12...

White usually able to stop...

16...\texttt{W}d1
If the defender has a knight's pawn against a bishop's pawn, he can't hide from the rook checks and so the following position is lost, but White's king has to make a very long march to prove this:

\[ \begin{array}{c}
1. & \text{Rook vs Minor Piece(s)} \\
\end{array} \]

C3) Passed Pawns

When there are passed pawns, the rook has even better chances to show its superiority.

\[ \begin{array}{c}
7.45 & \text{P. Genov - S. Löffler} \\
\text{Berlin 1992} & +/-
\end{array} \]

\[ \begin{array}{c}
7.46 & \text{E. Bacrot - Y. Pelletier} \\
\text{Lausanne jr rd 1999} & +/
\end{array} \]
b) 5...e4 d6 e8 7 f6+ e5 8 g3 h5 9 h6 e8 10 a6 f5 11 a5+ e6 12 f4 g6 13 a7 d5 14 a6 f7 15 g6 ++.

4...g7 5 d5 e6 g6 7 e7+ f8 8 a7?

This allows Black's pawn to advance further. White should play 8...e5 9 f7 9 g4 g7 10 f4 f7 11 a5 g7 12 a7+ f8 13 e5 e3 14 f6 c2 15 e7 d3 16 g6 e6 17 xe2 h5 18 h2 f7 19 h8+ g8 20 g6 ++.

8...g8? and 1-0

Black returns the favour. He could seize his chance with 8...e3! 9 a3 c2 10 e3 d3 11 h5 g7 12 e7+ f8 13 e6 f7 14 e5 g7 ± (Hecht).

After the text-move, Black resigned without waiting for White's reply. The finish could be 9 a4 f8 10 f4 g8 11 e5 e3 12 f6 d3 (12...c2 13 xe6 e1= 14 g8+ mates) 13 g6 ++.

Sometimes a well-placed bishop can save the game:

![Diagram](image-url)

Although Black’s pawns are far advanced, he is powerless against White’s b-pawn.

1...f4 2 e4+ e3 3 g1! g4 4 h2 e5 4...f3 5 c3+ (and now:

a) 5...f2 6 b4 f3 7 c2+ e2 8 b5 ++ (Kuzman in CBM 59).

b) 5...e2 6 b4 d3 7 g3 d2 8 e5+ e3 9 g5 ++.

c) 5...f4 6 b4 e5 7 b5 d6 8 b6 d7 ++; compare the game.

5 b4 d5 6 e8 d3 7 g3 e2 8 e5+ d6 9 e2

A typical procedure: the bishop is forced out of its good position.

9...f3 10 b5 f7 11 b6 d8 12 a5

Black now has to abandon his g-pawn due to zugzwang.

12...a2 13 b7 c8!

13...f3?! 14 b7 ++.

14 a4 g4 1-0

Black will inevitably fall into zugzwang:

14...b8 15 f4 f1 16 e5 g2 17 d6 e8 18 b8+! (this simple win was pointed out by Burgess; 18 c5?! b8! 19 b7? is the wrong way to do it due to 19...a7! [not 19...xb7? 20 b6 +] 20 xb5 a7 21 xa3 22 g2 23 e7+ b8! 24 xb6 c8! =) 18...b7 19 e5 and Black is in a fatal zugzwang; for example, 19...f1 20 b7+ b8 21 b7 a7 22 c6 g2+ 23 a7 xxb7 24 b4 h3 ++.

The following position contains more material, but includes an interesting fight with rook and c-pawn vs bishop and d-pawn:

![Diagram](image-url)

D) See Diagram

The rook and bishop on the 7th and 8th rank (there are no pawns on the 7th and 8th rank).

It is important to note that the black rook is well-placed: 1 e4 a5 2 b4 c6 3 a3 a6 4 d4 a5 5 c4 a4 6 b5 a3 7 a2 a6 8 e3...

Now a wrong move: 3...f1? with his king already far away. For him, the open h8-a1 diagonal is a back rank.
Averbakh showed the winning procedure:

1...\textit{h}5!

In the game, White took the pawn immediately, which allowed Black to save himself with a nice trick: 1...\textit{xc}6? d4 2 \textit{xd}4 h2 3 \textit{d}h4 \textit{h}1+ 4 \textit{xe}h1 \textit{c}4+ 1/2-1/2.

1...\textit{g}4 2 \textit{g}5 \textit{d}1

Or: 2...h2 3 \textit{g}8+ \textit{f}7 4 \textit{h}8+--; 2...\textit{d}7 3 \textit{e}5+ \textit{d}8 4 \textit{h}5+--.

3 \textit{g}3 h2 4 \textit{h}3 \textit{a}4 5 \textit{h}xh2 \textit{b}5 6 \textit{h}4 \textit{f}7 7 \textit{h}b4 \textit{c}4

7...\textit{e}8 8 \textit{f}4+--.

8 \textit{xc}6 \textit{e}7 9 \textit{b}7 \textit{d}3 10 \textit{c}6 \textit{d}6 11 \textit{c}7 \textit{f}5 12 \textit{f}4

12 \textit{c}8\textit{w}+? \textit{xc}8+ 13 \textit{xc}8 \textit{c}5!=.

12...\textit{d}7 13 \textit{f}7 \textit{g}4 14 \textit{e}8\textit{w} \textit{xc}8+ 15 \textit{xc}8 \textit{c}5 16 \textit{d}7 \textit{d}4 17 \textit{e}6+--

D) Several Pawns on One Wing

The rook has usually good chances to win, but there are some fortresses (see following diagram).

It is important that Black has already played ...a5 so that White can’t gain space without exchanging one pair of pawns.

1 \textit{e}5 \textit{c}7 2 \textit{h}7+ \textit{b}8 3 \textit{d}6

3 \textit{a}3 \textit{f}3 4 \textit{b}4 \textit{xb}4 5 \textit{xb}4 \textit{g}2 6 \textit{d}6 \textit{f}3=

3...\textit{f}3 4 a4?!

Now a critical moment arises and it is easy to go wrong. Black must not allow \textit{b}4 \textit{xb}4, \textit{xb}4 with his king still on the back rank. Fortunately for him, the long diagonal has just enough squares:

4...\textit{g}2!

Not 4...\textit{c}4? 5 \textit{h}4 \textit{f}3 6 \textit{f}4 (6 \textit{b}4? \textit{xb}4 7 \textit{xb}4 \textit{a}7! 8 \textit{c}7 \textit{a}6! 9 \textit{xb}6+ \textit{a}5 10 \textit{f}6 \textit{d}1!=), and now:

a) 6...\textit{d}1 7 \textit{c}6 \textit{a}7 8 \textit{d}4 \textit{e}2 (8...\textit{f}3+ 9 \textit{c}7 \textit{e}2 10 \textit{d}5 \textit{f}1 11 \textit{b}5+--; 9 \textit{d}7+ \textit{a}6 10 \textit{d}8 \textit{a}7 11 \textit{e}8 \textit{d}3 12 \textit{e}3 \textit{e}4 13 \textit{b}3 \textit{f}1 14 \textit{e}7+ \textit{a}6 15 \textit{e}5 \textit{g}2+ 16 \textit{c}7 \textit{f}1 17 \textit{e}6+--.

b) 6...\textit{g}2 7 \textit{b}4 \textit{xb}4 8 \textit{xb}4 \textit{a}7 9 \textit{c}7 \textit{a}6 10 \textit{xb}6+ \textit{a}5 11 \textit{b}2! \textit{f}3 12 \textit{a}2! \textit{d}1 13 \textit{c}6+--.

5 \textit{h}4 \textit{b}7 6 \textit{b}4 \textit{xb}4 7 \textit{xb}4 \textit{a}6 8 \textit{c}7 \textit{a}5 9 \textit{xb}6 \textit{a}4=

If the bishop doesn’t protect the corner square, the next fortress is applicable:

Black has to keep White’s king out of c6:
1...\texttt{\texttt{g}2}
Not: 1...\texttt{a}7? 2 \texttt{g}7+ \texttt{b}6 3 \texttt{xa}7 \texttt{xa}7 4 \texttt{c}6 \texttt{b}4 5 \texttt{b}3 +--; 1...\texttt{b}6? 2 \texttt{g}7+ \texttt{b}8 3 \texttt{f}2
4 \texttt{c}6 \texttt{c}3 5 \texttt{b}4 \texttt{d}4 6 \texttt{g}3 \texttt{f}2 7 \texttt{f}3 \texttt{d}4 8 a4 bxax4 9 axa3 \texttt{a}7 10 axa4 ++ (Averbakh).
2 \texttt{g}7+ \texttt{b}6! 3 \texttt{g}6+ \texttt{b}7 =

If the defender can't construct a fortress, he usually perishes:

\begin{center}
7.51

R. Fine, 1941
\end{center}

1 \texttt{c}3 \texttt{c}7 2 \texttt{c}4 a6
2...\texttt{c}6 3 \texttt{g}6 b5+ 4 \texttt{d}4 a6 5 \texttt{h}6 a5 6 a3
a4 7 \texttt{f}6 \texttt{c}7 8 \texttt{d}5 \texttt{g}3 9 \texttt{c}5 +--; 3 \texttt{d}5 \texttt{f}4 4 \texttt{f}2 \texttt{c}3 5 \texttt{f}7+ \texttt{b}6 6 \texttt{d}6
\texttt{(D)}

\begin{center}
7.51A

R. Kholmov – V. Neverov

Moscow 1998
\end{center}

Heading for \texttt{c}8.
6...\texttt{d}4 7 \texttt{b}3 \texttt{c}5+ 8 \texttt{d}7 \texttt{b}5 9 \texttt{c}7 \texttt{b}6 10 \texttt{f}4 \texttt{e}3 11 \texttt{e}4 \texttt{e}5 12 \texttt{b}7 \texttt{g}1 13 a3 \texttt{c}5
14 \texttt{xa}6 ++ (Averbakh)

If simplification into a pawn ending is possible, matters are easier:

\begin{center}
7.52

A. Mikhalevishin – E. Bareev

Lvov 1987
\end{center}

1...\texttt{g}7 2 \texttt{e}8 \texttt{b}6 3 \texttt{d}7 (3 \texttt{f}5 \texttt{g}4 4
\texttt{d}7 \texttt{x}h4 5 \texttt{c}6 \texttt{g}7 ++) 3...\texttt{g}4! 4 \texttt{f}3 (or
4 \texttt{x}g4 \texttt{h}xg4 5 \texttt{e}3 \texttt{h}5 6 \texttt{f}2 \texttt{x}h4 ++) 4...\texttt{x}h4 5 \texttt{g}3 \texttt{h}1 6 \texttt{h}3 \texttt{x}h3+ 7 \texttt{x}h3
\texttt{g}6 0-1

The next example shows that such endings can be very tricky:

\begin{center}
7.53

R. Kholmov – V. Neverov

Moscow 1998
\end{center}

White wants to win by marching his king to \texttt{a}6, but Black could have stopped him. Knowledge of example 7.40 is crucial as the position with blocked a-pawns arises in several critical variations.
1...b4
1...b4 is answered by 1...b2+ (= and not 1...c5? 2...xc5+ bxc5 3...e5+-).

2...e6 a3 3...f7 d6 4...e8
5...g3?
4...c7! 5...g5 5...d1 a4 6...d7+ 6...c6 7...d8= 5...e5 8...c7 a3 9...d1 xc4 10...xb6
f4 =) 6...e4 6...g6 6...d6 7...f7 7...g7+ 6...c6 8...d8= 5...e5 9...d7 10...e7 10...h2 11
el bxel c1 12...b1 g3 13...xb6 el 14...b1
b4 15...c6 d4 16...d1+ 15...e5=; see 7.40)
7...e6 8...e6 and now Black must choose carefully:

a) 8...e5? 9...g5+ 9...e6 10...g8 10...h2 11
b2+ 12...h7 12...h7 13...g7 13...h2 14...h8
b7 15...h3 18 (15...e5 16...e6 17...d4 17
f5 ++) 16...b3 ++.

b) 8...a3 9...g5 9...e1 10...f5 10...e3 =.
5...d8 8...e4 8...c6 9...g5 9...c2
Black can’t maintain the barrier although it is not at all easy to break the defence down:
7...h2 8...g2, and then:

a) 8...e5 9...g6+ 9...e5 10...g5 10...d4 11
f6 12...g6 12...c7 13...xb6 13...xc4 14...xa5

b) 8...f4 9...g6+ 9...e5 10...b7 10...c3 (or 10...xc4 11...g4 ++) 11...xb6 11...xc4 12...b1!
(12...b5? 12...e2 =; see 7.38) 12...c5 12...c2
13...b6 14...b4 14...d1 15...d5+ 16...d7
c3 17...d8 b3+ 18...a8 =) 13...d1 13...d4
(13...e3 14...e6 15...c1+ 15...e4 16...h1
f6 17...f1 18...g4+ 19...g4 19...e3 20
h4 21...e2 22...g5 23...b3 23...b3 23
f5 ++) 14...c6+ 14...c1 15...g1 16...e1 16...f2 17...g4+

b) 18...b5 18...b5 19...a1 19...e5 19...f4

A.Khalifman – S.Dvoirys

The bishop doesn’t cover the a1-h8 diagonal so it is relatively easy:
1...h2 2...d5 2...g3 2...f6
2...h4+ 3 3...xh4 3...xg2 4...g5 4...e4 5...e3
d4 6...d5 6...e5 7...e7 = (Hecht in CBM 67).
3...a6+ 3...g7
3...e5 4...a5 f6 5...f3 5...e6 6...h4 6...e5 7
b5 8...e4 8...d4 9...g4 10...f4 10...g4 ++)
6...h4 7...h5 7...g5 8...xg5 8...f2 8...h4 8...d6 9...e3
(9...e3 10...b5 11...a5 ++) 9...e3 10...e4 10
a4 ++ (Khalifman).

4...b4 4...e4 5...d6 5...b3 6...f4 6...e4
c4 6...f6 7...f3 7...g7 8...d6 8...g4 10...g5
++ (Khalifman).

7...e5 7...f1 8...g3 8...e2 9...d4 9...f1 10...d6
f8 11...b4 11...b3 12...b8+ 12...g7 13...e7 13
14...b6 14...e4 15...f6 15...f5 (D)
White’s pieces have reached their optimum squares, and now storm the barricades:
16...f4 1-0

Dvoirys resigned as he can’t stop f5-f6):
18...\texttt{gxf5} 19...\texttt{g6}+ 20...\texttt{f6} \texttt{c4} 21...\texttt{g7} -- (Hecht).

If the bishop covers the diagonal and the pawns are blocked, it is extremely hard to break the defence down:

\textbf{7.55A}  
\begin{center}
\begin{tabular}{|c|c|c|c|c|}
\hline
\texttt{W} & & & & \\
\hline
\texttt{B} & & & & \\
\hline
\texttt{W} & & & & \\
\hline
\texttt{B} & & & & \\
\hline
\end{tabular}
\end{center}

\textbf{7.55A}  
\begin{center}
\begin{tabular}{|c|c|c|c|c|}
\hline
\texttt{W} & & & & \\
\hline
\texttt{B} & & & & \\
\hline
\texttt{W} & & & & \\
\hline
\texttt{B} & & & & \\
\hline
\end{tabular}
\end{center}

\textbf{R.Kholmov, 1973}

Kholmov did the groundbreaking work in this position (see Av 481). Speelman in \textit{Endgame Preparation} and Hübner in 25 \textit{Annotated Games} also analysed it in great detail. Speelman provides some valuable insights regarding positions where the attacker’s pieces are not yet placed optimally, while Hübner gives a good overview and corrects several minor errors by earlier analysts. We provide a less detailed coverage but hope the following analysis proves that Black wins, and reveals the main steps to achieve this.

1...\texttt{c6} 2...\texttt{d2} 3...\texttt{g1} 4...\texttt{d6} 5...\texttt{b7} (D)
16...\texttt{\textit{g5}} 17 \texttt{\textit{d3}} \texttt{\textit{d7}} 18 \texttt{\textit{h1}}
18...\texttt{\textit{e3}} h4 19 \texttt{\textit{e4}} \texttt{\textit{g4}} 20 \texttt{\textit{f3+}} \texttt{\textit{g3}} 21
\texttt{\textit{e6}} \texttt{\textit{g7}} 22 \texttt{\textit{e4}} h4 --.
18...\texttt{\textit{f4}} 19 \texttt{\textit{g2}}
19...\texttt{\textit{e2}} h4 --.
19...\texttt{\textit{d2+}} 20 \texttt{\textit{h3}} \texttt{\textit{h2}} 21 \texttt{\textit{g7}} \texttt{\textit{b3+}} 22 \texttt{\textit{h2}}
22...\texttt{\textit{g3}} --+

However, not all positions with three against
three are won...

\textbf{A.Khasin – A.Filipenko}

\textit{Moscow 1985}

Here White’s pawns are crippled and Black’s
bishop is well placed to restrain them.
1 \texttt{\textit{h5}} \texttt{\textit{g6}} 2 \texttt{\textit{e3}} \texttt{\textit{f6}} 3 \texttt{\textit{d4}} \texttt{\textit{h3}} 4 \texttt{\textit{b6}} \texttt{\textit{g4}} 5
\texttt{\textit{c5}} \texttt{\textit{h3}} 6 \texttt{\textit{d6}} \texttt{\textit{g4}} 7 \texttt{\textit{c6}} \texttt{\textit{f3+}} 8 \texttt{\textit{c7}} \texttt{\textit{g4}}
9 \texttt{\textit{b6}} \texttt{\textit{h3}} 10 \texttt{\textit{d6}} \texttt{\textit{g4}} 11 \texttt{\textit{c3}} \texttt{\textit{h3}} 12 \texttt{\textit{e3+}} \texttt{\textit{f7}} 13
\texttt{\textit{d6}} \texttt{\textit{g4}} 14 \texttt{\textit{e7+}} \texttt{\textit{f8}} 15 \texttt{\textit{e7}} \texttt{\textit{h3}}
\texttt{\textit{b2+1/2}}

A draw was agreed as the following attempt
to storm the fortress doesn’t succeed: 16 \texttt{\textit{e5}}
\texttt{\textit{f7}} 17 \texttt{\textit{f5}} \texttt{\textit{xf5}} 18 \texttt{\textit{xf5}} \texttt{\textit{gxh5}} 19 \texttt{\textit{d7}} \texttt{\textit{g6}} 20
\texttt{\textit{e6}} \texttt{\textit{g7}} 21 \texttt{\textit{xf5}} \texttt{\textit{e7}} =.

However, the above example is an exception.
In general, the bishop has at least difficult
problems to solve, even with an extra pawn (see following
diagram):

1...\texttt{\textit{h5}}!!
1...\texttt{\textit{f6}} 2 \texttt{\textit{g4}} \mp (Stohl in CBM 68).
2 \texttt{\textit{e3}} \texttt{\textit{f6}} 3 \texttt{\textit{d4} \texttt{\textit{f5+}}}!!
3...\texttt{\textit{h4+}}! (Stohl).
4 \texttt{\textit{g3}} \texttt{\textit{f6}}
Alternatively, 4...\texttt{\textit{h4+}}? 5 \texttt{\textit{gxh4}} \texttt{\textit{f4}} 6 \texttt{\textit{a3}}
\texttt{\textit{c8}} and then:

\begin{itemize}
\item[\textbf{a})] 7 \texttt{\textit{xd5}}? \texttt{\textit{b7+}} 8 \texttt{\textit{d6}} \texttt{\textit{xf3}} 9 \texttt{\textit{a4+}} (9
\texttt{\textit{xc7}} 10 \texttt{\textit{xf6}} \texttt{\textit{h5}} =) 9...\texttt{\textit{xc3}} 10 \texttt{\textit{xe5}} f5 11
\texttt{\textit{xa3++}} \texttt{\textit{e2}} 12 \texttt{\textit{f4}} \texttt{\textit{h5}} 13 \texttt{\textit{g3}} \texttt{\textit{d2}} 14 \texttt{\textit{g5}}
\texttt{\textit{d3}} =.
\item[b)] 7 \texttt{\textit{b3+}}! \texttt{\textit{h3}} (7...\texttt{\textit{xe6}} 8 \texttt{\textit{c3+}} 8+ \texttt{\textit{xe3+}}
\texttt{\textit{d7}} (White also wins after 8...\texttt{\textit{g7}} 9 \texttt{\textit{c7}} \texttt{\textit{xf3}}
10 \texttt{\textit{xf7+}} \texttt{\textit{g4}} 11 \texttt{\textit{g8}} \texttt{\textit{e4}} 12 \texttt{\textit{h8}} ++) 9 \texttt{\textit{xe5}}
\texttt{\textit{xf3}} 10 \texttt{\textit{h5}} \texttt{\textit{gxh5}} 11 \texttt{\textit{h5}} \texttt{\textit{e6}} 12 \texttt{\textit{g5}} \texttt{\textit{f4}} 13
\texttt{\textit{h4+}} – (Dautov).
\item[c)] 5 \texttt{\textit{a3}} \texttt{\textit{f5}} 6 \texttt{\textit{c3}} \texttt{\textit{f6}} 7 \texttt{\textit{e5}} \texttt{\textit{e7}} 8 \texttt{\textit{c5}}
\texttt{\textit{d7}} 9 \texttt{\textit{e3}} \texttt{\textit{e7}} 10 \texttt{\textit{d3}} \texttt{\textit{f6}} 11 \texttt{\textit{d6}} \texttt{\textit{f5}} 12
\texttt{\textit{d4}} \texttt{\textit{g5}}
12...\texttt{\textit{f6}} 13 \texttt{\textit{f4+}} \texttt{\textit{g7}} 14 \texttt{\textit{e5}} \texttt{\textit{g5}} 15 \texttt{\textit{d4}}
= (Dautov).
\item[d)] \textbf{13 \texttt{\textit{h4+}}}
Creating further weaknesses on the dark
squares.
13...\texttt{\textit{f6}}
13...\texttt{\textit{f6}}? 14 \texttt{\textit{g4+}} =.
14 \texttt{\textit{hxg5+}} \texttt{\textit{h5}} 15 \texttt{\textit{e5}} \texttt{\textit{g6}} 16 \texttt{\textit{b4}} \texttt{\textit{g7}}
17 \texttt{\textit{b8}} \texttt{\textit{d4}}
17...\texttt{\textit{g6}} 18 \texttt{\textit{g8+}} \texttt{\textit{h7}} 19 \texttt{\textit{g5}} \texttt{\textit{h6}} 20 \texttt{\textit{f4}}
+ (Stohl).
18 \texttt{\textit{xd4}} \texttt{\textit{a2}} 19 \texttt{\textit{e5}} \texttt{\textit{e4}} 20 \texttt{\textit{f5}} \texttt{\textit{d5}} 21
\texttt{\textit{f4}} \texttt{\textit{xf3}} 22 \texttt{\textit{b6}} \texttt{\textit{g4+}} 23 \texttt{\textit{g5}} \texttt{\textit{f3}} 24 \texttt{\textit{f5}} \texttt{\textit{g4}}
25 \texttt{\textit{f6+}} \texttt{\textit{h7}} 26 \texttt{\textit{b7}} \texttt{\textit{e6}}
Or 26...\texttt{\textit{g8}} 27 \texttt{\textit{h6}} followed by \texttt{\textit{b8}} and
mate.
27 \texttt{\textit{xf5}} \texttt{\textit{d5}} 1-0
There could follow: 28 \texttt{\textit{b5}} \texttt{\textit{f3+}} 29 \texttt{\textit{g4}} \texttt{\textit{g2}}
(29...\texttt{\textit{e4}} 30 \texttt{\textit{g5}} \texttt{\textit{g6+}} 31 \texttt{\textit{hxg6}} \texttt{\textit{fxg6}} 32
\texttt{\textit{g5+}} ++) 30 \texttt{\textit{g5}} \texttt{\textit{h8}} 31 \texttt{\textit{h6}} ++.

The next example again shows the rook’s
superiority:
1...d2 2 d5 f8 3 h4 e7 4 g3 d6 5 e8
5 f4 c5 6 g1 f6 7 f1 d4 8 e1 e3 9 h5 b2 10 d1 f3 11 d6+ xg3 12 d7 b8 +.

5...f5 6 f7 f4!
A typical procedure to create weaknesses.
7 g2
7 gxf4 d4 8 g8 h6 9 g2 xf4 10 g3 e5 – see the game.
7...fxg3 8 xg3 e5 9 g8 h6 10 f7 d3+
11 f3 d4 12 g8 f4 13 e6 f6 14 h5
14 g6 g6+ 15 f2 f4 16 c6 f6 +.
14...f4 15 g4 b4 16 e6 d4 17 g8 f5 18 e6+ g5 19 f7 d3
This zugzwang forces White to retreat.
20 c2 f4 21 e2 d4
21...e3+?? 22 d2 e7 23 e6 xf3 24 d3 xf4 25 d4 e8 – (Chuchelov in Mega-Base 2000).
22 e6 e5 23 e3 h4 24 f7 f4 25 g6 a4 26 e4 a3+ 27 e2 b3 28 f2 f4 29 e2
29 d6 b2+ 30 c1 b8 31 d7 h8 32 c6 g5 33 f2 hxh5 34 g3 g5 35 f4+ f5 36 h5 e6 37 g4 e7 38 h5 b8 39 d3 b6 +.
29...a3 30 d2 g5 31 d6 b4 32 c6 f8 33 g6 f4 34 d3 e5 35 e4 f4 36 g2 f5 0-1

With four pawns each, the winning prospects are of course even greater than with three (see following diagram).

Despite his clumsy pawn-structure, Black is winning:

E) Pawns on Both Wings

The superiority of the rook is usually even greater with pawns on both sides of the board (though if the side with the bishop has dangerous passed pawns, matters are not so clear).

Yusupov analysed the following position in detail in CBM 24. Black can stay passive or try a counterattack with his king; in both cases White is victorious.

1...c5

The counterattacking option is 1...d2?? 2 b6 g5 3 xd6 f4 4 b5 h4 5 xg5! (5 h6? xh3 6 e6 h4 7 g4 xg3 8 f5 xg2
Even in the next position White has to be careful not to lose despite his apparently dangerous connected passed pawns:

```

9 \text{Nh}x\text{h}4=10 \text{Ng}x\text{h}3 (5...\text{Nxe}5 6 \text{Nxe}5 \text{Nh}x\text{h}3 7 \\
\text{Nf}4 \text{h}8 \text{e}5 \text{N}\text{g}x\text{e}5 9 \text{N}\text{g}x\text{e}5 \text{Nh}x\text{h}3 10 \text{Nh}f4 \text{g}7 11 \text{Nh}g5 12 \text{Nh}f4 +=), and now White must choose carefully:

a) 6...\text{Nh}x\text{h}7 \text{b}4 7 \text{e}5 allows Black to emerge unscathed:

a1) 7...\text{Nh}x\text{h}8 8 \text{Nh}x\text{g}4 (8...\text{Nh}x\text{h}5 9 \text{Nh}f4 \text{Nh}x\text{g}4 10 \text{Nh}x\text{h}7+ \\
11 \text{Nh}x\text{h}7 \text{Nh}x\text{g}4 12 \text{Nh}g4 \text{Nh}f5 +=)

a2) 7...\text{Nh}x\text{h}8 8 \text{Nh}x\text{g}4 9 \text{Nh}f4 (9...\text{Nh}x\text{h}7 10 \text{Nh}x\text{h}7 +=)

b) 6...\text{Nh}x\text{h}7 7 \text{e}5 (7...\text{Nh}x\text{h}7 8 \text{Nh}f4 9 \text{Nh}f4 +=) 8 \text{Nh}x\text{g}4 \text{Nh}x\text{h}7 9 \text{Nh}f4 \text{Nh}x\text{h}7 10 \text{Nh}f4 +=

2 \text{f}4!

Upholding the bishop’s post.

2...\text{Nh}f4 3 \text{Nh}f5 \text{Nh}x\text{h}7 4 \text{Nh}x\text{f}4 5 \text{Nh}x\text{g}4 6 \text{Nh}x\text{g}4 7 \text{Nh}x\text{g}4 8 \text{Nh}x\text{g}4 9 \text{Nh}x\text{g}4 10 \text{Nh}x\text{g}4 11 \text{Nh}x\text{g}4 12 \text{Nh}x\text{h}4 +=.

Black resigned due to 6...\text{Nh}f5 (6...\text{Nh}f3 7 \text{Nh}x\text{f}4 +=; 6...\text{Nh}f7 7 \text{Nh}x\text{f}7 +=) 7 \text{Nh}x\text{b}8 8 \text{Nh}g8 9 \text{Nh}f6 10 \text{Nh}x\text{f}6 11 \text{Nh}g6 12 \text{Nh}g6 13 \text{Nh}x\text{e}4 14 \text{Nh}f7 15 \text{Nh}g8 +=.

B.Spassky – R.Fischer

Reykjavik Wch (21) 1972

1...\text{Nh}d8 2 \text{Nh}d2 3 \text{Nh}c4 \text{Nh}a2

3...\text{Nh}f6 4 \text{Nh}c5 \text{Nh}e5 5 \text{Nh}f4 \text{Nh}d4 6 \text{Nh}c6 7 \text{Nh}f4 8 \text{Nh}x\text{f}4 9 \text{Nh}x\text{g}5 10 \text{Nh}x\text{g}5 11 \text{Nh}f4 12 \text{Nh}f4 13 \text{Nh}d2 14 \text{Nh}g6 15 \text{Nh}x\text{g}6 16 \text{Nh}x\text{g}6 17 \text{Nh}x\text{g}6 18 \text{Nh}x\text{g}6 19 \text{Nh}x\text{g}6 +=.

4...\text{Nh}f3 5...\text{Nh}f3 \text{Nh}e7 6 \text{Nh}d4?

6 \text{Nh}d4 is much better as then Black can’t easily create a passed pawn.

6...\text{Nh}f5 7 \text{Nh}gxf5 \text{Nh}g6 8 \text{Nh}x\text{h}5 9 \text{Nh}g3 \text{Nh}d6 10 \\
\text{Nh}d3 \text{Nh}a1 11 \text{Nh}f2

11...\text{Nh}c4? 12 \text{Nh}f7 (12...\text{Nh}h5 13 \text{Nh}g5 14 \text{Nh}f4 15 \text{Nh}x\text{f}4 ++)

11...\text{Nh}e5 12 \text{Nh}c6 \text{Nh}f4 13 \text{Nh}d7 \text{Nh}b1 14 \text{Nh}e6 \\
\text{Nh}a2 15 \text{Nh}c4 \text{Nh}b6 16 \text{Nh}h5?!

16...\text{Nh}g4 was more precise, since it prevents White’s counterplay on the kingside (Gligorić in Fischer-Spassky Schachmatch des Jahrhunderts, Knaur 1972).

17 \text{Nh}d7? 0-1

This was Spassky’s sealed move; he resigned without resuming, so Fischer won the match 12½-8½ and became World Champion. Gligorić suggests that Spassky may have lost interest in the match, and gives 17...\text{Nh}h4?! as a better try:

17...\text{Nh}g5 (17...\text{Nh}f4 18 \text{Nh}c5 \text{Nh}a2 19 \text{Nh}e6 \text{Nh}g5? 20 \\
\text{Nh}d4 \text{Nh}d4 21 \text{Nh}c2 \text{Nh}x\text{f}5 22 \text{Nh}b4 \text{Nh}x\text{f}5 23 \text{Nh}x\text{f}5 \\
18 \text{Nh}x\text{f}4 19 \text{Nh}d5 \text{Nh}x\text{f}5 20 \text{Nh}g3 “and White can still fight”.

After the sealed move, Black could have won as follows:

B. Spassky – R. Fischer

Reykjavik Wch (21) 1972

1...\text{Nh}d8 2 \text{Nh}d2 3 \text{Nh}c4 \text{Nh}a2

3...\text{Nh}f6 4 \text{Nh}c5 \text{Nh}e5 5 \text{Nh}f4 \text{Nh}d4 6 \text{Nh}c6 7 \text{Nh}f4 8 \text{Nh}x\text{f}4 9 \text{Nh}x\text{g}5 10 \text{Nh}x\text{g}5 11 \text{Nh}f4 12 \text{Nh}f4 13 \text{Nh}d2? 2

\text{Nh}e5! (5 \\
\text{Nh}f5 \text{Nh}g2
```
17...\textgreek{g}4 18 \textgreek{b}4
18 \textgreek{c}6 \textgreek{h}4 19 \textgreek{f}3+ \textgreek{xf}5 20 \textgreek{c}6 \textgreek{g}4 21 \textgreek{f}3+ \textgreek{f}4 22 \textgreek{c}6 \textgreek{c}2 23 \textgreek{d}5 \textgreek{c}3 and Black wins (Gligorić). We continue the line a bit further:
24 \textgreek{c}4 \textgreek{h}3+ 25 \textgreek{h}2 \textgreek{g}4 26 \textgreek{a}5 \textgreek{c}2 27 \textgreek{g}1 \textgreek{h}2+ 28 \textgreek{h}xh2 \textgreek{xf}2+ 29 \textgreek{g}1 \textgreek{g}3 30 \textgreek{a}6 (30 \textgreek{b}4 \textgreek{f}4+--) 30...	extgreek{f}5 31 \textgreek{b}5 \textgreek{f}4 32 \textgreek{a}7 \textgreek{a}2+.
18...\textgreek{h}4 19 \textgreek{c}6 \textgreek{h}3+ 20 \textgreek{g}1 \textgreek{a}1+ 21 \textgreek{h}2
\textgreek{f}1 22 \textgreek{f}3+ \textgreek{h}4 23 \textgreek{a}5 \textgreek{f}2+ 24 \textgreek{g}1 \textgreek{g}3+--

Zugzwang.

17...\textgreek{d}7 18 \textgreek{f}6 \textgreek{d}4
18...\textgreek{c}7 19 \textgreek{e}8+--.
19 \textgreek{b}7+ \textgreek{c}6 20 \textgreek{xf}7 \textgreek{b}5 21 \textgreek{axb}5+ \textgreek{xb}5
22 \textgreek{d}7! \textgreek{c}3
Or: 22...\textgreek{f}2 23 \textgreek{d}5+ \textgreek{b}4 24 \textgreek{e}6 \textgreek{h}4+ 25
\textgreek{g}5+--; 22...\textgreek{c}5 23 \textgreek{d}5 \textgreek{a}4 24 \textgreek{e}6+--.
23 \textgreek{f}5 \textgreek{b}4
23...\textgreek{a}4 24 \textgreek{e}6 \textgreek{b}4 25 \textgreek{b}7+--.
24 \textgreek{e}6 \textgreek{f}8
24...\textgreek{c}6 25 \textgreek{c}7 \textgreek{b}6 26 \textgreek{e}7+ (Ptačnik).
25 \textgreek{e}7 \textgreek{xe}7 26 \textgreek{xe}7 \textgreek{a}4 27 \textgreek{a}7 \textgreek{b}4 28 \textgreek{e}4
1-0

The next example is not so easy:

W

7.62

L. Ptačnik – A. Vaissier
Pula Echt 1997

The additional pawns on the queenside make White’s task easier despite Black’s extra material (Ribl in CBM 57 Extra):
1 \textgreek{f}4 \textgreek{e}5 2 \textgreek{f}3 \textgreek{g}7
2...\textgreek{e}5 3 \textgreek{xe}5+ \textgreek{xe}5 4 \textgreek{b}7 \textgreek{g}5 5 \textgreek{e}4+-- (Ptačnik).
3 \textgreek{e}4 \textgreek{f}8 4 \textgreek{e}5 \textgreek{g}7 5 \textgreek{e}4 \textgreek{f}8 6 \textgreek{g}4 \textgreek{hxg}4 7
\textgreek{hxg}4 \textgreek{e}8
7...\textgreek{g}5 8 \textgreek{f}5! \textgreek{e}8 9 \textgreek{b}7 \textgreek{f}8 10 \textgreek{f}6 \textgreek{g}8 11
\textgreek{b}8+ \textgreek{h}7 12 \textgreek{d}3 \textgreek{f}2 13 \textgreek{e}8 \textgreek{g}6 14 \textgreek{g}8+
\textgreek{h}6 15 \textgreek{g}7+ (Ptačnik).
8 \textgreek{b}7+ \textgreek{f}8 9 \textgreek{f}5 \textgreek{g}5+ 10 \textgreek{g}x\textgreek{f}5 \textgreek{e}5+ 10...
\textgreek{e}8 11 \textgreek{f}6 \textgreek{f}2 12 \textgreek{b}8+ \textgreek{d}7 13 \textgreek{f}8+--.
11 \textgreek{f}5 \textgreek{f}2+ 11...
\textgreek{e}8 12 \textgreek{f}6 \textgreek{d}4 13 \textgreek{e}7+--.
12 \textgreek{a}7
12 \textgreek{f}6 \textgreek{h}4+ 13 \textgreek{f}5 \textgreek{f}2 and White hasn’t made progress.
12...
\textgreek{e}1 13 \textgreek{a}8+ \textgreek{g}7 14 \textgreek{a}7 \textgreek{f}8 15 \textgreek{a}6!
Finally White hits upon the right idea.
15...
\textgreek{f}2 16 \textgreek{a}8+ \textgreek{c}7
16...
\textgreek{g}7 17 \textgreek{b}8 \textgreek{c}5 (17...
\textgreek{h}7 18 \textgreek{f}6+--)
18 \textgreek{b}7 \textgreek{f}8 19 \textgreek{f}6+ (Ptačnik).
17 \textgreek{a}8!

W

7.63

A. Hauchard – R. Lev
Herzliya 1998

White’s rook has no obvious route into the black position. Hauchard managed to win nevertheless:
1 \textgreek{g}2 \textgreek{f}4
1...
\textgreek{d}6 2 \textgreek{a}5 \textgreek{a}6 3 \textgreek{g}3+ with the idea \textgreek{f}4 and \textgreek{f}4 (Kuzman in MegaBase 2000).
2 \textgreek{h}3 \textgreek{c}6 3 \textgreek{g}4 \textgreek{e}5
3...\textgreek{g}5 4 \textgreek{h}5 \textgreek{g}7 5 \textgreek{c}3+ followed by \textgreek{d}3-d7 (Kuzman).
4 \textgreek{c}3 \textgreek{f}7
White’s next aim is to open a file for the rook on the queenside. The way he achieves this is quite instructive:
5 \textgreek{b}3 \textgreek{b}6
White wins easily after 5...\textgreek{b}5 6 \textgreek{c}5 \textgreek{a}5 7
\textgreek{c}6 \textgreek{b}4 8 \textgreek{a}+. 6 \textgreek{c}3 \textgreek{c}5 7 \textgreek{b}4! \textgreek{b}x\textgreek{b}4 8 \textgreek{a}x\textgreek{b}4 \textgreek{b}5
Or:
(a) 8...\textgreek{a}5 9 \textgreek{c}7+ \textgreek{f}8 10 \textgreek{b}5+ (Kuzman).
1 \textgreek{a}3!

b) 8...
\textgreek{h}5+ 12
\textgreek{c}6 \textgreek{a}5 15 \textgreek{d}7
9 \textgreek{c}6
\textgreek{a}7 \textgreek{d}5 13...
\textgreek{a}5
14 \textgreek{a}5
15...\textgreek{g}7
18 \textgreek{c}4
19 \textgreek{f}4
\textgreek{c}5 \textgreek{f}4+-.
16 \textgreek{g}3
Or:
a) 17
(Kuzman)
b) 17
19 \textgreek{f}4 \textgreek{c}5
21...
25 \textgreek{c}5 \textgreek{f}4
22 \textgreek{a}7
1-0

Sпасибо за чёткий анализ! (the next two sentences are in Russian)

7.64

A. Hauchard – R. Lev
Endgame

Black's rook sufficiently active (the a-pawn is lost)
1 \textgreek{a}3!
b) 8...d5 9 c7+ d6 10 b5 d6 11 a7 d5 h5+ 12 c3 (12...b4 13 c7 g5 14 c6 a5 15 c6+ 16 f4 e4 17 d4 f2 16 e5+ f6 17 g7+ =). 9 c7+ g6 10 c6+! h7 11 a6 d2 12 b7 a2 d2 13...c3 14 b5 g6 15 b6+ f3 16 f5 d4 17 b7+ =.

14 b5 f4 15 f5 h5
15...g6+ 16 f6 h5 17 xxe5 xxe5+(17...h4 18 xxe5 h3 19 e5 h2 20 xxe3 ++ 18 xxe5 g7 19 f4 e6 20 g3 e5 21 h3! f4 22 h4 e5 23 g5 d4 24 f4 d4 e4 25 c3 c5 26 f4 ++).

16 xxe5! xxe5 17 xxe5 g6

Or:

a) 17...h4 18 f4 g5+ 19 g4 g6 20 f4 ++ (Khuzman).

b) 17...g5 18 f5 (18 f4?? h4 ++ 18...xh6 19 f4 g4 20 e5 ++).

18 f4 f6 19 g3 e5 20 h4 g6 21 g5 d4
21...xe2 22 f4 e7 23 f5 h4 24 xb4 gxf5 25 c5 f4 26 g4 ++ (Hecht in MegaBase 2000).

22 f4! h4 23 g4 g5 24 f4! gxf4 25 f3!
1-0

Spasov in Informator 23 and Speelman in Endgame Preparation delved deeply into the next position.

The following manœuvring is not easy to understand but quite typical for the battle between rook and bishop. If White's king reaches f5 or Black is forced to play ...h4, then White has made a step towards victory. 11 c4 c3 12 b5 and now:

b1) 12...e6 13 e4 d8 (13...d4 14 g5+ h6 15 f5 ++) 14 c5 e6 15 c6 h4 16 h3 ++ (7.39).

b2) 12...g7 13 b3 g5 14 g3+ f6 15 g2 h8 (15...h6 16 h4 c1 17 a2 ++) 16 f4 g7 17 c2 h6+ 18 g3 and then:
Black’s passed pawns look menacing but Alekhine found a brilliant way to neutralize them:

1. \( d5 ! \)

1...\( g5 ?! \) should also win, but is much more complicated: 1...\( e4 \) 2...\( g6 \) 3...\( f2 \) 4...\( f1 \) 5...\( e6 \) 6...\( c2 \), and now:

a) 5...\( f6 \) 6...\( g1 \) 7...\( g7 \) 8...\( f1 \) 9...\( e3 \) 8...\( d3 \) 4...\( e4 \) 9...\( e2 \) 10...\( e1 \) 7...\( e2 \) 11...\( f1 \) 12...\( e4 \) 13...\( e3 \) 14...\( f4 \) 15...\( e5 \) 16...\( f6 \) 17...\( g6 \) 18...\( g7 \) 19...\( e1 \) 20...\( e6 \) 21...\( e7 \) 22...\( e8 \) 23...\( e7 \) 24...\( e6 \) 25...\( e4 \)++

b) 5...\( f5 \) 6...\( g1 \) 7...\( g7 \) 8...\( f1 \) 9...\( e3 \) 10...\( e1 \) 11...\( f2 \) 12...\( e4 \) 13...\( e3 \) 14...\( f4 \) 15...\( e5 \) 16...\( f6 \) 17...\( g6 \) 18...\( g7 \) 19...\( e1 \) 20...\( e6 \) 21...\( e7 \) 22...\( e8 \) 23...\( e7 \) 24...\( e6 \) 25...\( e4 \)++

1...\( e4 \)

After 1...\( f2 \) White’s king gets to e2 to block the pawns firmly: 2...\( f1 \) 3...\( e3 \) 4...\( e1 \) 5...\( d1 \)++

9...\( f6 \) 10...\( b5 \) 11...\( xh2 \)

Bonchev decides to sacrifice the bishop, but the three pawns are no match for the rook.

11...\( a5 \) 12...\( a6 \) 13...\( f1 \) 14...\( f5 \) 15...\( g1 \) 16...\( a7 \) 17...\( h5 \) 18...\( g7 \)

Black loses his pawns one after the other as a result of zugzwang.

18...\( f6 \) 19...\( g4 \) 1-0

1. \( d5 \) 2. \( f6 \) 3. \( g7 \) 4. \( f1 \) 5. \( e6 \) 6. \( c2 \) 7. \( e4 \) 8. \( f2 \) 9. \( e3 \) 10. \( f1 \) 11. \( e4 \) 12. \( e3 \) 13. \( f4 \) 14. \( e5 \) 15. \( f6 \) 16. \( g6 \) 17. \( g7 \) 18. \( e1 \) 19. \( e6 \) 20. \( e7 \) 21. \( e8 \) 22. \( e7 \) 23. \( e6 \) 24. \( e5 \) 25. \( e4 \)

A. Alekhine – S. Tartakower
Vienna 1922

7.66

A. Karpov – A. Pomar
Madrid 1973

White has more space and Black’s weak a-pawn is a liability. Nevertheless, he could have saved himself:
1 b5 \textbf{\texttt{?}}

After this mistake, Karpov shows how to convert his advantages into victory. 1...\texttt{cxb5} 2 \texttt{cxb5} \textbf{\texttt{f1}} was called for: 3 \texttt{d4} (3 \texttt{\texttt{c}}\texttt{c}3 \texttt{f3} 4 \texttt{\texttt{d}}\texttt{d}4 \texttt{f5} =) 3...\texttt{f5} 4 \texttt{\texttt{c}}\texttt{c4} \texttt{xf4} 5 \texttt{\texttt{d}}\texttt{d}6+ \texttt{\texttt{a}}\texttt{8} 6 \texttt{\texttt{b}6} (6 \texttt{\texttt{xf4}} is stalemate) 6...\texttt{\texttt{d}xd4}+ 7 \texttt{\texttt{d}xd4} \texttt{\texttt{f}xb6} =.

2 \texttt{\texttt{x}xf6} \texttt{\texttt{c}c7} 3 \texttt{\texttt{d}d}4 \texttt{\texttt{e}xe6} 4 \texttt{\texttt{a}a}7 \texttt{\texttt{a}a}1 5 \texttt{\texttt{d}d}5+ \texttt{\texttt{d}d}7 6 \texttt{\texttt{b}b}8 \texttt{\texttt{x}xa6} 7 \texttt{\texttt{c}c}5 \texttt{\texttt{a}a}4 8 \texttt{\texttt{e}e}6+ \texttt{\texttt{e}e}8 9 \texttt{\texttt{d}d}6 \texttt{\texttt{f}f}6 10 \texttt{\texttt{b}b}4 \texttt{\texttt{c}c}7 11 \texttt{\texttt{b}b}3 \texttt{(D)}

\section*{Exercises}
(Solutions on pages 387-8)

We know that White’s position is a fortress. Does it matter to which square White’s bishop goes?

11...\texttt{\texttt{a}a}1

11...\texttt{\texttt{d}d}8 12 \texttt{\texttt{c}c}4 \texttt{\texttt{b}b}6 13 \texttt{\texttt{c}c}5+ \texttt{\texttt{c}c}7 14 \texttt{\texttt{c}c}7 \texttt{\texttt{b}b}6 15 \texttt{\texttt{x}xf6} \texttt{\texttt{a}a}4+ 16 \texttt{\texttt{d}d}3 \texttt{\texttt{c}c}5 (16...\texttt{\texttt{x}xf4} 17 \texttt{\texttt{d}d}8+ \texttt{\texttt{b}b}5 18 \texttt{\texttt{c}c}4 \texttt{\texttt{c}c}4 19 \texttt{\texttt{d}d}6 +) 17 \texttt{\texttt{c}c}7 \texttt{\texttt{a}a}8 18 \texttt{\texttt{c}c}4 \texttt{\texttt{d}d}6 19 \texttt{\texttt{e}e}5+ \texttt{\texttt{d}d}7 20 \texttt{\texttt{f}f}5 +.

12 \texttt{\texttt{c}c}4 \texttt{\texttt{b}b}6 13 \texttt{\texttt{c}c}5+ \texttt{\texttt{c}c}7 14 \texttt{\texttt{b}b}5 \texttt{\texttt{h}h}1+ 15 \texttt{\texttt{b}b}4 1-0

A possible continuation is 15...\texttt{\texttt{f}f}5 16 \texttt{\texttt{d}d}6+ \texttt{\texttt{d}d}8 17 \texttt{\texttt{c}c}4 \texttt{\texttt{c}c}1+ 18 \texttt{\texttt{d}d}5 \texttt{\texttt{a}a}1 19 \texttt{\texttt{c}c}3 \texttt{\texttt{d}d}1+ 20 \texttt{\texttt{e}e}6 +.

\section*{Rules and Principles: Rook vs Bishop}

1) The pawnless ending king + rook vs king + bishop is drawn. The defender’s king must head for a corner opposite to the bishop’s colour.

2) With pawns on one wing, the fortresses 7.49 and 7.50 are worth knowing as they occur quite often in practice.

3) Study 7.54-7.58 in detail as the examples show how the attacker can (or can’t) storm fortresses.

4) In 7.65 Alekhine demonstrates how to create and play on a weak colour complex opposite to the bishop’s colour.
7.3 Bishop and Knight vs Rook

In this short section, we aim only to show some important specific cases and to illustrate some typical themes in the battle between the rook and the two pieces.

With three against three on one wing the defender is usually able to hold on (see following diagram).

White should just sit and wait in his fortress. However, he decided to start some misguided activity:

1 f5?
1...a3
1...gxf5? 2 h2 =
2 h2 gxf5 3 h4 d5 4 xf5 e4 5 g4
e6+ 6 f4 e5+ 7 f3 hxg4+ 8 xg4 e6 9

h5 e5 10 g1 f6 11 g8+ h6 12 g1 f5 13 g2 f4 14 g1 g5 15 f3
15...f4 16 g1 f6 17 g3 g5 18 g4
19 g8+ e5 20 g7 h6 21 g8 d3 22 h4 f4 23 h8 g5+ 24 g3 e6 25 g8
h6 26 g6 (D)

26 h4! g7 27 h8 f4!! 28 g2 h4 29 h3...

(Yusupov in Inf 52/269).

7.67A
Or 32...\( \text{g}7 \) 33 \( \text{f}8 \) \( \text{g}6 \) → (not 33...\( \text{g}xh7 \))
34 \( \text{fx}f6 = \).
33 \( \text{e}8 \) \( \text{x}h7 \) 34 \( \text{e}4 \) \( \text{e}7 \) 35 \( \text{h}5 \)
35...\( \text{g}7 \) is met by 35...\( \text{g}6 \) 36 \( \text{xe}7 \) \( T5+ \).++
35...\( \text{g}7 \) 36 \( \text{e}5 \) \( \text{f}4 \) 37 \( \text{a}6 \) \( \text{e}5 \) 38 \( \text{e}6 \)
\( \text{f}7 \) 39 \( \text{a}6 \) \( \text{e}8 \) 40 \( \text{b}6 \) \( \text{d}6 \) 41 \( \text{a}6 \) \( \text{e}4 \) 42
\( \text{g}4 \) \( \text{g}6 \) 43 \( \text{e}6 \) \( \text{d}6 \) 44 \( \text{a}6 \) \( \text{f}5+ \) 45 \( \text{f}3 \) \( \text{f}6 \)
46 \( \text{e}3 \) \( \text{g}5 \) 47 \( \text{f}3 \) \( \text{d}2+ \) 48 \( \text{e}2 \) \( \text{f}4 \) 49
\( \text{a}4 \) \( \text{g}4 \) 50 \( \text{f}2 \) \( \text{e}4+ \) 51 \( \text{g}2 \) \( \text{d}2 \) 52 \( \text{d}4 \)
\( \text{e}3 \) 53 \( \text{b}8 \) \( \text{d}4 \) 54 \( \text{a}3 \) \( \text{d}2 \) 55 \( \text{e}3 \) \( \text{c}3 \) 56

60 \( \text{b}xb4 \) \( \text{d}2+ \) 0-1

In the following classic, Lasker shows how to defend:

\[
7.68
\]

L. van Wely – G. Kasparov
Tilburg 1997

White has four pawn-islands, and Black only two, although he has two pawns more. Furthermore, Black’s pieces are much better coordinated.

1...\( \text{e}e5+ \) 2 \( \text{c}2 \) \( \text{b}5 \) 3 \( \text{d}d1 \) \( \text{d}5 \) 4 \( \text{e}2 \) \( g5 \) 5
\( \text{f}3 \) \( \text{d}6 \) 6 \( \text{h}3 \) \( g6 \) 7 \( \text{h}1 \) \( b5 \) 8 \( \text{c}3 \) \( g4 \) 9 \( \text{g}2 \)
\( \text{f}6 \) 10 \( \text{hxg}4 \) \( \text{hxg}4 \) 11 \( \text{d}4 \) \( \text{g}5 \)
Not, of course, 11...\( \text{xd}4? \) 12 \( \text{axc}6 \) \( \text{f}4?? \)
13 \( \text{d}5+ \) • •
12 \( \text{d}3 \)
12 \( \text{d}5 \) \( \text{xd}5 \) 13 \( \text{h}h6 \) \( \text{d}6 \) 14 \( \text{a}2 \) (14 \( \text{b}2 \)
\( \text{b}4 \) 15 \( \text{axb}4 \) \( \text{xb}4+ \) 16 \( \text{c}3 \) \( \text{d}4 \) 17 \( \text{c}c2 \) \( \text{d}4 \) 18 \( \text{a}a3 \) \( \text{a}3 \) 19 \( \text{h}6 \) \( \text{a}a4 \) 20 \( \text{g}3 \) \( \text{g}8 \)
21 \( \text{e}4 \) \( \text{f}7 \) 22 \( \text{d}2 \) \( \text{a}1 \) 23 \( \text{c}3 \) \( \text{c}1+ \) 24 \( \text{f}2 \)
\( \text{e}1 \) 25 \( \text{d}4 \) \( \text{c}6 \) 26 \( \text{e}4 \) \( \text{f}1+ \) 27 \( \text{f}2 \) \( \text{a}1 \) 28
\( \text{f}4 \) \( \text{a}4 \) 29 \( \text{c}5 \) \( \text{c}3 \) 30 \( \text{f}3 \) \( \text{c}1 \) 31 \( \text{f}2 \) \( \text{a}1 \)
32 \( \text{f}4 \) \( \text{a}4 \) 33 \( \text{f}3 \) \( \text{f}3 \) 34 \( \text{e}3 \) \( \text{a}5 \) 35 \( \text{c}5 \) \( \text{a}1 \) 36 \( \text{c}6 \) \( \text{a}a3 \) 37 \( \text{c}4 \) \( \text{a}4+ \) 38 \( \text{d}4 \) \( \text{b}4 \) 39
\( \text{c}3 \) \( \text{b}3+ \) 40 \( \text{e}4 \) \( \text{b}4 \) 41 \( \text{d}5 \) \( \text{b}1 \) 42 \( \text{g}5 \) \( \text{h}5 \)
43 \( \text{h}xg5 \) \( \text{f}xg5 \) 44 \( \text{h}xg5+ \) \( \text{g}8 \) 45 \( \text{e}6 \) \( \text{d}1 \) 46
\( \text{e}4 \) \( \text{f}7 \) 47 \( \text{g}5+ \) \( \text{g}8 \) 48 \( \text{e}5 \) \( \text{e}1+ \) 49 \( \text{f}4 \)
\( \text{f}1+ \) 50 \( \text{g}4 \) \( \text{d}1 \) 51 \( \text{f}3 \) \( \text{f}2 \) 52 \( \text{f}4 \) \( \text{f}4 \)
\( \text{f}4 \) \( \text{g}8 \) 54 \( \text{e}4 \) \( \text{d}1 \) 55 \( \text{g}5 \) \( \text{e}1+ \) 56 \( \text{d}5 \)
\( \text{d}1+ \) 57 \( \text{f}6 \) \( \text{e}1 \) 58 \( \text{h}3 \) \( \text{f}4 \) \( \text{f}4 \)
\( \text{f}4 \) \( \text{h}6+ \) 60 \( \text{xe}7 \) \( \text{b}5 \) 61 \( \text{g}6 \) \( \text{h}6 \) 62 \( \text{d}6 \) \( \text{a}6 \) 63 \( \text{b}6 \)
\( \text{b}6 \) 64 \( \text{c}7+ \) \( \text{h}7 \) 65 \( \text{e}8 \) \( \text{a}6 \) 66 \( \text{c}7 \) \( \text{b}6 \)
67 \( \text{d}5 \) \( \text{a}6 \) 68 \( \text{c}3 \) \( \text{g}6 \) 69 \( \text{e}4 \) \( \text{b}6 \) 70...
1...c4!! 2.± xe4
2 bxc4 h3 (2...±b8??) 3 axb3 a3 4 ±b1 ±e8 5
±f2 ±h8 6 ±f4 (6 ±g2?? ±b8 7 ±a2 ±d8 --)
6...±xh2+ 7 ±g2 ±h1 8 ±e1 ±h2+ 9 ±g2 =.
2...±e8! 3 ±d3
3 ±f4?? ±xe4 4 bxc4 b3 5 axb3 a3 --.
3...±a3
Now the game was adjourned and Beliavsky
sealed...
4 ±e3?!
4 ±xe3 was the best defence according to
Dolmatov and Dvoretsky as it leads to a fortress
after 4...±c1 5 h4 ±a1 6 ±c4 ±xa2 7 ±d3 ±f2+ 8
±xh2 a2 9 ±xh4 a1 ±10 ±d3 =.
4...±c1 5 ±f4 ±a1 6 ±d5 ±xa2 7 ±xb4
±xh2 8 ±c2 ±h3+ 9 ±f1 ±f5 10 ±a2 ±f4 11 ±xf4
±xb3 12 ±c4 ±h3 13 ±f1?
13 ±f2 ±g6 14 ±d5 is better, when Dvorets-
ky states that White should be able to hold on.
13...±h2+ 14 ±g2 ±f6 15 ±g3 ±h5 16
±f1?!
16 ±c4 ±e6 17 ±g4 ±h2 18 ±c3 ±e7 19
±d5 ±h2 =.
16...±c5 17 ±d3 ±d5 18 ±a6 ±d4 19 ±c4
±d4 0-1
White resigned as Black’s king enters the
stage; e.g., 20 ±a6 ±f5 21 ±c8+ ±e4 22 ±a6
±e3 23 ±f5 ±f4 24 ±c8 ±f2 --.

8.1

This section is cooperation.
First the denouement is

8.2

restatement.

8.3

because we need

8.4

The examples

8.5

are

8.6

to

8.7

to

8.8

to
This chapter is divided into two main parts. First we discuss the pawnless endings rook + knight vs rook, and rook + bishop vs rook. Sooner or later you are very likely to face one of these endings over the board and especially in the second case it is very important to memorize the defensive techniques as the ending is extremely difficult to defend without knowing them. These sections are rounded off with a few positions with added pawns, and as expected the extra piece scores heavily (statistically more than 70% wins and about 19% draws).

The ending rook + minor piece vs rook + minor piece occurs extremely frequently in practice. In the framework of this book it would be impractical to include hundreds of examples, so we have concentrated on a few instructive ones, with the emphasis on plans, themes and motifs. While these are sufficient for an overview, you might be interested in taking a look at one of the reference works that are mentioned at the end of this chapter.

The subchapters are therefore:

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8.3: Rook and Minor Piece vs Rook and Minor Piece  304

8.1 Rook and Knight vs Rook

The pawnless ending has a much greater drawish tendency than rook and bishop vs rook. In many games the draw was immediately agreed until Kasparov created some upset by defeating Judit Polgar in 1996 (see 8.03). In our view, this ending is worth playing on if the defending king is confined near the edge. Indeed, if it should happen to be in the corner, the winning chances are high:

```
801

L. Centurini  
La Régence, 1887

1...Nd2
Or:
a) 1...Nd2 2 Qh5+ Ke8 3 Qh8+ Kf7 4 Qh7+ Kf8 5 Kg1 Nd7 6 Qg8+ Kf7 7 Qg7+ Kf8 8 Qg6+ Ke7 9 Qg7+ Kf8 10 Qg8+ Kf7 11 Qg7+ Kf8 12 Qg6+ Kf7 13 Qg7+ Kf8 14 Qg8+ Kf7 15 Qg7+ Kf8 16 Qg6+ Kf7 17 Qg7+ Kf8 18 Qg8+ Kf7 19 Qg7+ Kf8 20 Qg8+ Kf7 21 Qg7+ Kf8 22 Qg6+ Kf7 23 Qg7+ Kf8 24 Qg8+ Kf7 25 Qg7+ Kf8 26 Qg6+ Kf7 27 Qg7+ Kf8 28 Qg8+ Kf7 29 Qg7+ Kf8 30 Qg6+ Kf7 31 Qg7+ Kf8 32 Qg8+ Kf7 33 Qg7+ Kf8 34 Qg6+ Kf7 35 Qg7+ Kf8 36 Qg8+ Kf7 37 Qg7+ Kf8 38 Qg6+ Kf7 39 Qg7+ Kf8 40 Qg8+ Kf7 41 Qg7+ Kf8 42 Qg6+ Kf7 43 Qg7+ Kf8 44 Qg8+ Kf7 45 Qg7+ Kf8 46 Qg6+ Kf7 47 Qg7+ Kf8 48 Qg8+ Kf7 49 Qg7+ Kf8 50 Qg6+ Kf7 51 Qg7+ Kf8 52 Qg8+ Kf7 53 Qg7+ Kf8 54 Qg6+ Kf7 55 Qg7+ Kf8 56 Qg8+ Kf7 57 Qg7+ Kf8 58 Qg6+ Kf7 59 Qg7+ Kf8 60 Qg8+ Kf7 61 Qg7+ Kf8 62 Qg6+ Kf7
```
However, White can’t win if Black’s rook is more actively placed:

\[ \text{Diagram 8.02} \]

1. \( \text{f6} \text{a2} \)
Not: 1... \( \text{g3?! 2 a1 +=}; 1... \text{g4? 2 a1 f4+} \text{g6+} =. \)
2. \( \text{e6} \text{g2} \)
2... \( \text{a6} =. \)
3. \( \text{d4 a2 4 g1} + \text{f8 5 e6} + \text{e8 6 d1 f2+} =. \)

The following practical example has become famous because Kasparov managed to win the ending:

\[ \text{Diagram 8.03} \]

J. Polgar – G. Kasparov
Dos Hermanas 1996

1. \( \text{h5?!} \)
After this move, Black can force White’s king into the corner. The following trick to prevent this is worth knowing: 1 \( \text{f8+?!} \text{f4 2 g8!} \text{h1+ (2... \text{g8 is stalemate)} 3 \text{g5 g1+ 4 h4!=.} \)

\[ 1... \text{g3+ 2 h6} \]
2. \( \text{h4!} \text{loses to 2... \text{f5+!} 3 \text{h5 (3 \text{h3 h1=}) 3... \text{g7+! +=.}} \)
2. \( \text{g6?! is preferable because the knight is better placed on f5 than on e4. Then 2... \text{e4+ is met by 3 \text{h6= (rather than 3 \text{h7? \text{f6+} += or 3 \text{f7? \text{d6+} +=.}} \)
2... \text{f5+ 3 \text{h7! \text{f4 4 b8}} \text{g7} =. \)
4. \( \text{g7+ 5 \text{h8 d7 6 e8} \)
6. \( \text{f8? allows a long win: 6... \text{g5! 7 a8 \text{g6+ 8 \text{g8+ (8 \text{b8 h7+ 9 \text{g8 \text{c7+ 10}}}) \text{f8 h8+ +=)}} 8... \text{h6 9 g1 d8+! 10 g8 d3 11 g1 f3 12 g4 (12 \text{g8?! \text{c7+! 13}} \text{g8 \text{f8+ 14 g8 \text{g6#!) 12... \text{e7 13 h4+ g6! (13... \text{g5?! 14 h6!= ) 14 g4+ (14}} \text{h6+ \text{f7! 15 h7+ \text{f8 16 h6 g8 17 h5}} \text{c6 18 h6 \text{f7 +)}} 14... \text{f7 15 g7+ \text{f8 +=.}} \)
}
6. \( \text{g5 7 e6 \text{d4 8 e1} \)
8. \( \text{b6 e7 (8... \text{f5 9 \text{g8 c6 10 b1 g6 11 g1! g5 12 \text{f8! =}) 9 \text{g8 c6 10 b1 g6 11 g1! g5 12 f8! =.} \)
8... \text{f6 9 d1! ?} \)
9. \( \text{f1+ f5 (9... \text{e7 10 \text{g7 =)} 10 \text{g8 g7+ 11 \text{f8! a7 12 e8 =.} \)
9... \text{d5?!} \)
Threatening \( \text{h5+}. \) Now Polgar misses the only defence, but over the board it is of course awkward to play with the king confined to the corner.

10. \( \text{a1?} \)
10. \( \text{h1? also loses: 10... \text{f3! 11 h6+ \text{f7! 12 h7+ g6! (12... \text{f8? 13 a7 =) 13 g7+ f6! 14 g4 (14 g8?! \text{h5#) 14... 5?! 15}} \text{f4+ g6! 16 g8 c6 17 g4+ f6! 18 \text{h7 g5+ 19 h6 f7+! 20 h7 h5+! 21 g8 h8#.)} \)
After 10 \( \text{f1+ it is not possible to break through because Black can’t manage to transfer the knight to f6: 10... \text{f5 11 a2 d4 (11... \text{g6 12 g2+! \text{f7! 13 a2! \text{d8+ 14 h7 \text{f6! 15}}}} \text{f1 =) 12 \text{g8!=.} \)
10... \text{e6! 11 a6 f7 12 a7+ g6 13 e8 d7 14 b8 c7 15 g8 e5 16 a8 h5 17 h8 b7 18 c8(D) \)
Now we have reached another study by Centurini, La Régence, 1850.

18. \( \text{c7?!} \)
18... \( \text{b6 is the winning idea. ... \text{f7 is threatened and the knight is freed as the rook now} \)

simplifies. \( \text{h5? (3 \text{h3}} \text{) is no better.}} \)

The knight is

...\text{dxe4+} is

?\text{f6+!} --+

8.03A

shelters the king. 19 \text{g8} \text{c5} 20 \text{g8} \text{c6} 21 \text{g8} (21 \text{c7} \text{h7+!}--+) 21...\text{h7} 22 \text{a8} \text{b6} 23 \text{g8} \text{b7} 24 \text{h8} \text{f6} 25 \text{e7} \text{b8}+ 26 \text{e8} \text{c6} #.

19 \text{g8+} \text{h6!} 20 \text{g1??}

This allows Kasparov to win in another way. After 20 \text{f8} he would have had to find the right plan with ...\text{b6} followed by transferring the knight to f6.

20...\text{b6+!} 21 \text{g8} \text{e8} 0-1

Polgar resigned due to the mating continuation 22 \text{f8} \text{g6} 23 \text{g8+} \text{f7} 24 \text{g1} \text{f6+} 25 \text{g8} \text{xg8} #.

If the defender has an additional pawn it can actually be his undoing since a stalemate defense might become impossible, as in the main line of the following study:

R. Hübner – A. Beliavsky

Groningen PCA 1993

1...\text{d7??}

1...\text{d2} 2 \text{c4+} \text{d7} 3 \text{c5} +-- (Hübner in CBM 39).

2 \text{c5} \text{d6} 3 \text{c2} \text{h1}

Or 3...\text{xe2} 4 \text{xc2} \text{c5} 5 \text{a6} \text{b6} 6 \text{d4} +--.

4 \text{f5} \text{h4}

4...\text{e1} 5 \text{xe4} \text{a4+} (5...\text{d6} 6 \text{c5} \text{d6} \text{h5} +--) 6 \text{d3} \text{e3+} 7 \text{d4} +-- (Hübner).

5 \text{a2} \text{e6} 6 \text{e5} \text{h8}

Not: 1 \text{c7?} \text{h1} 2 \text{f6+} \text{h8} = 1 \text{e6?} \text{h7! (1...\text{f8?} 2 \text{b8} =) 2 \text{f7} \text{h6} 3 \text{xc5} \text{h7+!} =.

1...\text{e4}

Or: 1...\text{h7} 2 \text{c6 +--) 1...\text{h4} 2 \text{f6+} \text{g7}

3 \text{g8+} \text{h6} 4 \text{f7 +--} 1...\text{h7+ 2} \text{e6} \text{h8} 3 \text{c7} \text{h1} 4 \text{f6+} \text{h8} 5 \text{c8+} \text{g7} 6 \text{g8+ +--}.

2 \text{e6!!} \text{f8}

2...\text{h7} 3 \text{xc4} \text{f8} 3...\text{xe8+ 4} \text{f7! +--}

4 \text{f6+!} \text{h6} 5 \text{h4+} \text{g7} 6 \text{g4+!} \text{h8} 7 \text{d6+} \text{e8} 8 \text{d6}+ \text{xd6} 9 \text{d7#}.

6 \text{g7+} \text{h5} 7 \text{e5}

Without the c-pawn, Black could now defend by 7...\text{xe8+ 8} \text{f4} \text{xe4 9} \text{xe4 stalemate.

7...c3 8 \text{f4} c2 9 \text{g5#}

By the way, without the pawn on c5, 8.04A is won for White as well: 1 \text{e6!} \text{h7} 2 \text{c1} \text{xe8+ 3} \text{f7! +--}

If the attacker has a pawn he usually wins:
Fundamental Chess Endings

Sometimes, though, it can be astonishingly complicated:

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8.06
J. Bosch – T. Heinemann
Bundesliga 1999/00
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1.\text{\textcopyright} d8+ e5 2.\text{\textcopyright} xf7+ d4 3.\text{\textcopyright} d6?!?

3.\text{\textcopyright} a3? e3 (3...\text{\textcopyright} c2 4.\text{\textcopyright} xg5 \text{\textcopyright} xc4 5.\text{\textcopyright} d2 \text{\textcopyright} b4 6.\text{\textcopyright} a2 \text{\textcopyright} c4 7.\text{\textcopyright} e2 \text{\textcopyright} b4 8.\text{\textcopyright} f2 e3+ 9.\text{\textcopyright} f3 \text{\textcopyright} b3 10.\text{\textcopyright} e2 --) 4.\text{\textcopyright} x d6 and then:

a) 4...\text{\textcopyright} e5 5.\text{\textcopyright} d3 \text{\textcopyright} e2 (5...\text{\textcopyright} xg3 6.\text{\textcopyright} d5+ \text{\textcopyright} e6 7.\text{\textcopyright} e2 \text{\textcopyright} c4 8.\text{\textcopyright} d1 ++) 6.\text{\textcopyright} d5+ \text{\textcopyright} e6 7.\text{\textcopyright} d5 \text{\textcopyright} e6 8.\text{\textcopyright} d5 \text{\textcopyright} e5+ 9.\text{\textcopyright} f5 +--.

b) 4...\text{\textcopyright} e1 5.\text{\textcopyright} g1+ 5.\text{\textcopyright} f2 \text{\textcopyright} g2+ 6.\text{\textcopyright} f1 \text{\textcopyright} f2+ 7.\text{\textcopyright} e1 \text{\textcopyright} f6 8.\text{\textcopyright} c5 \text{\textcopyright} e6 9.\text{\textcopyright} e2 \text{\textcopyright} x e5 10.\text{\textcopyright} f5 +--.

3.\text{\textcopyright} e5

3...\text{\textcopyright} c3 4.\text{\textcopyright} a5 \text{\textcopyright} g1+ 5.\text{\textcopyright} e2 \text{\textcopyright} g2+ 6.\text{\textcopyright} f1 e2+ 7.\text{\textcopyright} e1 \text{\textcopyright} e3 8.\text{\textcopyright} a3+ 9.\text{\textcopyright} d4 9.\text{\textcopyright} f3 10.\text{\textcopyright} d3 \text{\textcopyright} g4 11.\text{\textcopyright} f5 +--.

4.\text{\textcopyright} d5 5.\text{\textcopyright} a3 \text{\textcopyright} c6 6.\text{\textcopyright} a4 e3 7.\text{\textcopyright} f4 8.\text{\textcopyright} a4++.

5.\text{\textcopyright} f4? 5.\text{\textcopyright} f7! is best:

a) 5...\text{\textcopyright} c3 6.\text{\textcopyright} f5+ \text{\textcopyright} e6 7.\text{\textcopyright} xg5+ --.

b) 5...\text{\textcopyright} f3 6.\text{\textcopyright} f7 (6...\text{\textcopyright} x f3? 7.\text{\textcopyright} e4 g4 8.\text{\textcopyright} c6 \text{\textcopyright} f6 \text{\textcopyright} d7 10.\text{\textcopyright} d4 9.\text{\textcopyright} d6 \text{\textcopyright} d6 11.\text{\textcopyright} d2 \text{\textcopyright} f4 10.\text{\textcopyright} d4+ 11.\text{\textcopyright} e3 12.\text{\textcopyright} d5 ++.

In our final example, rook and knight must fight for a draw:

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8.07
A.Karpov – V.Anand
Lausanne FIDE Wch rd 7 (1998)
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1.\text{\textcopyright} g4

The alternative 1.\text{\textcopyright} e6 also comes into consideration.

1...\text{\textcopyright} c3 2.\text{\textcopyright} g5 \text{\textcopyright} x e4 3.\text{\textcopyright} f7+ \text{\textcopyright} g6

Passive defence was necessary in order to stop White's pawns: 3...\text{\textcopyright} g8! 4.g6 \text{\textcopyright} a8 5.\text{\textcopyright} h7+ 6.\text{\textcopyright} f6 7.\text{\textcopyright} f7+ 8.\text{\textcopyright} x h7 9.\text{\textcopyright} x h7 10.\text{\textcopyright} x h7 11.\text{\textcopyright} x h7 12.\text{\textcopyright} x h7 13.\text{\textcopyright} x h7 14.\text{\textcopyright} x h7 15.\text{\textcopyright} x h7 16.\text{\textcopyright} x h7 17.\text{\textcopyright} x h7 18.\text{\textcopyright} x h7 19.\text{\textcopyright} x h7 20.\text{\textcopyright} x h7 21.\text{\textcopyright} x h7 22.\text{\textcopyright} x h7

2.\text{\textcopyright} f4

3.\text{\textcopyright} g5

Liberal at the board.

4.\text{\textcopyright} x e4

...and
8.2 Rook and Bishop vs Rook

The pawnless ending occurs relatively often in practice. It is generally drawn, but there are some positions that require more than 50 moves to win. This caused FIDE to expand the 50-move rule and to give the attacker 75 moves. Naturally, this increased the number of decisive games even more, but only because it gave the attacker more time to probe for an error. Although this decision was reversed, it is still very important to study the main defensive strategies: the venerable Cochrane Defence and the more recently discovered Second-Rank Defence.

The Cochrane Defence

![Diagram of the Cochrane Defence]

A.Budnikov – M.Novik
USSR Ch (Moscow) 1991

The Cochrane Defence has been known for a long time and is based on the fact that White has problems unpinning his bishop.

1...\text{Be}1

Black waits to see which side White's king chooses. 1...\text{d}8?! 2 \text{d}6! \text{e}8 3 \text{d}5! \text{+} would be fatal, while 1...\text{f}8 is still playable.

2 \text{d}5 \text{f}8

This is the principle of the defence: move your king in the opposite direction to the attacker's king!

3 \text{f}5 \text{e}7

Liberating the king from the edge of the board.

4 \text{a}8+ \text{f}7 5 \text{a}1

...and White decides to start again:

5...\text{f}6 6 \text{c}8 \text{e}5+ 7 \text{d}6 \text{e}2 8 \text{f}1+ \text{g}5
9 \text{b}7 \text{e}3 10 \text{d}5 \text{e}2 11 \text{d}4 \text{e}7 12 \text{d}5
\text{e}8 13 \text{f}7 \text{b}8

Preparing the Cochrane Defence.

14 \text{e}5 \text{b}5 15 \text{f}1 \text{a}5 16 \text{g}1+ \text{h}5

Reaching the starting position, rotated by 90 degrees.

17 \text{h}1+ \text{g}5 18 \text{b}1 \text{h}5 19 \text{g}1 \text{b}5 20
\text{d}4 \text{h}6 21 \text{e}4 \text{g}5 22 \text{f}1 \text{g}7 23 \text{f}5 \text{f}6
24 \text{e}4 \text{e}7 25 \text{d}1 \text{g}2 26 \text{d}7+ \text{f}6 27
\text{f}6+ \text{e}7 28 \text{g}6 =

\text{e}7 31 \text{e}4 \text{d}2+ 32 \text{e}5 \text{e}2 33 \text{e}6+ \text{d}7
34 \text{h}6 \text{e}7 35 \text{h}7+ \text{e}8 36 \text{e}7

Reaching the starting position again.

36...\text{f}1 37 \text{d}5 \text{f}8 38 \text{f}5 \text{e}7 \tfrac{1}{2} \tfrac{1}{2}

The Cochrane Defence works well on the central files. On the b- and g-files it requires great care because of the proximity of the corner, and on the a-file it does not work at all (\text{w}\text{a}5, \text{d}4, \text{h}7; \text{b}\text{a}8, \text{a}2: 1 \text{b}6! \text{b}2+ 2 \text{b}5! \text{+}--).

The Second-Rank Defence

This is the main alternative defensive method. For a long time it was relatively unknown, but it was recently vindicated by the database.

![Diagram of the Second-Rank Defence]

A.J.Norri – A. Atalik
Pula Echt 1997

The situation looks pretty grim for White, because all the black pieces occupy active positions. However, he can still hold on, because he can prevent his king from becoming tied to the edge. The idea, based on a nice stalemate resource, is to keep the rook on the second rank.

1 \text{d}2 \text{h}5 2 \text{e}2 \text{h}2+ 3 \text{d}1

The rook has to leave White's second rank again.

8.09
3...h1+ 4 e2 h2+ 5 d1! h3 6 e2 e3

Isn't White in zugzwang now? No, he isn't:
7 d1 h1+
Or:
a) 7...e3?! 8 e2 =
b) 7...d3 8 d2+! (this key tactical point lies at the heart of the Second-Rank Defence) 8...xd2 stalemate.
c) 7...g3 8 e2 e3+ 9 f2 (9 d1??
\[\text{4...e1} 10 \text{e2} --.
\]
8 e2 d4 9 f3! f1+ 10 f2 a1 11
g4 a8 12 g2 1/2-1/2

Philidor's Winning Method

If the attacker reaches a very favourable set-up, a win can be forced, but it is by no means easy. Note that from a normal starting position, such a situation can't be forced, especially if the defender uses one of the two basic defensive methods described above and plays according to the rules we have just discussed.

Philidor discovered the basic winning method long ago:

1 f8+!

Black threatened to establish a second-rank defence with ...d7+. Therefore, White must first of all control the seventh rank.
1 e8 2 f7! e2

This is the best square for the rook. Alternatives:
a) 2...e1 3 f3 and White wins as in the main line.
b) 2...e3 3 d7+ e8 4 a7 f8 5 f7+ e8 6 f4 d8 7 e4 +--.

c) 2...c8 3 a7 d8+ 4 c6 b8 5 b7+ a8 6 b1 a7 7 c7 +--
3 h7

Now the black rook is forced by zugzwang to abandon its seventh rank.
3 e1 4 b7

The rook has to be on b7 or f7 to make the procedure work. The side-to-side oscillation of White's rook is typical for this ending. Not 4 f3? e8! 5 h5+ f18! =.
4...f1 5 b4 d1 6 h4 b8 7 a4 +--
5 b3

This is the point of the whole strategy. Black's rook had to be forced to its eighth rank, so that the bishop could prevent a rook check. Black is now in zugzwang:

5...c3
5...c8 6 b4 d8 7 h4 e1 (7...c8 8 d5 b8 9 a4 +--) 8 a4 c8 9 c6 d1+ 10 d5! b8 11 a4 +--
6 e6 d3+ 7 d5! c3 8 d7+ c8 9 h7
d8 10 b7+ c8 11 b4 d8 12 a4 c4
e6+ d8 14 b8+ c8 15 c8#

If the position is shifted one file to the left, it remains won, but the procedure is slightly different:

1 e8+!

Black threatened to establish a second-rank defence with ...d7+. Therefore, White must first of all control the seventh rank.
1...e8 2 f7! e2

This is the best square for the rook. Alternatives:
a) 2...e1 3 f3 and White wins as in the main line.
b) 2...e3 3 d7+ e8 4 a7 f8 5 f7+ e8 6 f4 d8 7 e4 +--.

c) 2...g8 (this defence was not possible before) and now:
For the practical player the following drawing method is also important:

![Diagram](image)

J. Szen, 1837

It looks similar to the Philidor position, but surprisingly White can’t make progress:

1. b8+ c8 2. h1 c2 3. d6
2. h8? is too passive: 3. c6 c8 4. d6!

3. f7 5. e4 f8 6. d3 b6 7. f5 c8 8. g8
d6 b8 9. e4+ b8 10. f1 c8 11. d1
d8 12. b7+ d8 13. a1 =—

5. c1
6. c5? 6. d6! c8 7. b7! c8 8. h7! =—

6. b4 c6+ 7. d6 c1 =

Szen’s position remains drawn if it is shifted to the right, but if it is shifted to the left, White wins whoever moves first:

![Diagram](image)

For example, with Black to move: 1... b4 2. a1 b6+ 3. c6! b4 4. h1 b8 5. h8+ a7 6. c5! b8 7. h7+ a6 8. h4 =—.
If the defender has one additional pawn it can often be won, but there are exceptions, e.g., L.van Wely-Z.Almasi, Polanica Zdroj Rubinstein mem 2000 saw White try unsuccessfully to win Black’s last pawn in the position W\texttt{b}f2, \texttt{a}a6, \texttt{c}c7, b\texttt{b}f5, \texttt{d}d5, \texttt{g}g5. In the next example even three pawns didn’t help in the end, though it should be mentioned that Black was very short of time:

\begin{figure}[h]
\centering
\includegraphics[width=0.5\textwidth]{chess_board.png}
\caption{8.14A}
\end{figure}

\textit{J.Hector – W.Unzicker}\n\textit{Bundesliga 1999/00}

1 \texttt{xd}d5 \texttt{xe}e3
1...\texttt{b}b1 \texttt{a}a1 3 \texttt{g}g1 \texttt{b}b2 4 \texttt{c}c4 \texttt{a}a3 5 \texttt{g}g2 and the b2-pawn falls.
2 \texttt{e}e4 \texttt{e}e6
2...\texttt{b}b5 3 \texttt{d}d4 \texttt{c}c4+ 4 \texttt{e}e3 \texttt{b}b3 5 \texttt{g}g2 \texttt{c}c3+ 6 \texttt{d}d3 \texttt{b}b6 7 \texttt{d}d4 \texttt{b}b4 8 \texttt{c}c4 \texttt{c}c2 9 \texttt{g}g6+ and the b3-pawn falls.
3 \texttt{g}g7+ \texttt{b}b6 4 \texttt{d}d4 \texttt{c}c7 5 \texttt{g}g5 \texttt{f}f7 6 \texttt{c}c4 \texttt{f}f4 7 \texttt{e}e5 \texttt{c}c7 8 \texttt{c}c5 \texttt{b}b6+ 9 \texttt{d}d5?!
9 \texttt{xb}b4 \texttt{d}d6 10 \texttt{e}e8 \texttt{d}d7 11 \texttt{e}e5 \texttt{d}d6 12 \texttt{d}d5+ \texttt{e}e6 13 \texttt{d}d4 \texttt{e}e5 =.
9...\texttt{b}b3 10 \texttt{c}c7+ \texttt{d}d8 11 \texttt{b}b7 \texttt{f}f6 12 \texttt{c}c5 \texttt{h}h6 13 \texttt{f}f5 \texttt{b}b2 14 \texttt{d}d7+ \texttt{e}e8 15 \texttt{d}d2 \texttt{c}c6 16 \texttt{xb}b2

A second pawn falls.
16...\texttt{e}e7 17 \texttt{c}c4 \texttt{e}e6+ 18 \texttt{d}d4 \texttt{h}h6 19 \texttt{g}g2 \texttt{d}d6 20 \texttt{g}g7 \texttt{b}b5 21 \texttt{b}b7 \texttt{h}h5 22 \texttt{b}b6+ \texttt{c}c7 23 \texttt{g}g6 \texttt{h}h4 24 \texttt{c}c4+ \texttt{d}d7 25 \texttt{a}a6 \texttt{c}c7 26 \texttt{xb}b5 and Hector has won all three pawns. He later even won the game although this position is of course drawn.

If the attacker has a pawn, he usually wins very comfortably. The only case of theoretical interest is the wrong rook’s pawn:

\begin{figure}[h]
\centering
\includegraphics[width=0.5\textwidth]{chess_board.png}
\caption{8.15}
\end{figure}

\textit{J.Capablanca – S.Tarrasch}\n\textit{St Petersburg 1914}

If it hasn’t advanced to the seventh rank, matters are fairly easy:
1 \texttt{d}d1+ \texttt{d}d5+ 2 \texttt{b}b2 \texttt{a}a3+ 3 \texttt{a}a1 \texttt{c}c5 4 \texttt{c}c1+ \texttt{c}c4 5 \texttt{g}g1 \texttt{h}h2 6 \texttt{g}g5+ \texttt{a}a4 7 \texttt{g}g1 \texttt{a}a2+ 8 \texttt{a}a1 \texttt{d}d2 9 \texttt{a}a1 (9 \texttt{a}a1 \texttt{f}f2 10 \texttt{b}b1 \texttt{d}d3+ 11 \texttt{a}a1 \texttt{b}b3 12 \texttt{b}b1 \texttt{a}a2#) and Capablanca resigned (0-1) due to 9...\texttt{d}d3 10 \texttt{g}g4+ \texttt{c}c3 11 \texttt{g}g3 (11 \texttt{c}c4+ \texttt{c}c4 12 \texttt{b}b1 \texttt{d}d1#) 11...\texttt{b}b3 12 \texttt{g}g1 \texttt{a}a2#.

With the pawn already on the seventh rank, it is much more complicated to win:

\begin{figure}[h]
\centering
\includegraphics[width=0.5\textwidth]{chess_board.png}
\caption{8.16}
\end{figure}

\textit{J.Speelman}\n\textit{Batsford Chess Endings, 1993}

1 \texttt{c}c5
Forcing Black’s rook to leave the a-file, which is of crucial importance.
1...\texttt{b}b8
1...<f7 2 <h8<+ <xh8 3 <c6 <g7 4 <c7+!
<<f8 5 <f6 --.
2 <a5! <e8 3 <f6 <f8+ 4 <g6 <f6+ 5 <g5
<e8 6 <c6 <e8
6...<xh7 7 <a7+ <h8 8 <f7 <g7 9 <g6+
<h8 10 <h7+ <g8 11 <e7! <d8 12 <f5 <f8
13 <f6! --.
7 <f6 <f8+ 8 <c7 <f1 9 <f5 <e1+ 10 <d7
<e1+ 11 <c7 <c1+ 12 <b7 <g7 13 <a8 --

White to play and win.

Rules and Principles:
Rook + Minor Piece vs Rook

1) The pawnless endings rook + bishop vs rook and rook + knight vs rook are both drawn, but with a bishop the defender has to play accurately. The best way is to follow one of the defensive techniques: the Cochrane Defence (8.08) or the Second-Rank Defence (8.09).

2) Rook + bishop + wrong rook’s pawn win against a lone rook.

Reference work
Secrets of Pawnless Endings, Nunn, Batsford 1994, pp. 171-232

Exercises
(Solutions on pages 388-9)

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It looks pretty grim for Black. Is there a defence?

The white king is very near the corner. Does the Second-Rank Defence hold anyway?

In this world championship game, White missed the win. Can you do better?
8.3 Rook and Minor Piece vs Rook and Minor Piece

More than 15% of all games (based on Mega Database 2001; see the statistics on pages 11-12) reach an ending of rook + minor piece vs rook + minor piece, so you might expect to get it about once or twice in every longer tournament! Naturally there are four different piece configurations to investigate (with relative percentage frequencies in brackets):

1) \( \text{R} + \text{N} \) vs \( \text{R} + \text{N} \) (20.4%).
2) \( \text{R} + \text{B} \) vs \( \text{R} + \text{B} \) with same-coloured bishops (22.2%).
3) \( \text{R} + \text{B} \) vs \( \text{R} + \text{N} \) with opposite-coloured bishops (12.7%).
4) \( \text{R} + \text{N} \) vs \( \text{R} + \text{B} \) (44.7%).

Basically, we have a minor-piece ending with the additional firepower of the rook. Fortunately, the principles from the minor-piece chapters can in general also be applied to the above piece arrangements. However, there are some very important new facets.

Of course it is still highly important to activate your king, but two pieces can in connection with certain pawn-structures (or their king) create mating threats or at least cause a lot of trouble. The combination of rook and bishop is especially dangerous in this respect (see for example 8.21, 8.22 or 8.8.08).

The drawbacks of the minor pieces are somewhat compensated by the rook, which attacks squares denied to the bishop, or saves time for the slower knight. Especially for the knight, a safe anchor square is important, since otherwise it is constantly exposed to possible attacks from the rook. This also applies to the bishop if it has duties on both flanks. Finally, be prepared for simplifications and don’t forget about a possible exchange sacrifice.

We consider the topics as follows:

A) Rook and Knight vs Rook and Knight

With knights, matters are usually very tactical since rook and knight working together represent a considerable attacking force. In the following example, the king joins in as well:

\[
\text{B} \\
\text{8.17 J.Emms – K.Müller} \\
\text{Bundesliga 2000/1} \\
\]

The position is almost symmetrical, but Black is nevertheless on the brink of disaster as White’s rook is much more active. Therefore, I decided to activate my rook at the cost of two pawns to obtain counterplay:

1...\( \text{d6} \)

After 1...\( \text{c8} \) I didn’t like 2 \( \text{g4} \).

2 \( \text{d3} \) \( \text{b6} \) 3 \( \text{xg5} \) \( \text{b3} \) 4 \( \text{xe5} \) \( \text{f2} \) 5 \( \text{x}\text{c1} \) \( \text{e3} \) 6 \( \text{xa5} \)

I was worried about 6 \( \text{xg6} \) 7 \( \text{xc5} \) \( \text{d6} \) \( \text{xe3} \), when it is not completely clear if Black can save the draw.

6...\( \text{f5} \) 7 \( \text{a7+} \)

This allows Black’s king to play a very active role. 7 \( \text{d5} \) was John Emms’ proposal. It seems to be very strong; e.g., 7...\( \text{e2} \) \( \text{f4} \) \( \text{xg3} \) 9 \( \text{a7} \) \( \text{f6} \) 10 \( \text{d6} \) \( \text{xf3} \) 11 \( \text{d7} \) \( \text{e7} \) 12 \( \text{c8} \) \( \text{xd3} \) 13 \( \text{a5} \).

7...\( \text{f6} \) 8 \( \text{xf7} \)

Now, of course, 8 \( \text{xf7} \) \( \text{d4} \) 9 \( \text{f4} \) \( \text{f3} \) 10 \( \text{xg2} \) 11 \( \text{g7} \) \( \text{f6} \) 12 \( \text{xe6} \) \( \text{xf6} \) 13 \( \text{xe5} \) = 14 \( \text{xf3} \) \( \text{xf7} \).

8...\( \text{xg3} \)

Dorfman’s suggestion 8...\( \text{xg4} \) is also interesting; e.g., 9 \( \text{g5} \) \( \text{d5} \) 10 \( \text{a5} \) \( \text{c4} \) 11 \( \text{a6} \) \( \text{d2} \) 12 \( \text{c7} \) \( \text{d3} \) 13 \( \text{a7} \) \( \text{c2} \) and White’s king
can't escape from the checks since after 14 \( \text{xf1} \text{xe3+} 15 \text{exf1} \text{e1} 16 \text{wh2} \text{e2}, 17 \text{wh3}? leads to disaster: 17...\text{xf1} 18 \text{e7+} \text{e4} 19 \text{e7+} \text{eb5} 20 \text{e7+} \text{e5} 21 \text{exe4+} \text{e4} 22 \text{e7+} \text{d3} 23 \text{d7+} \text{e3} ++.

9 \text{d5xe5+} 10 \text{e7d7+} \text{e4}

Now Black's king is coming to assist in the attack.

11 \text{d5e2+}

As Ftačník pointed out, the immediate \( 11...\text{d3}! \) was called for: 12 \text{c7?} (12 \text{e7?} \text{d5} 13 \text{e4} \text{e3} +++) 12...\text{xf5!} 13 \text{e4} (13 \text{c1?} \text{e3} +++) 13...\text{xb4} 14 \text{c3+} \text{d4} 15 \text{d6} \text{xf3+} 16 \text{exf3} \text{xe4} 17 \text{g3} \text{b4} =.

12 \text{d1d3} (D)

\[\text{8.17A} \quad +/\]

This is certainly not an easy position to play. Emms had to win - Hamburg was leading \( 3 \frac{1}{2} - 2 \frac{1}{2} \) and he was already running short of time.

13 \text{c1}

13 \text{c7?} is also interesting:

a) 13...\text{a2} 14 \text{d6} \text{a1} + 15 \text{c1} \text{a2} 16 \text{e4}! \text{xe4} 17 \text{fxe4} \text{xa4} 18 \text{d7} \text{d4} 19 \text{e1} + + .

b) 13...\text{h2} 14 \text{c1} \text{xb4} 15 \text{gb2} (15 \text{e6}?) 15...\text{xa4} 16 \text{d6} \text{b4} + 17 \text{c3} \text{bb8} 18 \text{c7} \text{h4} 19 \text{d7} \text{h3} 20 \text{c8} \text{xc8} 21 \text{dxc8} \text{h2} 22 \text{e5}+ \text{d4} 23 \text{b4} \text{xe5} 24 \text{wh8}+ ++ .

c) 13...\text{d2}! 14 \text{c1} \text{e2} + 15 \text{b1} and now:

c1) 15...\text{c3?} 16 \text{xc3}+ \text{xc3} 17 \text{e4}+ + is the main point behind 13 \text{c7}.

c2) 15...\text{c3} and Black is still fighting.

13...\text{a2} 14 \text{b1} \text{xa4} 15 \text{d6} \text{e2}

15...\text{d4+} doesn't really help Black: 16 \text{a2} \text{f5} 17 \text{d8!} \text{xb4} 18 \text{d7} \text{a4} + 19 \text{b2} \text{a7} 20 \text{e6} ++ .

16 \text{e4}?

16 \text{b7!} wins; c.g., 16...\text{c3}+ (16...\text{d4} 17 \text{d7} \text{c3}+ 18 \text{c1} \text{c2}+ 19 \text{b2} \text{f4} 20 \text{c7} \text{e6} 21 \text{xb8} \text{d2} 22 \text{c5} \text{d5} 23 \text{f4} \text{c4} 24 \text{e8} + + ) 17 \text{xb2} \text{a2}+ 18 \text{c3} \text{a1} 19 \text{d7} \text{b1}+ 20 \text{a3} \text{xb7} 21 \text{d8w}+ \text{c2} 22 \text{wh8}+ .

16...\text{c3}+ 17 \text{cxc3} \text{cxc3}

I had read John Emms's excellent book The Survival Guide to Rook Endings and therefore managed to survive:

18 \text{c7}+

18 \text{d8} \text{d4} 19 \text{d7} \text{d4} 20 \text{h2} \text{h4} 21 \text{h3} \text{d4} = .

18...\text{b3} 19 \text{b7}+

19 \text{e7} \text{c8} 20 \text{d4} 20 \text{d4}+ 20 \text{d7} \text{d4} = .

19...\text{c3} 20 \text{c7}+ \text{b3} 21 \text{d7} \text{d4} 22 \text{c1} \text{d6} 23 \text{f4} \text{d5} 24 \text{h7}+ \text{c3} 25 \text{c7}+ \text{b3} 26 \text{c6} \text{xd7} 27 \text{g6} \text{f7} 28 \text{g5} \text{xf4} 29 \text{hxh5} \text{c3} 30 \text{c5}+

30...\text{d4} 31 \text{d5+} \text{d4} 32 \text{dxd4+} \text{xd4} = .

30...\text{b4} 31 \text{c8} \text{xb4} 32 \text{d2} \frac{1}{2} - \frac{1}{2}

The next position was analysed by Mikhailovsky and Hecht in CBM 67:

\[\text{8.18} \quad \text{R.Åkesson - E. Gausel} \quad \text{Munkebo Z 1998}\]

Compare the piece positions: White's knight blocks Black's queenside majority and ties the rook down to the defence of b7. The rook is also well placed on the only open file, so that Black's knight has to protect the entry square e8. Nevertheless, Black has a regrouping plan involving the moves...\text{c7},...\text{g8-f7} and...\text{d7}. White counters this by bringing his king and pawn-majority into play:
1 \(\text{Ke}6 \text{g}8\) 2 \(\text{g}2\) h5?

This move was played to slow down White’s majority, but it weakens g5 and the h-pawn might become weak itself. It is better to play 2...\(\text{c}7\) at once.

3 \(\text{f}3\) \(\text{c}7\) 4 \(\text{h}3\) \(\text{f}7\) 5 \(\text{f}5\) \(\text{d}7\) 6 \(\text{f}4!\)

White doesn’t fear the exchange of knights as Black’s queen-side would still be fixed and Black’s wrecked kingside would be an easy target.

6...\(\text{g}6\)

It is hard to find a better move. For instance:
6...\(\text{d}4\) 7 \(\text{cxd}4\) \(\text{f}6\) 8 \(\text{e}5\) +-- or 6...\(\text{c}x\text{c}5\) 7 \(\text{bxc}5\) \(\text{d}7\) 8 \(\text{d}6\) \(\text{c}7\) 9 \(\text{g}5\) \(\text{e}3\) 10 \(\text{d}7\) +--.

7 \(\text{g}4\) \(\text{hxg}4\) 8 \(\text{hxg}4\) \(\text{d}4\)

A desperate attempt to create counterplay.

9 \(\text{c}4!\) +--

White certainly shouldn’t give Black’s knight access to d5!

9...\(\text{b}6\) 10 \(\text{d}3\)

10 \(\text{c}x\text{a}6\) leads to unnecessary complications:

10...\(\text{a}7\) 11 \(\text{x}c6\) 12+ 12 \(\text{f}3\) \(\text{e}3\) 13 \(\text{g}2\)

10...\(\text{d}7\)

Protecting e5.

11 \(\text{d}6\)

11 \(\text{c}5??\) (V.Mikhalchishki).

11...\(\text{a}7\)

11...\(\text{c}5\) 12 \(\text{bxc}5\) \(\text{bxc}5\) (12...\(\text{c}x\text{c}5\) 13 \(\text{e}5++\)) \(\text{e}7\) 14 \(\text{a}6\) \(\text{c}6\) --.

12 \(\text{d}4\) \(\text{e}5\) 13 \(\text{bxc}5\) \(\text{d}5\) 14 \(\text{e}3\) \(\text{h}3\)

2 15 \(\text{g}3\) \(\text{b}5\) 17 \(\text{h}5\) \(\text{a}5\) 18 \(\text{g}4\)

The penetration of White’s king finally decides the outcome.

18...\(\text{b}7\) 19 \(\text{b}6\) \(\text{f}8\) 20 \(\text{g}5\) \(\text{b}4\) 21 \(\text{f}6\) \(\text{g}6\)

22 \(\text{gxf}6\) \(\text{g}1\)

Our analysis in the following example is based on Illescas’s work in CBM 63 (see next diagram).

Black is clearly better for several reasons. His pieces are more active, his king is safer than its white counterpart (and can possibly be further advanced) and White has to guard his weak pawn.

1 \(\text{bxa}5\)

1 \(\text{b}3?\) \(\text{cxb}5\) 2 \(\text{c}3\) \(\text{e}5\) 3 \(\text{c}x\text{b}5\) \(\text{d}2+\) 4 \(\text{d}2\) \(\text{x}d2\) \(\text{f}+)\) (Hecht in CBM 63).

1...\(\text{a}5\) 2 \(\text{c}3\) \(\text{e}4\) 3 \(\text{e}3\) \(\text{e}5\) 4 \(\text{h}4\) \(\text{g}4\) \(\text{h}5??\)

Activating the king immediately with 5...\(\text{c}5\) is more to the point.

6 \(\text{d}3\) \(\text{d}4\) 7 \(\text{e}2\) \(\text{e}4\)

8 19

U. Andersson – M. Illescas
Pamplona 1997/8

Illescas repeats moves to reach the time-control.

8 \(\text{d}3\) \(\text{d}4\) 9 \(\text{e}2\) \(\text{b}4\) 10 \(\text{d}2+\)

10 \(\text{d}3\) \(\text{b}3\) 11 \(\text{e}2\) \(\text{c}4\) \(\text{f}\)

10...\(\text{c}5\) 11 \(\text{d}7\) \(\text{b}2+\) 12 \(\text{d}1!\)

Or:

a) 12 \(\text{d}3?\) \(\text{c}4\) --.

b) 12 \(\text{d}2?\) \(\text{x}d2+\) 13 \(\text{x}d2\) \(\text{b}4\) and now

White’s counterattack against the weak h-pawn is too slow: 14 \(\text{c}e2\) \(\text{c}5\) 15 \(\text{g}3\) \(\text{c}4\) 16 \(\text{h}x\text{h}5\) \(\text{c}+\)

17 \(\text{c}2\) \(\text{c}6\)

18 \(\text{d}4\) \(\text{d}4\) 19 \(\text{d}1\) \(\text{b}3\) --.

12...\(\text{h}2\) 13 \(\text{x}f7\) \(\text{hxh}4\) 14 \(\text{e}2\) \(\text{h}1+\) 15

\(\text{c}2\) \(\text{c}4\) 16 \(\text{h}7??\)

16 \(\text{f}4!\) \(\text{e}1\) 17 \(\text{c}3\) \(\text{d}6\) 18 \(\text{h}7\) \(\text{exf}4\) 19

\(\text{x}h5+\) \(\text{d}4\) 20 \(\text{h}6\) \(\text{c}4\) 21 \(\text{c}e4\) \(\text{f}6\) 22 \(\text{c}e4\)

\(\text{c}e4\) 23 \(\text{h}2\) --.

16...\(\text{h}2\) 17 \(\text{d}1\)

17 \(\text{d}3??\) \(\text{f}2??\) 18 \(\text{x}h5\) \(\text{xf}3+\) 19 \(\text{c}2\)

20 \(\text{c}3\) \(\text{d}4\) \(\text{f}\) (Hecht).

17...\(\text{h}1+\) 18 \(\text{c}2\) \(\text{h}2\) 19 \(\text{d}1\) \(\text{b}2+\) 20

\(\text{c}1\) \(\text{d}3+\)!

This check is very annoying for White. After 20...\(\text{a}4\) Black’s knight is far away from the action on the kingside: 21 \(\text{g}3\) \(\text{h}4\) 22 \(\text{c}5\) \(\text{h}3\) 23 \(\text{f}1\) and White should be able to hold on.

21 \(\text{d}1\)

Not: 21 \(\text{f}1?\) \(\text{e}2+\) --; 21 \(\text{d}2?\) \(\text{e}4--\).

21...\(\text{b}2+\) 22 \(\text{e}1\) \(\text{d}3+\) 23 \(\text{d}1\) \(\text{h}4!\)

After the repetition of moves, Illescas plays his trump card.

24 \(\text{a}5\) \(\text{b}5\) 25 \(\text{d}7\)

25 \(\text{h}6??\) \(\text{h}6\) 26 \(\text{a}6\) \(\text{b}6\) 27 \(\text{c}3\) \(\text{c}6\) 28

\(\text{x}c6+\) \(\text{a}5\) 29 \(\text{h}6\) \(\text{g}2--\).

25...\(\text{f}2+\)

25...\(\text{b}2+??\) also comes into consideration.
26 \( \text{e1} \) \( \text{xa5} \) 27 \( \text{f1} \) h3 28 \( \text{d2?} \)

28 \( \text{g1?} \) is also wrong: 28...c5 29 \( \text{xd2} \) h1 30 \( \text{xf2} \) h2+ 31 \( \text{e3} \) \( \text{xd2} \) 32 \( \text{exh3} \) (32 \( \text{xd2} \) h2 –+) 32...d7 –+

Illescas gives the resource 28 \( \text{g3!} \), which leads to a fortress-like position with rook and knight vs queen:

a) 28...c5 29 \( \text{f5} \) c4 30 \( \text{e3} \) c3 31 \( \text{g1} \) c2 32 dxc7 (not 32 dxc2? \( \text{g2} + 33 \text{f1} \) \( \text{h1} + \)) 32...d2+ 33 \( \text{xf2} \) c1\( \text{W} \) 34 \( \text{xc1} \) \( \text{xc1} \) 35 \( \text{g3} \) =.

b) 28...\( \text{g2} \) 29 \( \text{f5} \) h2 30 \( \text{g2} \) h1\( \text{W} \) + 31 \( \text{xf2} \) ±.

28...\( \text{g2} \)

The surprising 28...\( \text{d1} \) also wins: 29 \( \text{xd1} \) \( \text{h1} + \) 30 \( \text{g1} \) h2 31 \( \text{g2} \) \( \text{g1} + \) 32 \( \text{g1} \) h1\( \text{W} \) + 33 \( \text{xf2} \) \( \text{g1} - .

29 \( \text{e3} \)

29 \( \text{g1?} \) h2 30 \( \text{g2} \) h1\( \text{W} \) + 31 \( \text{xf2} \) \( \text{h2} + .

29...\( \text{g4} \!\!\!\)!

Not: 29...\( \text{b4} \? \) 30 \( \text{a2} + \) \( \text{a3} \) 31 \( \text{xf2} \) \( \text{xf2} + \) 32 \( \text{xf2} \) \( \text{xa2} \) 33 f4 =; 29...h2? 30 \( \text{g2} \) h1\( \text{W} \) + 31 \( \text{xf2} \) \( \text{b4} \) (31...\( \text{c1} \) 32 \( \text{d3} \) \( \text{c2} + \) 33 \( \text{e3} \) \( \text{b4} \) 34 \( \text{e2} \) \( \text{e5} + \) 35 \( \text{d2} \) \( \text{f1} + \) 36 \( \text{e3} \) c5 37 \( \text{d1} \) c4 38 \( \text{d2} = ) 32 \( \text{d1} \) c5 33 \( \text{e3} = .

30 \( \text{g2} \)

30 \( \text{d3} \) \( \text{h2} + \) 31 \( \text{e1} \) \( \text{xf3} + \) 32 \( \text{xf3} \) h2 – +.

30...\( \text{e3} + \) 31 \( \text{g1} \) \( \text{g2} \!\!\!\)!

The knight has to take, since Black’s passed pawn is now much more dangerous. 31...\( \text{h2} \) spoils the win: 32 \( \text{e2} \) c5 33 f4 \( \text{exf4} \) 34 \( \text{xf4} \) c4 35 \( \text{e2} \) \( \text{b4} \) 36 \( \text{e2} \) =.

32 \( \text{d1} \) \( \text{b4} \) 33 \( \text{f2} \) \( \text{f4} \) 34 \( \text{g4} \) \( \text{d3} \!\!\!\)!

34...c5?!! 35 \( \text{e5} \) 36 \( \text{e4} \) 37 \( \text{e3} \) \( \text{b3} \) 38 e5! (38 \( \text{h2} \) \( \text{g2} \!\!\!\) 39 \( \text{f5} \) \( \text{e4} \) 40 \( \text{e3} \) \( \text{c4} \) 41 \( \text{xb2} \) \( \text{g2} \!\!\!\) ) and now:

a) After 38...\( \text{g2} \) White has the surprising 39 \( \text{c2} \!\!\!\) (Illescas) with good chances to get a draw; e.g., 39...\( \text{xc2} \) 40 e6 \( \text{d3} \) 41 e7 e2 42 \( \text{e2} \) \( \text{c1} = + 43 \( \text{h2} \).

b) 38...\( \text{d5} \) 39 e6 \( \text{xc3} \) 40 e7 c2 41 e8\( \text{w} \) \( \text{c1} = + 42 \( \text{h2} \) \( \text{h2} = + .

35 \( \text{h2} \) c5 36 \( \text{e3} \) c4 37 \( \text{e3} \) c3 38 \( \text{g4} \)

38 \( \text{e3} \) \( \text{f1} \) c2 – +.

38...\( \text{b3} \) 39 \( \text{f5} \) \( \text{b2} \)

39...\( \text{c2} \? 40 \( \text{xc2} \) \( \text{xc2} \) 41 f4! \( \text{exf4} \) 42 \( \text{g4} \) \( \text{c3} \) 43 e5 =.

0-1

Andersson resigned due to 40 \( \text{e5} \) \( \text{c4} + 41 \( \text{d4} \) \( \text{xe3} \) 42 \( \text{e3} \) c2 43 \( \text{d2} \) \( \text{b2} = + .

For another example see 11,10, V.Kramnik-
C.Lutz.

B) Same-Coloured Bishops with One Pair of Rooks

Rook and bishop usually form a powerful duo if they get attacking chances in an open or semi-open position, which tends to favour the attacking or more active side. The king usually tries to join their attack on squares opposite to the bishop’s colour. The following classic also shows that the defender’s rook is a strong counterattacking unit:

\[
\text{W} \\
\text{R.Fischer – J.Bolbochan} \\
\text{Mar del Plata 1959}
\]

White is slightly better as his king is more active and his bishop has a fine base on f3, protecting the weak square e2 and controlling the long diagonal. Nevertheless, with careful defence, the position is still drawn:

1 a4 \( \text{c4} \) 2 \( \text{c1} \) \( \text{b8} \) 3 c3 \( \text{dxc3} + \)

After 3...\( \text{d3} \? 4 \( \text{e1} \) \( \text{e1} \) 5 \( \text{xe1} \) Black’s d-pawn is very weak.

4 \( \text{xe3} \) \( \text{f7} \) 5 a5 \( \text{e7} \) 6 \( \text{e3} \) \( \text{d7} + \) 7 \( \text{d3} \)

8 \( \text{d8} + \) \( \text{e7} \) 9 \( \text{h8} \) h6 10 \( \text{e3} \) a6 11 \( \text{d4} \)

12 \( \text{f8} \) \( \text{h7} \) 13 \( \text{h4} \) \( \text{e8} \) 14 \( \text{d5} \) \( \text{d7} \) 15 \( \text{f4} \) (D)

15...\( \text{g6} \? \)

This fatally weakens the dark-square complex on Black’s kingside. The counterattacking 15...\( \text{e1} \) was necessary. In Endgame Secrets Lutz showed that Black obtains very good chances to hold on as the pawn endgame arising after 16 \( \text{f7} \) \( \text{d1} + 17 \text{c5} \) \( \text{c1} + 18 \text{c4} \) \( \text{d8} \)
C) Opposite-Coloured Bishops with One Pair of Rooks

The new motifs, such as sacrificing the exchange or playing for mate, which are also possible with same-coloured bishops, are even more important here and reduce the drawing tendency inherent in opposite-coloured bishop endings. The following position (with Black to move) would be dead drawn without rooks.

1. c3 f8+ 2. e2 d4 3. c7 f7 4. c6 d7 5. c4

Not 5. d3? exb5 6. c4 (6. c4 c5 =)
6...exb3 7. e5 c3 =.
5...e5 6. d3 b6 7. d6? d2

After 7...g5 8. exd4 exd4 9. cxd4 the white pawns can’t be stopped; e.g., 9...f4 (9...f6 10. e5+ e7 11. e5 c7+ 12. d5 c7+ 13. c6 c2 14. b6 c5 c2 15. c5 b2 16. d5 —+) 10. e5 c8 11. e6 f5 12. b6 c5 13. c5 e7 14. a6 c2 15. c6 +-

8. d5 c7 9. c8 b7 10. e2 a7 11. d5 e7 12. d6 b7 13. c6 d4 14. d6 a7 15. g3!

First White plays against Black’s king to restrict his counterplay.

D). 8.21

K. Müller – T. Heinemann
German Ch (Allenkirchen) 1999

15...g5 16. f3 h6 17. h4 h5 18. g2 c5

More resilient than 18...g4?? 19. e2# or 18...g5? 19. c2+ g4 20. c4 h4 21. f6 ++.
19. c6 d4 20. h3 h6 21. g4 g7 22. g5 c3 23. d5 b8

Or:

a) 23...h5 24. xg6+ xg6 25. xh7 c5 26. c8 b6 27. f5+ xh7 28. g3 ++.

b) 23...xb5 24. c7+ f8 (24...h8? 25. c8+ g7 26. g8+ 25. f7+ xxe8 26. c3 xxd5 27. cxd5 c5 28. h6 ++.

24. c7+ h8 25. c6 f8 26. c7 d4 27. d5 f3+ 28. g2 f2+ 29. g3 h6

29...f8 30. e6 b8 31. g4 c7 32. e7+ h8 33. h5 g8 34. e6 b8 35. h6 xh6 36. xg6 xh6 37. g8+ h7 38. g6+ h8 39. f5 ++.

30. gxh6

Missing the beautiful 30. h5.

30...f4 31. e6 h7 32. b6 f8 33. b7 a7 34. h5 gxh5 35. h4 d4 36. xh5 g8 37. c7 h8 38. c5 1-0

The next example shows a typical mating attack (see following diagram):

1. hxg4+ 2. g4 f5+!

Pelletier seizes his chance to play against White’s king.

3. exf5 exf5 4. h3 g5! 5. g4 f4

The simple plan of ...e5 followed by ...f3 completely ties White down.

6. h1 b5 7. c1 g7

7...f3 runs into 8. c2! = (Pelletier in CBM 71).
8 \(\text{rf1?}!\)

8 \(\text{xb7} \text{xa2} 9 \text{c6} \text{f6} 10 \text{f1} \text{c7} 11 \text{d1} \text{d8} 12 \text{c1} f3 13 \text{h1} \text{f2}! 14 a5\) (otherwise Black's king marches to a5, setting up a zugzwang) 14...\(\text{c7} 15 \text{d5} \text{b8} 16 a6 \text{a7} 17 \text{b7} \text{f4} +\) (Pelletier).

8...\(\text{e2} 9 \text{f3} \text{xa4} 10 \text{f1} \text{xa2} 11 \text{g2} \text{d2} 12 \text{f1} \text{f6} 13 \text{f3} \text{c7} 14 \text{d1} \text{e2} 15 \text{d3} \text{d5} 16 \text{g2} \text{d4} 17 \text{f3} \text{d2} 18 \text{f1} \text{d6} 19 \text{d3} \text{d5} 20 \text{g6}

20...\(\text{c4}+ \text{e4} 21 \text{a3} f3 +\).

20...\(\text{d6} 21 \text{f5} \text{h4} 22 \text{b3} \text{c4} 23 \text{e6}+ \text{c5} 24 \text{f5} \text{f2} 25 \text{g6} \text{c3} 26 \text{b8}??\)

\(\text{d} 27 \text{c8}+ \text{f4} 28 \text{b8}+ \text{a3} 29 \text{xd3}??\)

\(\text{f3}+ 30 \text{g2} \text{xd3} 31 \text{b5} f3+ 32 \text{f2} \text{d4}+ 33 \text{g3} f2+ 34 \text{g2} \text{d1} 35 \text{f5} \text{g1} +0-1\)

**D) Rook and Bishop vs Rook and Knight**

In open positions, rook and bishop are usually stronger than rook and knight (see following diagram).

Fischer played...

1 \(\text{c4}!??\)

...giving Petrosian the choice between a double-rook ending and an ending with rook and bishop vs rook and knight:

1...\(\text{c6}??\)

The double-rook ending after 1...\(\text{exe}4!\) 2 \(\text{ex}4\) should be roughly equal.

2 \(\text{xa8}!\)

The pure ending bishop vs knight that arises after 2 \(\text{xd6? exe}6 3 \text{exe}6+ \text{f}6 4 \text{xa8} \text{c}5\)

5 \(\text{b3} \text{d7} 6 \text{c2} \text{d4}\) is only drawn thanks to Black's active pieces.

2...\(\text{xd1}+ 3 \text{c2} \text{f1} 4 \text{xa5} \text{xf2}+ 5 \text{b3} \text{h2} 6 \text{c5} \text{d8} 6\)

...\(\text{h3} 7 \text{a7}+ \text{c8} 8 \text{xb4} \text{xg3} 9 \text{a4 ++.}\)

7 \(\text{b5}!\)

7...\(\text{d7}! 8 \text{c6} \text{b6 } \pm.\)

7...\(\text{xe}3 8 \text{b8}+ \text{c7} 9 \text{b7}+ \text{c6} 9\)

...\(\text{c8} 10 \text{xf7} \text{xg3} 11 \text{xb4} +++.\)

10 \(\text{c4}! 1-0\)

A knight does not usually feel at home in an open position with action on both wings:

**8.24**

Iibragimov – S. Ionov

*Russian Ch (St Petersburg) 1998*

Black's passed pawn looks dangerous, but the knight finds no base and so White draws:

1 \(\text{c5}!\)
Combining attack (on g7) and defence (b2)!

1...\(\square d 5\)

1...\(\square h 2 2 \square c 3 \square d 1 (2...\square c 4 + 3 \square d 3 \square d 6 4 \square e 5 \square f 7 5 \square c 3 \square g 1 6 \square b 7 \square g 6 7 \square b 6 + =) 3 \square d 4 \square b 2 4 \square b 7 =

2 \(\square b 5 \square e 4 + 3 \square d 3 \square f 6\)

The tricky 3...\(\square e 1 \)!! also comes into consideration; e.g., 4 h4 (4 \(\square x b 3 \)?? \(\square c 6 + 5 \square d 2 \square x e 5 --) 4...\(\square f 2 + 5 \square d 2 \square g 1 6 \square b 7 \square x g 2 7 \square e 3 \)!

4 \(\square c 4 \square g 1 5 g 4 \square d 1 6 \square x b 3 ?

6 \(\square x f 6 \square x f 6 7 \square x b 3 \square e 6 8 \square f 3 =\) was called for.

6...\(\square h 1\?

The rook ending after 6...\(\square d 3 + 7 \square c 4 \square x h 3 8 \square x f 6 \square x f 6\) is also drawn, but much more uncomfortable for White.

7 \(\square x f 6 \square x f 6 8 \square h 5 \frac{1}{2} - \frac{1}{2}\)

If the knight has a strong outpost and there are weak colour complexes, the knight can be very strong:

\[\text{Diagram 8.25A}\]

\[+/−\]

A. Karpov – V. Kramnik
Vienna 1996

The diagram shows the position after Karpov’s 24th move. Kramnik’s problems were aggravated by the fact that he was already short of time, following a misunderstanding over the time the game was due to start. Nevertheless, he forced Karpov to give of his best:

1...\(\square d 8 2 g 3 \square d 7 3 \square c 2 \square g 7 4 \square h 4 \square d 5 5 \square e 7 \square c 5 6 \square d 7 b 5 ?\)

6...\(\square b 8 !\) is better; e.g., 7 b4 \(\square c 1 + 8 \square g 2 \square e 8 \)!

7 b4 \(\square c 2 8 \square f 5 + 9 \square g 6 9 \) \(\square c 3 \square c 1 + 10 \) \(\square g 2 \) \(\square e 5\)

10...\(f 5 11 \square d 5 \square b 8 12 \square b 7 \square c 6 13 \square a 7 \) !

\[\text{Diagram 8.25B}\]

\[+/−\]

28...\(\square a 2\)

28...\(b 3 29 \square d 6 + \square d 8 (29...\square f 8 30 \square h 7 \square d 4 31 \square f 7 #) 30 \square f 5 --\).
29 h4 a5 30 h5 a4 31 h6 h2 32 h7 (D)

8.25C +/-

32...d8
Or: 32...a3 33 h4 f5 34 g7 +-; 32...b3 33 h4 f5 34 g7 xg7 35 exg7 d7 36 h8 W b2 37 wB8 a3 38 f3 ++.

33 h4 f5 34 xB4
34 g7?! also wins.
34...h3 35 xa4 xg3+ 36 xf5 1-0
Kramnik had seen enough.

You will find some additional positions relevant to this chapter in Chapter 11.

**Reference works**

*Secrets of Pawnless Endings*, Nunn, Batsford 1994

*Endgame Secrets*, Lutz, Batsford 1999

*Secrets of Chess Training*, Dvoretsky, Batsford 1991

*Technique for the Tournament Player*, Dvoretsky and Yusupov, Batsford 1995

*Gewinne das Endspiel!*, Mednis, Olms 1996

*Winning Endgame Technique*, Beliavsky and Mikhalschin, Batsford 1995

**Comments:**

For further information on 8.1 and 8.2 you can take a look at Nunn’s famous book *Secrets of Pawnless Endings*.

To our knowledge there are only a few books that deal extensively with the important subject of rook and minor piece vs rook and minor piece. Lutz’s excellent but difficult book *Endgame Secrets* is one of the few that does; you will also find some good examples in Dvoretsky’s works and in *Gewinne das Endspiel!*. In

**Exercises**

(Solutions on pages 389-90)

The extra pawn should be enough for White to win anyway, but you can save a lot of energy if you find the immediate winning blow!

Can you find the best way for White to draw?
In the game Black found an elegant way to convert his extra pawn into victory. Can you do the same?

Which of the following statements is true?
A) Black is clearly on top and the only real question is whether he is winning.
B) Black has only one move to draw.
C) The position is a dead draw.

Should Black be content with a draw?

Can you find the easiest way for Black to win?

There are two lines which promise a draw for Black in the long run. Find one of them.

Can you find a straightforward finish?
Queen Endings

Queen endings are different from the endings we have discussed so far since the presence of such a powerful piece as the queen adds new dimensions to the play, with king safety in particular being a higher priority. This makes matters more complicated at first sight, but on closer inspection it is not such a difficult topic since the number of basic techniques to apply (see ‘Rules and Principles’ at the end of this chapter on page 328) is quite small.

Our discussion is divided into the following sections:

9.1: Queen vs Pawn(s) 313
9.2: Queen vs Queen 315

9.1 Queen vs Pawn(s)

The queen normally wins against one or even several pawns. Only if the pawns are very far advanced do they have a chance.

We start with a single pawn. If it has advanced to the seventh rank and is threatening to promote, everything depends on whether the attacking king can assist the queen. With a central pawn, this is almost always possible, no matter how far away the king is.

At first the queen has to approach.
1...c2 2 a4+ d2
2...d3 is met by 3 b4 followed by e1. If the queen manages to get in front of the pawn, the win is trivial.
3 d4+ c2 4 e3! d1 5 d3+

The decisive moment. White forces the black king in front of the pawn, so that he can bring his own king closer.
5...e1 6 b7 f2 7 d4+ f1 8 f4+ g2 9 e3! f1 10 f3+

The pattern repeats itself.
10...e1 11 c6 d2 12 f4+ d1 13 d4+ c2 14 e3! d1 15 d3+! e1 16 d5 f2 17 d4+ f1 18 f4+ g2 19 e3!

f1 20 f3+! e1 21 e4 d2 22 d3+ e1 23 f3 +–

The distance of the white king from the pawn was irrelevant. However, the position would have been drawn with the king on d5, d6 or d7, because the white queen would be obstructed. The same winning procedure works against a knight’s pawn.

With a rook’s or bishop’s pawn, there are difficulties because of possible stalemate defences.

White always wins if his king is inside the zone and it is his turn to move.
1  \textcolor{red}{\textbf{\textit{W}}b4}+ \\
1  \textcolor{red}{\textbf{\textit{W}}}f2+  \textit{\textit{c}}b1 (1...  \textit{\textit{c}}b3 2  \textit{\textit{W}}d4 \textit{\textbf{\textit{+-}}}) 2  \textit{\textit{W}}b4 \textit{\textbf{\textit{wins}}} \textit{\textbf{\textit{more}}} \textit{\textbf{\textbf{quickly.}}} \\
1...  \textit{\textit{c}}e2 2  \textit{\textit{W}}a3  \textit{\textit{c}}b1 3  \textit{\textit{W}}b3+  \textit{\textbf{\textit{a}}}1 \\
White has managed to force Black's king in front of the pawn, but cannot move his king in as usual due to stalemate. However, White can mate the black king instead: \\
4  \textit{\textit{W}}d1+  \textit{\textit{h}}b2 5  \textit{\textit{h}}b4  \textit{\textbf{\textit{a}}}1 6  \textit{\textbf{\textit{W}}}d2+!  \textit{\textit{h}}b1 7  \textit{\textit{h}}b3! \textit{\textbf{\textbf{+-}}}

If you study the zone carefully, you will see that if White's king is inside, it can either reach b3 in two moves, or d3 or d2 in one move, to give mate by  \textit{\textbf{\textit{c}}}2#!.

The bishop's pawn also makes a stalemate defence possible:

\begin{center}
\begin{tikzpicture}
    \draw[thick,black] (0,0) grid (4,4);
    \fill [black] (0,0) circle (0.1cm);
    \fill [white] (1,1) circle (0.1cm);
    \fill [black] (3,3) circle (0.1cm);
    \fill [white] (4,4) circle (0.1cm);
    \draw [thick,black] (0,0) -- (1,1) -- (3,3) -- (4,4);
\end{tikzpicture}
\end{center}

9.03 \textbf{\textit{Queen vs c-pawn}}

1  \textit{\textbf{\textit{W}}b4}+  \textit{\textbf{\textit{a}}}a2 2  \textit{\textbf{\textit{c}}}c3  \textit{\textbf{\textit{b}}}b1! 3  \textit{\textbf{\textit{b}}}b3+  \textit{\textbf{\textit{a}}}a1! 4  \textit{\textbf{\textit{c}}}c3+ \\
4  \textit{\textbf{\textit{W}}}xc2 \textit{\textbf{\textbf{is}}} \textit{\textbf{\textbf{stalemate.}}} \\
4...  \textit{\textbf{\textit{b}}}b1! 5  \textit{\textbf{\textit{W}}}d3  \textit{\textbf{\textit{b}}}b2 6  \textit{\textbf{\textbf{c}}}c2?!  \textit{\textbf{\textit{a}}}a1! = \\
Not, however, 6...  \textit{\textbf{\textbf{b}}}b1? 7  \textit{\textbf{\textbf{b}}}b4  \textit{\textbf{\textbf{c}}}c1 8  \textit{\textbf{\textbf{b}}}b3! \textit{\textbf{\textbf{+-}}}.

The zone is based on the logic that White wins only if his king can reach b3 or d2 in one move. If Black's king is on the other side of the c-pawn, the winning zone is much larger. This is because White can win a tempo when Black's king blocks the c-pawn and because there exist additional mating patterns on the other side of the pawn (see following diagram).

1  \textit{\textbf{\textbf{f}}}f4+  \textit{\textbf{\textbf{d}}}d1 \\
1...  \textit{\textbf{\textbf{c}}}c3 2  \textit{\textbf{\textbf{c}}}c1 \textit{\textbf{\textbf{+-}}}.

2  \textit{\textit{W}}d4+  \textit{\textbf{\textit{e}}}e2 3  \textit{\textbf{\textit{c}}}c3!  \textit{\textbf{\textit{d}}}d1 4  \textit{\textbf{\textit{d}}}d3+!  \textit{\textbf{\textit{c}}}c1 5  \textit{\textbf{\textbf{c}}}c4  \textit{\textbf{\textit{b}}}b2 6  \textit{\textbf{\textit{d}}}d2  \textit{\textbf{\textit{b}}}b1 7  \textit{\textbf{\textbf{b}}}b3!  \textit{\textbf{\textbf{c}}}c1 8  \textit{\textbf{\textbf{a}}}a2#!

With his king on g4, White would win as follows: 1  \textit{\textbf{\textbf{f}}}f4+  \textit{\textbf{\textbf{d}}}d1 2  \textit{\textbf{\textbf{d}}}d4+  \textit{\textbf{\textit{c}}}c1 3  \textit{\textbf{\textbf{a}}}a1+  \textit{\textbf{\textbf{d}}}d2 4  \textit{\textbf{\textbf{b}}}b2!  \textit{\textbf{\textit{f}}}d1 5  \textit{\textbf{\textbf{f}}}f3!  \textit{\textbf{\textbf{c}}}c1 6  \textit{\textbf{\textbf{w}}}e2#!.

If the defender has additional pawns, the stalemate defence may become impossible:

\begin{center}
\begin{tikzpicture}
    \draw[thick,black] (0,0) grid (4,4);
    \fill [black] (0,0) circle (0.1cm);
    \fill [white] (1,1) circle (0.1cm);
    \fill [black] (3,3) circle (0.1cm);
    \fill [white] (4,4) circle (0.1cm);
    \draw [thick,black] (0,0) -- (1,1) -- (3,3) -- (4,4);
\end{tikzpicture}
\end{center}

9.05 \textbf{\textit{+/-}}

1.Fuss – A.Becker

\textit{Vienna Trebitsch mem 1934}

1  \textit{\textbf{\textbf{g}}}g2+  \textit{\textbf{\textbf{b}}}b1 2  \textit{\textbf{\textbf{f}}}f1+  \textit{\textbf{\textbf{b}}}b2 3  \textit{\textbf{\textbf{e}}}e2+  \textit{\textbf{\textbf{b}}}b1 4  \\
\textit{\textbf{\textbf{d}}}d1+  \textit{\textbf{\textbf{b}}}b2 5  \textit{\textbf{\textbf{d}}}d2+  \textit{\textbf{\textbf{b}}}b1 6  \textit{\textbf{\textbf{b}}}b4+  \textit{\textbf{\textbf{c}}}c2 7  \textit{\textbf{\textbf{a}}}a3!  \\
\textit{\textbf{\textbf{b}}}b1 8  \textit{\textbf{\textbf{b}}}b3+!  \textit{\textbf{\textbf{a}}}a1 9  \textit{\textbf{\textbf{w}}}e2 1-0 \\
\textit{\textbf{\textbf{c}}}c1# \textit{\textbf{\textbf{follows.}}}

Note that with the rear pawn on a5 or a4, the position would have been a draw, because the queen checks on b4 and b3 are essential for the winning process.

The following study also illustrates this motif:
5...\( \text{Wf7} \) 6 g8\( \text{W} \)! \( \text{Wxg8} \) stalemate.
6 \( \text{h7} \) \( \text{Wf5+} \) 7 \( \text{h6!} \) \( \text{We6+} \) 8 \( \text{h7!} \) \( \text{Wf7} \) 9
\( \text{h6} \) \( \text{c5} \) 10 \( \text{h8} \) \( \text{g6} \) 11 \( \text{g8} \) \( \text{Wxh6+} \) 12 \( \text{h7} \)
\( \text{Wxh7}+ \) 13 \( \text{Wxh7} \) \( \text{h2-1/2} \)

Usually the queen wins easily against several pawns if they haven’t advanced to the seventh rank:

Sometimes an additional pawn makes a successful defence possible by denying essential squares to the enemy queen. In the following position Black can’t force the white king to g8:

9.07

J. Berger, 1914

1 \( \text{b1} \) \( \text{g3} \)
Or: 1...f3 2 \( \text{Wh8} \) f2 3 \( \text{Wh4} \) +-; 1...g3 2 \( \text{Wh8} \) +
\( \text{g4} \) 3 \( \text{Wh4} \) 4 \( \text{Wh5} \) h2 5 \( \text{Wh4} \) \( \text{h3} \) 6
\( \text{Wh3} \) +-

2 \( \text{Wh1} \) \( \text{h2} \) 3 \( \text{c2} \) f3 4 \( \text{d2} \) \( \text{h3} \) 5 \( \text{f1} \) +
6 \( \text{e3} \) +-

9.2 Queen vs Queen

Our topics are as follows:
A: Queen vs Queen (no pawns) 315
B: Queen + Pawn(s) vs Queen 316
C: Queen + Pawn(s) vs Queen + Pawn(s) 321

A) Queen vs Queen (no pawns)

This endgame arises most often from a pawn ending after both sides queen. It is usually a draw, but if the defending king is stuck near the corner, mating possibilities arise (see following diagram):

1 \( \text{We5+} \) \( \text{a2} \) 2 \( \text{We4+} \) \( \text{a3} \) 3 \( \text{a6+} \) \( \text{b2} \) 4
\( \text{b6+} \) \( \text{c1} \) 5 \( \text{c5+} \) \( \text{b2} \) 6 \( \text{b4+} \) 1-0

Black is mated after 6...\( \text{c1} \) (6...\( \text{a2} \) 7 \( \text{c2} \) +-) 7 \( \text{d2+} \) \( \text{b1} \) 8 \( \text{c2} \) !.
With such strong pieces as queens on the board, one also has to watch out for tactical possibilities such as skewers:

With White to play: 1 \texttt{wa8+} \texttt{wb6} 2 \texttt{wb8+}! ++.

If Black is to move, he wins the white queen with 1...\texttt{wb3+} or 1...\texttt{wa2+}.

\textbf{B) Queen + Pawn(s) vs Queen}

These endings occur quite frequently in practice and are very difficult to play over the board. Pre-computer analysts faced great difficulties in handling them, while even with access to the computer tablebases, which can say for certain whether a position is won or lost, it is very difficult to see the underlying logic of the ending. However, we can certainly state that if the defending king doesn’t manage to get in front of the pawn he usually faces unpleasant problems.

We discuss the following important topics:

\begin{itemize}
\item B1: Drawing Zones \hspace{1cm} 316
\item B2: Exchange of Queens, \hspace{1cm} 320
\item Stalemate and Underpromotion
\end{itemize}

\textbf{B1) Drawing Zones}

The position of the defending king is especially important. Ideally, it should be placed so that its queen can give checks or pin the pawn without being obstructed. With a rook’s or a knight’s pawn, the theoretical result is a draw if the defending king is in front of or near the pawn or if it is in the corner which is furthest away. However, it should be stressed that the practical winning chances are much greater with a knight’s pawn (especially if it is far advanced) because it provides better shelter for the attacking king than a rook’s pawn. With a bishop’s pawn or a central pawn, the theoretical result is a win if the defending king is not in front of the pawn. With a bishop’s pawn the winning chances are especially great, as we shall see. Our treatment is inspired by John Nunn’s exposition in \textit{Secrets of Practical Chess} (pp. 147-52) and we start with the rook’s pawn:

\begin{figure}
\centering
\includegraphics[width=0.8\textwidth]{drawing_zones}
\caption{\texttt{wa5}-pawn vs \texttt{w}}
\end{figure}

In all these \texttt{wa5} vs \texttt{w} zone diagrams Black is to move. He draws if his king is on the marked squares. The drawing zone is very large here; we can gain more insights from examining the situation with the pawn two squares further advanced:
The drawing zone has reduced considerably. As a guideline the king should be near the pawn, on the a-file or in the south-east corner. Note that h8 is a draw for specific tactical reasons, and does not constitute a drawing zone in the normal sense. The position w+a5, w+b6, a6; b+h8, w+c1 is lost even if Black moves first (with White to move, 1 a7? would throw the win away!). But it is of course worth knowing that if you are stuck near the north-east corner, h8 is the square to head for. The next example illustrates this (see note 'b' to Black's 1st move), and the winning procedure if the defending king is stuck in the wrong corner:

9.12

A.Shirov – I.Sokolov
Groningen 1996

1...c6!
Black's king has to leave the danger zone immediately and must head for the south-west corner. The fact that Sokolov did not choose this move suggests that he may have been afraid of counterchecks on f6 or g6, but as White's pawn is not very far advanced, he has time to bring his king into the drawing zone.

1...c8? was the game continuation, when Shirov demonstrated good technique: 2 h5 w+g2+ 3 c8+ w+h3 4 w+e8+ w+b7 5 w+g6 w+c8+ 6 w+g7 w+c3+ 7 w+h7, and now:

a) 7...w+h3?! (the move played in the game)
8 h6 w+a7 and then:

a1) The game concluded 9 w+f6?! w+d3+!! (9...w+b3?! is tougher, because it is not so easy for White's king to hide from the checks) 10 w+h8 (10 w+g8 w+a8 11 w+f8+ w+b7 12 h7 ++) 10...w+h3 11 h7 w+c8+ 12 w+g7 w+g4+ 13 w+f8 w+c8+ 14 w+f7 w+c4+ 15 w+e6 w+e4+ 16 w+g7 w+g3+ 17 w+f8 w+h8+ 18 w+c8 (the checks have run out) 18...w+b2 19 w+e3+ w+a8 20 w+f3+ (covering g2) 20...w+a7 21 w+g8 w+h8+ 22 w+f8 1-0.

a2) 9 w+f7+!? is more accurate and leads to a quick win for White: 9...w+a8 (9...w+b3 10 w+g8 w+e4+ 11 w+g7 w+g4+ 12 w+g4++)

b) 7...w+c7+!! is based on a neat stalemate trick. After 8 w+g7 w+a8?! 9 h6 w+c2+ 10 w+h8 w+f2 it is still not easy to break down Black's defence as 11 h7? would let the win slip: 11...w+f3! (reciprocal zugzwang) 12 w+g8 w+b3+ 13 w+f7 w+g3+ 14 w+f8 w+d6+ 15 w+e7 w+f4+! 16 w+e8 w+e4+ 17 w+d7 w+e4+! 18 w+d8 w+h4+ 19 w+c8 w+c4+!

2 h5 (D)
The otherwise desirable 2 w+g1 is easily parried by 2...w+e7+!, winning the h-pawn.
This is the only move that gives Black sufficient checks as \( \text{W}f6 \) and \( \text{W}g6 \) are not counter-checks any more.

3 \text{h}6 \text{W}g4+! 4 \text{W}g6 \text{W}d4+!

4...\text{W}d7++ is wrong since after 5 \text{c}f8! there is no check: 5...\text{b}b4 6 \text{W}e4+! (6 \text{h}7? \text{W}d8+ =) 6...\text{b}b3 7 \text{h}7! ++ and White mates in 44 moves.

5 \text{h}7 \text{b}b4 =

\[ \text{W} + \text{b}-\text{pawn vs } \text{W} \]

The situation is similar to the rook’s pawn, as the defending king should move into the direction of the south-east corner if it can’t get in front of or at least very near the pawn.

The defensive strategy applied by König in the next example is very good:

\[ \text{H.Mudrochova – M.Holoubkova} \]

Czechoslovak Girls Ch 1990

1...\text{c}d5 2 \text{c}g7 \text{W}f5 3 \text{W}h1+ \text{e}e5 4 \text{W}e1+ \text{f}f4 5 \text{W}f2+ \text{g}4 6 \text{W}g2+ \text{h}4 7 \text{W}h2+ \text{h}3 8 \text{W}f2+ \text{g}3

8...\text{h}5 9 \text{W}e2+ \text{g}4 10 \text{W}d2 \text{h}4 11 \text{e}1+ \text{g}3 (11...\text{g}3 12 \text{W}c7+! =) 12 \text{W}h1+ \text{g}5 13 \text{W}d5+ \text{h}4 14 \text{W}g6 \text{c}3 15 \text{h}5 \text{W}e8+ 16 \text{W}h6! \text{W}e5 17 \text{W}c4+! \text{f}3 18 \text{W}f1+ \text{g}3 19 \text{W}g6 \text{h}2 20 \text{W}f2+ \text{h}3 21 \text{W}f1+ =.

\[ 9.14 \]

E.Bogoljubow – L.König

Vienna 1922
9 \(f6 \, f4\) 10 \(d8 \, e5+\) 11 \(h6 \, e6+\) 12 
\(g7 \, h5\) 13 \(h8+ \, g4\) 14 \(h1 \, e5+\) 15 
\(g6 \, f5+\) 16 \(g7 \, f3\) 17 \(g1+ \, h4 \, 1/2-1/2\)

With an f-pawn, this position would be a win.

\[9.16\]

\(+ c5\)-pawn vs \(\)

With a bishop's pawn it is completely different. The defender is only able to draw if his king gets in front of the pawn. The following example illustrates the winning process:

\[9.17\]

\(A.\) Kharitonov - S. Iskusnykh

Russian Ch (Kazan) 1995

1 \(b8+ \, a3?!\) 2 \(d6+ \, b3\) 3 \(f4 \, h1\) 4 
\(g5 \, g1+\) 5 \(f6 \, h2\) 6 \(e6+ \, a3?!\)

6... \(b2?!\) is more stubborn.

7 \(f5 \, h4+\) 8 \(g7 \, h5+\) 9 \(e7 \, h2\) 10 \(f6 \, e5+\) 11 \(d6 \, g5\) 12 \(d4+ \, b1\) 13 \(g4+ \, a1\) 14 \(a6 \, h6\) 15 \(f5 \, a2\) 16 \(f2+ \, a1\) 17 \(g3 \, a2\) 18 \(e7 \, h7+\) 19 \(f7 \, (D)\)

The first phase is completed. Now the f-pawn has to be promoted.

19... \(e4+\) 20 \(f6 \, c6+\) 21 \(g7 \, f7\) 22 
\(g6 \, a3\) 23 \(d6+ \, a2\) 24 \(d2+ \, a1\) 25 
\(g8 \, b3\) 26 \(f4 \, d5\) 27 \(h8\)

White can also win by 27 \(h7!! \, b7\) 28 
\(f6+ \, a2\) 29 \(f2+ \, a1\) 30 \(g7 \, h1\) 31 \(g6\) 32 \(f6 \, g2+\) 33 \(h7 \, h3+\) 34 \(g7\) 35 \(b6+ \, a1\) (35... \(a2\) 36 \(f6 \, +\) 36 
\(f6 \, c8\) 37 \(e7 \, +\) .

27... \(h1+\) 28 \(g7 \, g2+\) 29 \(h7 \, h1+?\) !

29... \(c2+?!\) 30 \(h6 \, c6+\) 31 \(g5 \, g2+\) 32 \(g4 \, d5+\) 33 \(f5 \, g2+\) 34 \(h6 \, h1+\) 35 
\(g7 \, b7\) 36 \(f2 \, b1\) 37 \(g6 \, c6+\) 38 \(f6 \, g2+\) 39 \(g5 \, c6+\) 40 \(h7 \, f3\) 41 \(g7\) 42 \(g8 \, d5\) 43 \(h8 \, +\).

30 \(h6 \, e4+\) 31 \(h8\) 1-0

A similar situation arises in the case of a central pawn:

\[9.18\]

\(+ d5\)-pawn vs \(\)
With the king on b3, for example, Black can only save himself by retreating immediately:
1...\( \text{b4!} \) 2 \( \text{Wb7+} \) (2 \( \text{d6?! Wd1+1} \) 3 \( \text{c6+} \) \( \text{c5!} \) =) 2...\( \text{b5} \) (or 2...\( \text{a5} \) 3 \( \text{Wc5+} \) \( \text{c6!} \) =.

However, the winning method with a central pawn is more complex. One reason is the following diagonal pin, although it must be emphasized that the defender usually can’t reach this position unless the attacker makes a mistake.

\[
\begin{array}{|c|c|c|c|c|c|c|}
\hline
\text{W} & \text{B} \\
\hline
\text{W} & \text{B} \\
\hline
\text{W} & \text{B} \\
\hline
\end{array}
\]

9.19

Y. Averbakh, 1962

2...\( \text{Wh2} \) is better, to prevent \( \text{Wc7+} \).
3 \( \text{Wc7+} \) \( \text{b5} \) 4 \( \text{Wc5+} \) \( \text{a4} \) 5 \( \text{Wd4+} \) \( \text{a3} \) 6 \( \text{Wd3+} \) \( \text{b4} \) 7 \( \text{Wf5} \) \( \text{c6} \) 8 \( \text{e7} \) \( \text{c7} \) 9 \( \text{We4+} \) \( \text{a3} \) 10 \( \text{Wd4} \) \( \text{Wh2} \) 11 \( \text{Wc5+} \) \( \text{a2} \) 12 \( \text{e8W} \) \( \text{Wf4+} \) 13 \( \text{g7} \) \( \text{Wg3+} \) 14 \( \text{f8} \) 1-0

9.20 shifted one file to the right would be lost for Black whoever moves first.

B2) Exchange of Queens, Stalemate and Underpromotion

If the defending king is not in the square of the pawn or the attacking king can conquer the pawn’s key squares, one has to watch out for possibilities of exchanging the queens. The following study shows a combined attack against the black king that forces the exchange:

\[
\begin{array}{|c|c|c|c|c|c|c|}
\hline
\text{W} & \text{B} \\
\hline
\text{W} & \text{B} \\
\hline
\text{W} & \text{B} \\
\hline
\end{array}
\]

9.21

R. Cifuentes, 1996
1 $\text{w}4+$ $\text{h}2$
1...$\text{g}1$ 2 $\text{w}g8+$ $\text{h}2$ 3 $\text{w}h7+$! $\text{g}1$ 4 $\text{w}g6+$! +–.
2 $\text{w}h8+$! $\text{g}2$
2...$\text{g}1$ 3 $\text{w}d4+$ $\text{h}2$ 4 $\text{w}c5!$ +–.
3 $\text{w}g8+$! $\text{h}2$ 4 $\text{w}h7+$! $\text{g}1$ 5 $\text{w}g6+$! $\text{h}2$
6 $\text{w}h5+$ $\text{g}1$ 7 $\text{w}c5!$ 8 $\text{g}2$ 8 $\text{d}5+$! $\text{h}3$ 9 $\text{w}f5!$ $\text{h}2$ 10 $\text{w}e5!$ $\text{d}1$ 11 $\text{w}e3+$! $\text{h}1$ 12 $\text{w}e4+$ $\text{g}1$ 13 $\text{d}4$ $\text{h}5$ 14 $\text{d}2+$ $\text{h}2$ 15 $\text{f}2+$ $\text{h}3$
15...$\text{w}h1$ 16 $\text{w}f1+$ $\text{h}2$ 17 $\text{w}e2+$ +–.
16 $\text{w}e3+$ $\text{h}4$ 17 $\text{w}e1+$ +–

The following stalemate idea is quite important and has often been used to save a valuable half-point:

B. Belotti – R. Vaganian
Reggio Emilia 1994/5

1 $\text{w}h8!!$ $\text{b}2$ 2 $\text{f}f2+$ $\text{a}1$ 3 $\text{f}f1+$ $\frac{1}{2}$–$\frac{1}{2}$
With the white queen on b6 and the king on b7, 1 $\text{w}a8!!$ would be the only way to save the game.

Sometimes promotion to a queen leads to stalemate (see following diagram):
1 $\text{w}b8+$ $\text{a}1$ 2 $\text{g}8\text{w}$
2 $\text{g}8\text{w}$? $\text{w}c4+$ 3 $\text{b}4$ $\text{w}c6+$ 4 $\text{b}5$ $\text{w}c2+$! 5 $\text{a}5$ $\text{w}c7+$! 6 $\text{w}b6$ $\text{w}c3+$! 7 $\text{a}4$ (7 $\text{w}b5$
$\text{w}b3+$! =) 7...$\text{w}a3+$ (7...$\text{w}c4+$ 8 $\text{a}3$ $\text{w}a4+$ =) 8 $\text{b}5$ $\text{w}a4+$ 9 $\text{c}5$ $\text{d}4+$! 10 $\text{c}6$ $\text{d}7+$ 11 $\text{x}d7$ stalemate.
2...$\text{w}a2+$ 3 $\text{b}4$ $\text{w}b2+$ 4 $\text{c}4$ $\text{w}c2+$! 5 $\text{d}4$
$\text{d}2+$ 6 $\text{e}4$ $\text{e}2+$ 7 $\text{f}4$ $\text{f}2+$ 8 $\text{g}4$ $\text{e}2+$ 9 $\text{h}3$ $\text{f}3+$
9...$\text{w}h5+$ 10 $\text{w}g3+$–.
10 $\text{w}h2$ $\text{w}e2+$ 11 $\text{h}1$ $\text{f}3+$ 12 $\text{g}2$ +–

C) Queen + Pawn(s) vs
Queen + Pawn(s)

The topics covered in this section are as follows:
C1: Perpetual Check 321
C2: Far-Advanced Passed Pawn/
Active King 323
C3: Extra Pawn 324
C4: Pawn Races 327

C1) Perpetual Check

One of the most important defensive motifs is perpetual check, which can sometimes be used to save otherwise hopeless positions. The following wheel check is very well known:

9.24 $\text{+/=}$ Wheel checks
1...\textbf{\textit{\textup{d2}}+!} (NC) 2 \textbf{\textit{c4 \textup{a2}+!}} 3 \textbf{\textit{c5 \textup{a5}+!}} 4 \textbf{\textit{c6 \textup{a8}+!}} 5 \textbf{\textit{d6 \textup{d8}+!}} 6 \textbf{\textit{e6 \textup{g8}+!}} 7 \textbf{\textit{e5 \textup{g5}+!}} 8 \textbf{\textit{d4 \textup{d2}+!}} =

Sometimes it is even possible to draw against two queens:

\begin{center}
\textbf{B}
\end{center}

\begin{center}
9.25
\textbf{G.Lolli. 1763}
\end{center}

\begin{center}
\textbf{B}
\end{center}

\begin{center}
\textbf{B}
\end{center}

\begin{center}
9.27
\textbf{G.Kasparov – The World}
\textbf{Internet 1999}
\end{center}

1...\textbf{\textit{\textup{h4}+ 2 \textup{h7}}}
2 \textbf{\textit{g8 \textup{d8}+!}} 3 \textbf{\textit{f7 \textup{w7}+ 4 \textup{f6 \textup{d6}+ 5 \textup{g5 \textup{g3}+ =}}}}
2...\textbf{\textit{d8}+! 3 \textbf{\textit{g8w \textup{f6}+ 4 \textup{wgh7 \textup{h4}+! 5 \textup{w8h7 \textup{w8}+! 6 \textbf{gg8 \textup{w6}+ =}}}}}

With more pawns on the board, the attacker often uses them as shields against checks:

\begin{center}
\textbf{W}
\end{center}

\begin{center}
9.26
\textbf{+/-}
\end{center}

\begin{center}
\textbf{W}
\end{center}

\begin{center}
1 \textbf{\textit{\textup{w6}+}}
1 \textbf{\textit{\textup{wxb}5? =}} would be wrong as Black's king is near the south-east corner and is inside the drawing zone.

\begin{center}
\textbf{W}
\end{center}

\begin{center}
9.26
\textbf{+/-}
\end{center}

\begin{center}
\textbf{W}
\end{center}

\begin{center}
1...\textbf{\textit{\textup{w6}+}}
1...\textbf{\textit{\textup{wxf2}?! 2 \textbf{\textit{\textup{d7 \textup{w4}+ 3 \textbf{\textit{w1 \textup{w3}+ 4 \textup{w7}!}}}}}}}
\textbf{+- (Hecht)}
2 \textbf{\textit{w1}}
9.28

V. Korchnoi – A. Miles
Horgen 1994

\[\begin{align*}
2. \text{h1 e4! 3 } & \text{c6 } \text{xf2 4 } \text{xc4 } \text{wd2 5 } \text{h4+ } \text{g6}
\text{f7 c1+ 7 } \text{h2 h4+ 8 } \text{g1 c1+ } \text{9 h2 d2+ 10 } \text{g3 g5 11 } \text{wxe+ h7 12 } \text{wxf7}
\text{d7?? } \text{wxf4#} 12... \text{wxh6+ 13 } \text{g4 w4+ 14 } \text{xg5 w2+=.}
\text{2...e4! 3 } \text{wxe6}
\text{3...c5 w2d2+ 4 } \text{h5 w6 = (Hecht).}
\text{3...e3 4 } \text{fxe3 } \text{wxh3+ 5 } \text{g1 } \text{d2 6 } \text{d7 f5 7 c7 w1d1+ 8 } \text{fx2 w2d2+ 9 } \text{g1 f4! ½-½}
\text{A draw was agreed because the typical perpetual pattern 10 } \text{d8 } \text{wxh1+ 11 } \text{h2 w3+ 12 }
\text{g1 } \text{wxh2 saves Black.}
\end{align*}\]

C2) Far-Advanced Passed Pawn/Active King

A far-advanced passed pawn can easily out
weigh several pawns because the lone queen
can't stop it (see following diagram):

\[\begin{align*}
1...?\text{xe3} 2 \text{fxe3 h7 is also drawn, but is not easy to calculate over}
\text{the board due to White's queenside majority.}
\text{2 w2xh7}
\text{2 w2xe8+ w2h7 3 } \text{w2xh7 d4 = .}
\text{2...d4 3 w2a8+}
\text{3 b4?? d4 b5 w2e1 5 b6 w2xf2 w2a8+ w2h7 7 w2e4+ g6 8 w2xd3 (8 b7 d2 9 b8?? w2d1+ 10 h4}
\text{w2d1+ 11 w2h3 h2xh2+ ) 8...w2xh6 = .}
\text{3 w2h7 4 w2e4+ g6 5 w2f4}
\text{5 b4 d3 b5 d2 7 b6 w2e1 8 w2f4 d1 w2h7 (9 w2xf7+ is necessary, with perpetual check})
\text{9...w2g1+ 10 w2g3 } \text{w2d5! = .}
\text{5...d3! 6 w2xf7+ w2h8 7 w2f8+}
\end{align*}\]

9.30

L. Gostiša – U. Bönsch
Lippstadt 1994

\[\begin{align*}
1...w2d3 0-1
\text{White resigned because the immediate mate}
\text{can only be stopped by exchanging queens. It is}
\text{interesting to see how the e4-pawn hinders}
\text{the white queen: 2 w2f7+ (2 w2d1+ w2e2+ 3 w2xe2+}
\text{w2xe2 -- ) 2...w2f4+ 3 w2xf4+ w2xf4 -- .}
\end{align*}\]
It is harder to see that positional factors outweigh the pawn deficit in the next example:

\[ B \]

9.31
V. Topalov – G. Kasparov
Linares 1999

1...\textcolor{red}{\texttt{c4+}} 2 \textcolor{red}{\texttt{c3}} \textit{\textcolor{red}{\texttt{c3}}} 3 \textcolor{red}{\texttt{d8}}?!

"The last desperate chance to create some confusion with 3 b5 is best parried by 3...axb5?! 4 a6 \textit{\texttt{xd4+}} (4...b4?!?) 5 \textit{\texttt{c3}} \textit{\texttt{d5+}} and Black takes on e5 with check" – Stohl in \textit{Instructive Modern Chess Masterpieces}.

3...\textcolor{red}{\texttt{d3+}} 4 \textcolor{red}{\texttt{f4}}

4 \textcolor{red}{\texttt{f2}} f4! and the passed pawn proves too much for White to handle: 5 \textit{\texttt{g5}} (5 \textit{\texttt{c8+ d2}} 6 \textit{\texttt{xe6}} \textit{\texttt{e2+}}+ 7 \textit{\texttt{g1}} f3 8 \textit{\texttt{a2+ e3}} 9 \textit{\texttt{b3+ xd4+}} 5...\textit{\texttt{xd4+}} 6 \textit{\texttt{e2}} \textit{\texttt{d2+}} 7 \textit{\texttt{f1 e3+}} (Stohl).

4...\textcolor{red}{\texttt{d2+}}

4...\textit{\texttt{a4}} 5 \textit{\texttt{f5}} f4! (Stohl) 6 \textit{\texttt{f6}} (6 \textit{\texttt{xf4??}} \textit{\texttt{e3+}}; 6 f3 \textit{\texttt{h5 e1+}}). 5 \textcolor{red}{\texttt{f3}} \textit{\texttt{d1+}} 6 \textcolor{red}{\texttt{e3?}}!

This allows Kasparov to finish the game in great style. 6 \textcolor{red}{\texttt{f2}} f4! 7 \textit{\texttt{c8+ d2}} 8 \textit{\texttt{xa6}} 8 \textit{\texttt{xe6}} \textit{\texttt{e2+}} 9 \textit{\texttt{g1}} f3 10 \textit{\texttt{a2+ e3}} 11 \textit{\texttt{b3+ xd4+}} 8...\textit{\texttt{e1+}} 9 \textit{\texttt{g2}} \textit{\texttt{g3+}} 10 \textit{\texttt{h1}} f3 11 \textit{\texttt{f1}} \textit{\texttt{xb4+}} 12 \textit{\texttt{g1}} \textit{\texttt{e3+}}+ 13 \textit{\texttt{h1}} \textit{\texttt{e1+}} 14 \textit{\texttt{g1}} h4 15 a6 f2+ 16 \textit{\texttt{g2}} h3+ -- (Stohl, Hecht in CBM70).

6...\texttt{h1+ 7 e2}

7 \textit{\texttt{f3}} \textit{\texttt{f1+}} 8 \textit{\texttt{g3}} (8 \textit{\texttt{c3}} f4+ 9 \textit{\texttt{c4}} \textit{\texttt{d2}} -- 8...\textit{\texttt{f4+}} 9 \textit{\texttt{h2}} \textit{\texttt{f2+}} 10 \textit{\texttt{h1}} f3 11 \textit{\texttt{g5}} \textit{\texttt{e1+}}+ 12 \textit{\texttt{h2}} f2 --. 7...\textit{\texttt{g2+}} 8 \textit{\texttt{e3}}

8 \textit{\texttt{e1}} \textit{\texttt{d3}} 9 \textit{\texttt{g5}} \textit{\texttt{e2+}}.

8...\textit{\texttt{f4+}} 1-0

Topalov resigned due to 9 \textit{\texttt{xf4}} \textit{\texttt{d3!}} 10 \textit{\texttt{g5}} (10 d5 \textit{\texttt{g4#}}) 10...\textit{\texttt{f2#}}.

C3) Extra Pawn

Dunnington called the following method, which is a typical way to convert an outside extra pawn, 'Head for the Hills' in \textit{101 Winning Chess Strategies}:

\[ B \]

9.32
A. Sherzer – I. Almasi
Hungarian Ch 1995

1...\textcolor{red}{\texttt{g3}} 2 \textcolor{red}{\texttt{c8+ e4}} 3 \textcolor{red}{\texttt{e6+ d3}} 4 \textcolor{red}{\texttt{c4+}}

\textcolor{red}{\texttt{d2}} 5 \textit{\textcolor{red}{\texttt{d4+}} c2 6 \textit{\texttt{c5+ b2}} 7 \textit{\texttt{e5+ c3}} 8 \textit{\texttt{e2+}}

8 \textit{\texttt{xa5}} \textit{\texttt{e1+}} 9 \textit{\texttt{g2}} \textit{\texttt{f2+}} 10 \textit{\texttt{h3}} \textit{\texttt{h2+}} 11 \textit{\texttt{g4}} g2 --.

8...\texttt{a3}

The king has arrived and is now sheltered by White's pawns.

9 \textit{\texttt{e6}} \textit{\texttt{a1+}} 10 \textit{\texttt{g2}} \textit{\texttt{xa2+}} 11 \textit{\texttt{h3}}

11 \textit{\texttt{xg3}} \textit{\texttt{xb3+}} 12 \textit{\texttt{xb3+ e3}} --.

11...\textit{\texttt{h3+}} 12 \textit{\texttt{g4}} g2 13 \textit{\texttt{f3}} g1+ A little joke. White can't avoid the exchange of queens.

14 \textit{\texttt{c4}} \textit{\texttt{e2+}} 15 \textit{\texttt{f5}} \textit{\texttt{xe6+}} 0-1

In the following diagram, White captures Black’s a-pawn and wins easily because of his well-sheltered king:

1 \textit{\texttt{d7+??}}

1...\textit{\texttt{xf6}} 2 \textit{\texttt{xe6}} \texttt{d5+} gives Black more counterplay.

1...\texttt{e2}

1...\texttt{e2} 2 \textit{\texttt{xa4+}} \textit{\texttt{c1}} 3 \textit{\texttt{xa7+}} --.

2 \textit{\texttt{e7+ d3}} 3 \textit{\texttt{xa7}} \textit{\texttt{g4}} 4 \textit{\texttt{e3+ c4}} 5 \textit{\texttt{c5+ d3}} 6 \textit{\texttt{e3+ c4}} 7 \textit{\texttt{c5+ d3}} 8 \textit{\texttt{b5}}

\textit{\texttt{c4+}} 9 \textit{\texttt{h2 a8}} 10 \textit{\texttt{c6 a2}} 11 \textit{\texttt{g2}}

This situation is typical. There is no way to attack White’s king successfully.
13 ♕d2 ♘b6 14 ♕d3 ♘d6+ 15 ♕c2 ♘b6 16 ♕c3 ♘a5+ 17 ♗b3 ♘f6 18 ♘e4+ ♕g5 19 ♘e3+ ♘g6 20 ♘a7 ♘b5+ 21 ♕c3 ♘a5+ 22 ♘c4 ♙d4+ 23 ♙d3 ♘a3+ 24 ♘e2 ♙a2+ 25 ♘f1 ♘a1+ 26 ♘g2 ♙a2+ 27 ♘f2 ♘d5+ 28 ♘f1 ♘d3+ 29 ♘e2 ♘b1+ 30 ♘f2 ♘f5+ 31 ♘g2 ♘d5+ 32 ♘f1 ♘f5+ ½-½

The comparable classic is the following game:

1...♕f6 2 ♘d8+ ♕e6 3 ♘e8+ ♕f5 4 ♘d7+ ♕e4 5 ♘e7+ ♕d3 6 ♘a3+ ♕c2 7 ♘e7 ♕d1 8 ♘d8+ ♕e2 9 ♘e7+ ♘e6 10 ♘b7 ♘f2 11 ♘g2+ ♕e1 12 ♘g1+ ♕e2 13 ♘g2+ ♕d3 14 ♘f3+ ♕d2 15 ♘f4+ ♕e2 16 ♕c7 16 ♕g2??

Even with all the pawns on one wing, an extra pawn provides winning chances. The following very well known example demonstrates this (see next diagram):

1...♕f6 2 ♘d8+ ♕e6 3 ♘e8+ ♕f5 4 ♘d7+ ♕e4 5 ♘e7+ ♕d3 6 ♘a3+ ♕c2 7 ♘e7 ♕d1 8 ♘d8+ ♕e2 9 ♘e7+ ♘e6 10 ♘b7 ♘f2 11 ♘g2+ ♕e1 12 ♘g1+ ♕e2 13 ♘g2+ ♕d3 14 ♘f3+ ♕d2 15 ♘f4+ ♕e2 16 ♕c7
21...\textit{W}a1?? \textit{\textbf{\textcolor{red}{	ext{f3}}}} 22...\textit{W}h1+ (22...\textit{W}h3 \textit{f4} 23 \textit{W}h1+ \textit{\textbf{\textcolor{red}{	ext{e2}}} } 24 \textit{W}g2+ \textit{\textbf{\textcolor{red}{	ext{e1}}}} --) 22...\textit{\textbf{\textcolor{red}{	ext{e2}}} } 23 \textit{W}c6 (23 \textit{W}g2+ \textit{\textbf{\textcolor{red}{	ext{e1}}} } 24 \textit{W}h1+ \textit{\textbf{\textcolor{red}{	ext{d2}}} } 25 \textit{W}c6 \textit{f4} 26 \textit{\textbf{\textcolor{red}{	ext{gx}}}f4} \textit{\textbf{\textcolor{red}{	ext{g}}2} } 25+ --) 23...\textit{\textbf{\textcolor{red}{	ext{e4}}} } 24 \textit{W}c1 \textit{\textbf{\textcolor{red}{	ext{e3}}} } 25 \textit{W}c6 \textit{\textbf{\textcolor{red}{	ext{f1}}} } 26 \textit{W}g2+ \textit{\textbf{\textcolor{red}{	ext{e1}}} } 27 \textit{W}h1+ \textit{\textbf{\textcolor{red}{	ext{d2}}} } 28 \textit{W}c6 \textit{\textbf{\textcolor{red}{	ext{f3}}} } 29 \textit{W}a6+ (29 \textit{W}xg6 \textit{\textbf{\textcolor{red}{	ext{f1}}} } 30 \textit{W}a6+ \textit{\textbf{\textcolor{red}{	ext{f}}}2 } 29...\textit{\textbf{\textcolor{red}{	ext{e1}}} } 30 \textit{W}a1+ \textit{\textbf{\textcolor{red}{	ext{f2}}} } 31 \textit{W}g1+ \textit{\textbf{\textcolor{red}{	ext{e2}}} } 32 \textit{W}a1 \textit{\textbf{\textcolor{red}{	ext{f2}}} } 33 \textit{\textbf{\textcolor{red}{	ext{h3}}} } \textit{\textbf{\textcolor{red}{	ext{f1}}} } +--.

21...\textit{\textbf{\textcolor{red}{	ext{f3}}} } (D)

\textbf{22...\textit{W}c6+}
\textbf{23 \textit{W}h3 (23 \textit{\textbf{\textcolor{red}{	ext{gx}}}f4} \textit{\textbf{\textcolor{red}{	ext{c}}}2 } 24 \textit{\textbf{\textcolor{red}{	ext{h}}}1} \textit{W}e4 25 \textit{W}g5 \textit{\textbf{\textcolor{red}{	ext{h}}1} } 26 \textit{\textbf{\textcolor{red}{	ext{h}}}2} \textit{\textbf{\textcolor{red}{	ext{c}}}2 } 27 \textit{\textbf{\textcolor{red}{	ext{h}}}1} \textit{\textbf{\textcolor{red}{\text{f}}}1+ } 28 \textit{\textbf{\textcolor{red}{	ext{h}}}2} \textit{Wxf4+ }--) 23...\textit{\textbf{\textcolor{red}{	ext{e}}}2 }--.
\textbf{24...\textit{W}e4} 23 \textit{W}c3+ \textit{\textbf{\textcolor{red}{	ext{f2}}} } 24 \textit{W}c5+ \textit{\textbf{\textcolor{red}{\text{e}}}3 } 25 \textit{\textbf{\textcolor{red}{	ext{c}}}2 } 26 \textit{W}e6 \textit{\textbf{\textcolor{red}{\text{f1}}} } 27 \textit{\textbf{\textcolor{red}{\text{h}}}3 } 27...\textit{\textbf{\textcolor{red}{	ext{h}}}1} \textit{\textbf{\textcolor{red}{\text{e4}}} }--. 
27...\textit{\textbf{\textcolor{red}{\text{g}}}1} 28 \textit{\textbf{\textcolor{red}{\text{c}}}5+} \textit{\textbf{\textcolor{red}{\text{f2}}} } 29 \textit{\textbf{\textcolor{red}{\text{e}}}3}!?
29 \textit{\textbf{\textcolor{red}{\text{c}}}1+} \textit{\textbf{\textcolor{red}{\text{f1}}} }--.

\underline{29...\textit{\textbf{\textcolor{red}{	ext{f4}}} }!}
\textbf{Not 29...\textit{\textbf{\textcolor{red}{	ext{xe}}}3??} stalemate.}
\textbf{0.1}

The next example is easier to understand:

\underline{1 \textit{\textbf{\textcolor{red}{	ext{g}}}4} !}
\textbf{Opening a path for the king to g5 to take part in the attack.}
\textbf{1...\textit{W}d2}
\textbf{1...e4 2 \textit{\textbf{\textcolor{red}{	ext{g}}}3} e3?? 3 \textit{\textbf{\textcolor{red}{\text{h}}}5+} \textit{\textbf{\textcolor{red}{\text{g}}}8} 4 \textit{\textbf{\textcolor{red}{\text{f}}}8+} \textit{\textbf{\textcolor{red}{\text{h}}}7} 5 \textit{\textbf{\textcolor{red}{\text{exe}}}3 }--. 
\underline{2 \textit{\textbf{\textcolor{red}{\text{g}}}3} \textit{\textbf{\textcolor{red}{\text{c}}}3+} 3 \textit{\textbf{\textcolor{red}{\text{h}}}4} \textit{\textbf{\textcolor{red}{\text{d}}}4} 4 \textit{\textbf{\textcolor{red}{\text{f}}}5+} \textit{\textbf{\textcolor{red}{	ext{g}}}6} (D)
4...\textit{\textbf{\textcolor{red}{\text{g}}}8} 5 \textit{\textbf{\textcolor{red}{\text{h}}}5} e4 (5...\textit{\textbf{\textcolor{red}{\text{f}}}6} 6 \textit{\textbf{\textcolor{red}{\text{g}}}5 ++) } 6 \textit{\textbf{\textcolor{red}{\text{g}}}5} \textit{\textbf{\textcolor{red}{\text{d}}}1+} 7 \textit{\textbf{\textcolor{red}{\text{h}}}4} \textit{\textbf{\textcolor{red}{\text{d}}}4} 8 \textit{\textbf{\textcolor{red}{\text{g}}}6} \textit{\textbf{\textcolor{red}{\text{d}}}8+} 9 \textit{\textbf{\textcolor{red}{\text{g}}}3} \textit{\textbf{\textcolor{red}{\text{d}}}6+} 10 \textit{\textbf{\textcolor{red}{\text{g}}}2} \textit{\textbf{\textcolor{red}{\text{d}}}8} 11 \textit{\textbf{\textcolor{red}{\text{e}}}6+} 12 \textit{\textbf{\textcolor{red}{\text{h}}}8} 13 \textit{\textbf{\textcolor{red}{\text{d}}}4+} $
8...\text{x}f4+ 9 \text{x}f4 \text{ex}f4 10 \text{x}f4 \text{h}6 11 \text{e}5 \text{g}5 12 \text{e}6 ++.
9 \text{f}7+ \text{h}8 10 \text{h}6 1-0
"If 10...\text{f}3+, then 11 \text{g}5 ++ closes the tent door and shuts out the wild elements." (Wade in Batsford Chess Endings).

Sometimes the easiest way to convert an extra pawn is to exchange queens:

\text{B}
\text{H}

9.37

B.Horberg – O.Bernstein
Montevideo 1954

1...\text{e}3?? 2 \text{xe}3
2 \text{d}d1 \text{e}5 3 \text{g}2 \text{f}4 4 \text{f}1 \text{d}3 +–.
2...\text{dxe}3 3 \text{e}2 \text{f}5 4 \text{xe}3 \text{e}5 5 \text{e}2 \text{f}4
6 \text{f}2 \text{f}6 7 \text{g}2 \text{e}3 8 \text{g}3 \text{f}5! 0-1

However, the queen is so powerful that care is required not to be unpleasantly surprised:

\text{W}
\text{W}

9.38

G.Borisenko – V.Simagin
USSR Ch (Moscow) 1955

1 \text{h}3 \text{f}1+ 2 \text{g}4??
2 \text{h}2 \text{c}2+ 3 \text{g}1 \text{e}1+ 4 \text{g}2 \text{c}2+ 5
\text{f}2 \text{e}4+ 6 \text{h}2 \text{c}8 +–.
2...\text{f}5+! 0-1

Borisenko resigned due to 3 \text{gx}f6 (3 \text{h}4 \text{h}1#) 3...\text{f}5+! 4 \text{h}4 \text{h}5#.

\text{D}

9.38A

A.Batuev – V.Simagin
USSR Ch (Riga) 1954

One year earlier Simagin was on the receiving end: 1...\text{e}2?? 2 \text{g}1+! \text{d}2 3 \text{c}1+! \text{d}3 4
\text{c}3#! (1-0).

C4) Pawn Races

These cases require extremely precise calculation and the position of the kings is of course very important:

\text{W}
\text{W}

9.39

M.Ashley – N.de Firmian
New York 1996
White should have contented himself with a draw:

1. \( \text{b}8?! \)
2. \( \text{d}7+ \text{h}6 2 \text{d}8 =. \)
3. \( \text{xe}3 2 \text{b}7 \text{h}3 \)
4. \( \text{xf}4+?? 3 \text{c}7+ --. \)
3. \( \text{d}7+ \text{h}4 4 \text{c}8? \)
4. \( \text{d}6! \text{f}5 5 \text{a}8 \text{c}4 (5... \text{h}2 6 \text{f}8+ =) 6 \text{a}4+ 7 \text{b}6 \text{b}3+ 8 \text{a}7 =. \)
4. \( \text{h}2 5 \text{b}8 \text{h}1 \text{w} \)

King safety plays a crucial role when four queens are on the board.

6. \( \text{d}8 \)
Or: 6. \( \text{bc}7 \text{a}8+ 7 \text{b}8 \text{c}5+--; 6 \text{dd}6 \text{c}8+ 7 \text{e}7 \text{c}1+ --. \)
6. \( \text{xe}4 7 \text{f}5 \text{xf}5 8 \text{h}2+ \text{h}5 9 \text{hc}7 \text{he}5 10 \text{b}7 \text{e}4 11 \text{bc}7 \text{a}8+ 12 \text{dc}8 \)
12. \( \text{cc}8 \text{aa}3 13 \text{c}4 \text{f}8+ 14 \text{c}7 \text{a}7+ 15 \text{c}6 \text{aa}8+ 16 \text{b}6 (16 \text{b}7 \text{f}c8+ --) \)
16. \( \text{fb}8+ 17 \text{c}5 \text{a}8+ 18 \text{d}4 \text{f}4+ 19 \text{d}3 \text{ad}2#. \)
12. \( \text{d}5+ 13 \text{d}7 \text{g}8+ 14 \text{c}7 \text{c}5+ 0-1 \)

**Exercises**
(Solutions on pages 390-1)

Black’s king is outside the winning zone, but how should White continue?

**Rules and Principles: Queen Endings**

1) A rook’s or a bishop’s pawn on the seventh rank draws against a queen if the attacking king is outside the winning zone.
2) In an endgame queen + rook’s or knight’s pawn vs queen, the defending king should be near the pawn or in the corner furthest away (e.g., against a pawn on a4 or b4 Black’s king should be on the queenside in front of the pawn or in the south-east corner; compare 9.10 and 9.13).
3) Using enemy pawns as shields and ‘Head for the Hills’ are strategies worth remembering.
4) It is generally favourable to advance a passed pawn, but watch out for possibilities to improve the position of your pieces first. In particular, a centralized queen can be extremely strong.
5) A well-supported far-advanced passed pawn can outweigh several pawns.
6) With such powerful pieces as queens still on the board, king safety plays an important role, so watch out for stalemate, mate and perpetual check.

**Reference works**

*Damenendspiele*, Averbakh, Sportverlag 1990

*Secrets of Practical Chess*, Nunn, Gambit 1998

How should Black parry the check?
White has set up a typical pattern to give perpetual check. Can Black avoid it?

White has an extra pawn. Is he winning?

It looks pretty grim for Black. Does he have a way out?
10 Further Queen Endings

In this chapter we discuss a variety of endings with at least one queen on the board together with rooks and/or minor pieces. The most important endings of this type for the practical player are queen vs rook + minor piece and queen vs two rooks, while some positions with queen vs rook and pawns are also of considerable interest.

Our subchapters are:
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10.7: Queen and Minor Piece vs Queen 347
10.8: Queen and Minor Piece vs Queen and Minor Piece 349

10.1 Queen vs One Minor Piece

In the traditional material count the pawn is worth 1, bishop and knight 3, a rook 5 and the queen 9 points. Therefore, a single minor piece normally has no chance against the queen. Even with several pawns, the queen proves too strong. The following position illustrates this (see next diagram).

The knight protects the pawn, shelters the king and creates a kind of barrier against the white king. However, there is a way to penetrate:

1 \( \text{g3} \) \( \text{d3} \)
1...\( \text{d1}?! \) loses the knight immediately to 2 \( \text{f3} + \).
2 \( \text{e4} 3 \) \( \text{h5}?! \)
3 \( \text{d6} \) is the right direction and wins much more quickly.
3...\( \text{d4} 4 \) \( \text{e4} 5 \) \( \text{b3} \) \( \text{e4} 6 \) \( \text{a2} \) \( \text{d4} \)
7 \( \text{h2} \) \( \text{e4}?! \)
7...\( \text{d3}?! \) 8 \( \text{c1} \) puts Black in zugzwang.
8 \( \text{b1} \)

Not, of course, 8 \( \text{c3}?! \) \( \text{d1} + \) !

8...\( \text{d4} 9 \) \( \text{e1} \) \( \text{d3} \)

Now it is White's move and it seems at first sight that he can't penetrate that way, and so he turns back:

10 \( \text{b1} \)

However, it was possible to break through with the following manoeuvre: 10 \( \text{e1} \) 11 \( \text{d1} + \) \( \text{e3} 12 \) \( \text{g4} \) 13 \( \text{d4} + \) \( \text{c2} \) (13...\( \text{e3} \), 14 \( \text{g1} \) \( \text{g3} \) 15 \( \text{d2} \) \( \text{e4} + \) 16 \( \text{e1} \) \( \text{g3} \) 17 \( \text{e2} \) \( \text{c3} + \) 18 \( \text{e3} \) \( \text{d5} + \) 19 \( \text{e2} \) \( \text{f3} \) 20 \( \text{e1} \) + ) 14 \( \text{c5} \) \( \text{e3} \) 15 \( \text{g5} \) and now:

a) 15...\( \text{f3} \) 16 \( \text{d2} \) \( \text{g4} \) 17 \( \text{c5} \) \( \text{g3} \) 18 \( \text{e2} \) \( \text{f2} \) 19 \( \text{c7} + \) \( \text{h1} \) 20 \( \text{h7} + \) \( \text{g1} \) 21 \( \text{h4} \) 22 \( \text{g5} \) \( \text{f1} \) 23 \( \text{f3} \) \( \text{h2} + \) 24 \( \text{g3} \) \( \text{f1} + \) 25 \( \text{h3} + \).
b) 15...\( \text{f2} \) 16 \( \text{f4} + \) \( \text{e2} \) 17 \( \text{g3} \) \( \text{d3} \) 18 \( \text{f2} + \).

10...\( \text{e4} 11 \) \( \text{a2} \) \( \text{d3} \) 12 \( \text{h3} \) \( \text{e4} \) 13 \( \text{a4} \)
14 \( \text{d3} \) 14 \( \text{b5} \) 15 \( \text{e6} \) 16 \( \text{d4} \) 17 \( \text{e6} \) \( \text{e4} \) 18 \( \text{f4} \) 19 \( \text{g6} \) 20 \( \text{h5} \) 1-0.

The white king finally arrives: 20...\( \text{d3} \) (or 20...\( \text{e4} \) 21 \( \text{g5} \) \( \text{d3} \) 22 \( \text{f4} + \) ) 21 \( \text{h4} \)
\( \text{d4} \) 22 \( \text{g3} \) \( \text{e4} \) 23 \( \text{f4} + \) \( \text{d4} \) 24 \( \text{f4} + \).

10.01 is drawn if shifted one file to the left or the right, because of the possible stalemate defence with a bishop's pawn or a rook's pawn (see 9.02 and 9.03).
A bishop usually loses as well:

11...\(\text{Wa1}\) wins more quickly: 12 e7 \(\text{Wh8+}\) 13 \(\text{a7}\) e7 14 a6 a1+ 15 b5 b2+ 16 xc5 b6#.

12 c4 xe6 13 c8 a6 14 f3 e7 15 d5 d6 16 b8#.
16 b8 d7#.
16...b6 0-1

In view of the threat of ...\(\text{d6}\).

No rule is without exception:

10.2 Queen vs Rook

The material divides naturally into the following topics:
A: Queen vs Rook (no pawns) 331
B: Queen vs Rook + Pawn(s) 333
C: Queen + Pawn(s) vs Rook + Pawn(s) 337

A) Queen vs Rook (no pawns)

The queen always wins against a lone rook unless there is an immediate draw such as perpetual check or stalemate. The winning nature of the ending has been known for a long time and
it was believed to be quite easy to force a win. However, the appearance of computer databases in 1978 caused the ending to be seen in a new light. While they confirmed that the queen should win from all normal starting positions, they also showed that it was quite difficult to win if the defender played precisely. Therefore, it is well worth studying the winning process, which falls into three steps:

1) Forcing the rook back into a third-rank defence and breaking that down (this is the stage where computers have had the greatest impact, by showing how tough the third-rank defence is).

2) Reaching the Philidor position from a second-rank defence, which is most often applied in practice.

3) Winning the rook from Philidor’s position.

We will work backwards through this process, and thus start with the third step:

1 \text{\textit{Wf5}}+

For 1 \text{\textit{Wd6}} see E10.01.

1...\text{\textit{ad8}} 2 \text{\textit{ec5 ec7}}

Or:

a) 2...\text{\textit{ae8}} 3 \text{\textit{wc8}}+ \text{\textit{af7}} 4 \text{\textit{wd6 ea7}} 5 \text{\textit{wc4}}+ \text{\textit{sf8}} 6 \text{\textit{se6 at7}} 7 \text{\textit{wc5}}+ \text{\textit{sg8}} 8 \text{\textit{wd5 eg7}} 9 \text{\textit{sf6}}+ \text{\textit{sh8}} 10 \text{\textit{we5}} \text{\textit{ag8}} 11 \text{\textit{wh5}} ++ (10.03).

b) 2...\text{\textit{ae1}} 3 \text{\textit{wd3}}+ \text{\textit{ef7}} 4 \text{\textit{sd5 ef7}} 5 \text{\textit{sf3}}+ \text{\textit{ec7}} 6 \text{\textit{wg4 ef7}} 7 \text{\textit{wf4}}+ \text{\textit{se8}} 8 \text{\textit{sd6 ed1}}+ 9 \text{\textit{se6 ec1}}+ 10 \text{\textit{sf6}} wins the rook.

3 \text{\textit{wd5 ed7}} 4 \text{\textit{we5}}+ \text{\textit{sb7}} 5 \text{\textit{hb5 ec7}} (D)

The easiest winning method is to transfer the move to Black:

1 \text{\textit{wb5}}+

1 \text{\textit{wd5}} is as good.

1...\text{\textit{ab8}} 2 \text{\textit{wa1}}+ \text{\textit{ab8}}

2...\text{\textit{ab7}}?? 3 \text{\textit{wh8}}#.

3 \text{\textit{wa5}}

Now Black is in zugzwang and loses his rook.

3...\text{\textit{ab1}}

Or: 3...\text{\textit{ae7}}?? 4 \text{\textit{wb4}}++; 3...\text{\textit{ab2}}?? 4 \text{\textit{we5}}+ ++; 3...\text{\textit{ag7}} 4 \text{\textit{we5}}+++; 3...\text{\textit{ah7}} 4 \text{\textit{we5}}+ \text{\textit{sa8}} 5 \text{\textit{wa1}}+ \text{\textit{sb8}} 6 \text{\textit{sb1}}++; 3...\text{\textit{sf7}} 4 \text{\textit{wb4}}+ \text{\textit{ec8}} (4...\text{\textit{sb8}} 5 \text{\textit{wa3}}+ \text{\textit{sb8}} 6 \text{\textit{wb3}}+++) 5 \text{\textit{wd6}}++; 3...\text{\textit{yb3}} 4 \text{\textit{we5}}+ \text{\textit{sa7}} 5 \text{\textit{wg7}}+ \text{\textit{sa8}} 6 \text{\textit{wg8}}++.

4 \text{\textit{wd8}}+ \text{\textit{sa7}} 5 \text{\textit{sd4}}+ \text{\textit{sa8}} 6 \text{\textit{h8}}+ \text{\textit{sa7}}

6...\text{\textit{ab8}} 7 \text{\textit{wa1}}#.

7 \text{\textit{wh7}}+ \text{\textit{sb8}} 8 \text{\textit{xb1}}+ \text{\textit{sc8}} 9 \text{\textit{sb7}}+ \text{\textit{sd8}}

10 \text{\textit{wd7}}#
6...\\text{c}1 7 \text{w}c4+ \text{e}c8 8 \text{b}b6 \text{d}d7 9 \text{d}d3+ \text{c}c8 10 \text{w}f5+ \text{d}d8 (10...\text{b}b8 11 \text{w}e5+ \text{c}c8 12 \text{w}e8#) 11 \text{g}5+ ++.
7 \text{w}e4 \text{b}b7+ 8 \text{c}c6 \text{a}a8 9 \text{d}d5 \text{a}a7 10 \text{d}d8 ++ (10.03)

The third-rank defence is very difficult to break down if you don’t know how, because it requires at least one counter-intuitive move to achieve that:

\begin{center}
\includegraphics[width=0.5\textwidth]{third_rank_defence.png}
\end{center}

1 \text{w}f4!!
(Nunn). Black’s rook now has no safe square on his third rank, so the king moves:
1...\text{d}d7 2 \text{a}a4+ \text{c}c7
2...\text{d}d8?! 3 \text{a}a5 \text{c}c7 4 \text{c}c5 ++.
3 \text{a}a7+
Forcing Black into the second-rank defence.
3...\text{b}b7 4 \text{c}c5+ \text{b}b8 5 \text{d}d6 \text{g}7 6 \text{b}b4+ \text{b}b7 7 \text{w}e4 \text{b}b6+ 8 \text{c}c5 \text{a}a7 9 \text{d}d4 \text{b}b7 10 \text{c}c6+ \text{a}a8 11 \text{d}d5 \text{b}b8 12 \text{a}a5 +-.
We have reached Philidor’s position (10.03).

The rook can only draw if there is an immediate perpetual check or stalemate available. The most famous has been known for quite a long time (see following diagram):
1...\text{h}7+! 2 \text{w}g2 \text{g}7+! 3 \text{w}f3 \text{f}7+! 4 \text{g}g4 4 \text{e}e4 \text{e}e7!=.
4...\text{g}g7+! 5 \text{w}f5 \text{f}7+! 6 \text{g}6
6 \text{w}g5 \text{g}7+! 7 \text{w}f6 \text{g}6+!=.
6...\text{g}g7+! 7 \text{w}h6 \text{h}7+! 8 \text{w}h7 stalemate

Reference work
Secrets of Pawnless Endings, Nunn, Batsford 1994, pp. 47-67

B) Queen vs Rook + Pawn(s)

Although the material-count is highly favourable for the queen, there are a lot of fortresses worth knowing and, even in the situations where the queen wins, it can be quite complicated.

A pawn on its second rank draws if it is not a rook’s pawn and the defending king and rook are next to it, because no encirclement by the attacking king is possible.

\begin{center}
\includegraphics[width=0.5\textwidth]{queen_vs_rook_pawn.png}
\end{center}

1 \text{g}3 \text{e}4 2 \text{e}3+
The rook just moves back and forth between the two squares protected by the pawn.
2...\text{f}4 3 \text{g}3 \text{c}6+ 4 \text{g}1
The king stays near the pawn. Black can’t make progress. Even an additional pawn on g4 or h4 wouldn’t help Black:
1  \( \text{f3+} \)  \( \text{g4} \) 2  \( \text{h3} \)  \( \text{c6+} \) 3  \( \text{h2!} \)
3  \( \text{f3+? g5} \) 4  \( \text{f1} \)  \( \text{e6} \) 5  \( \text{g2} \)  \( \text{e1} \) +.

After K.A.L. Kubbel

c) 1... \( \text{g6? 2 d3 e1} \) 3  \( \text{f4} \)  \( \text{e6} \) 4  \( \text{d7} \)  \( \text{c7} \)
5  \( \text{d6} \)  \( \text{f7} \) 6  \( \text{g5} \)  \( \text{c6} \) 7  \( \text{d7} \) +  \( \text{e7} \) 8  \( \text{d5} \)
9  \( \text{b7} \) +  \( \text{e7} \) 9... \( \text{g8} \) 10  \( \text{c7} \) \( \text{f8} \) 11  \( \text{d7} \)
12  \( \text{d6} \) +-- 10  \( \text{f3+} \)  \( \text{g8} \) 11  \( \text{e6} \)  \( \text{f8} \) 12  \( \text{d6} \) +.

Averbakh's and BCE give Kubbel's study with White's queen on d4 (instead of e3). In that case Black is lost: 1... \( \text{f1} \) 2  \( \text{d6+} \)  \( \text{f7} \) 3  \( \text{d7+} \)  \( \text{g8} \)
4  \( \text{e6+} \)  \( \text{f7} \) 5  \( \text{g4} \)  \( \text{g6} \) (5... \( \text{g8} \) 6  \( \text{c8} \) +! \( \text{e7} \) 7  \( \text{g5} \)  \( \text{f6} \) 8  \( \text{g8} \) +--) 6  \( \text{g5!} \)  \( \text{f8} \) 7  \( \text{h6} \) +--.

If the pawn is further advanced, it is no fortress any longer, because Black's king can successfully encircle White:

10.10

The winning process falls into three phases and zugzwang is the main weapon to achieve
each step. In the first phase the king has to cross the e-file:

1. \( \text{w}c7 \text{w}g2 \text{w}c2 + 3 \text{w}g1 \)
2. \( \text{w}g3 \text{w}d2 \text{w}g4 \text{w}e5 \text{w}e4 + \text{w}d5 \) and the first aim is achieved.
3. \( \text{w}d2 \text{w}4 \text{w}f1 \text{h}2 5 \text{w}e2 \text{w}g3 6 \text{w}g2 \text{w}h3 \)
4. \( \text{w}f2 \text{w}e5 8 \text{w}g4 \text{d}5 \)

Next the king needs to cross the fifth rank.
5. \( \text{w}e2 \text{w}h6 10 \text{w}f2 \text{d}2 + 11 \text{w}f1 \text{w}e3 12 \text{w}g2 \text{w}c4 + 13 \text{w}g3 \text{w}f1 14 \text{w}e4 \text{w}g1 + 15 \text{w}f4 \)

---

With a knight’s pawn, the same procedure is impossible as the queen does not have enough room on the shorter side:

![Diagram](image)

**10.10A**

White is again in zugzwang and has to make a concession.

18 **w**e5+

The winning method after 18 **w**a4 is different. The tablebase provides the following line:

18...\( \text{w}c6 19 \text{w}a2 (19 \text{w}c4 + \text{w}f6 20 \text{w}e2 \text{w}g5 + 21 \text{w}e4 \text{w}c1 22 \text{w}g2 \text{w}e1 + 23 \text{w}d3 \text{w}f1 + \text{w}+) \)
19...\( \text{w}c6 20 \text{w}a6 + \text{w}f7 \) and now:

a) 21 **w**a4 \( \text{w}g6 22 \text{w}a6 + \text{w}h5 23 \text{w}e6 \text{w}g5 + 24 \text{w}e4 \text{w}h4 + 25 \text{f}4 \text{w}e1 + 26 \text{w}f5 \text{w}b1 + 27 \text{w}e5 \text{w}g4 28 \text{w}f6 \text{w}e1 + 29 \text{w}h6 \text{w}e8 30 \text{w}d5 \text{w}d7 + 31 \text{w}d6 \text{w}f7 + \text{w}+)

b) 21 **w**e6 \( \text{w}f2 22 \text{w}g4 \text{w}g2 + 23 \text{w}f4 \text{w}h3 24 \text{w}e3 \text{w}h4 25 \text{w}c7 + \text{w}e6 26 \text{w}e8 \text{w}c1 + 27 \text{w}f4 \text{w}e5 + 28 \text{w}g4 \text{w}d5 29 \text{w}a8 \text{w}c7 30 \text{w}h3 \text{w}c6 31 \text{w}a7 \text{w}e5 32 \text{w}g3 \text{w}g6 + 33 \text{w}h3 \text{w}f4 34 \text{w}a4 + \text{w}xf3 +

18...\( \text{w}d4 19 \text{w}e4 + \text{w}d3 \)

The king’s next aim is \( \text{f}2 \), when the pawn is forced to advance and Black can win it afterwards.

20 **w**e8 \( \text{w}d4 + 21 \text{w}e4 \text{w}g7 22 \text{w}e3 + \text{w}d2 23 \text{w}e4 \text{w}g6 24 \text{w}e5 \text{w}f6 + 25 \text{w}f5 \text{w}d4 + 26 \text{w}g5 \text{w}g7 + 27 \text{w}f4 \text{w}e2 28 \text{w}e4 \text{w}f2 29 \text{f}4 \text{w}e7 + 30 \text{w}e5 \text{w}d4 + 31 \text{w}f5 \text{w}f3 +

---

Otherwise:

a) Not 2 \( \text{w}f2 ? \text{w}h2 + ! 3 \text{w}f3 \text{w}g1 ! --+

b) 2 \( \text{w}g1 \text{w}h3 3 \text{w}f2 =

c) 2 \( \text{w}h4 \text{w}c2 + 3 \text{w}g1 \text{w}d1 + 4 \text{w}g2 (4 \text{w}f2 \text{w}d2 + 5 \text{w}f1 \text{w}e3 6 \text{w}g1 ! \text{w}c2 + 7 \text{w}g1 ! =) \)
4...\( \text{w}e2 + 5 \text{w}g1 ! \text{w}f3 6 \text{w}h2 ! \text{w}g4 7 \text{w}h4 + ! \text{w}xg3 (7...\( \text{w}g8 8 \text{w}h2 ! =) 8 \text{w}h3 + ! \text{w}xh3 stalemate.

2...\( \text{w}b7 + 3 \text{w}h2 =

To summarize the results we state the following rule for rook and pawn (not a rook’s pawn!) against the queen in positions such as 10.10: if the pawn is on its original square or if it is a knight’s pawn the position is drawn, as long as the attacking king is cut off and can’t get behind the pawn.

Against a rook’s pawn on the third rank, the attacking king must approach along the rook’s file (see following diagram):

1 \( \text{w}f3 ?

Surprisingly, this natural move throws away the win. To put Black in zugzwang it is necessary to advance from directly in front of the pawn: 1 \( \text{w}h3 \text{g}5 2 \text{w}e4 \text{h}5 + 3 \text{w}g4 \text{g}5 + 4 \text{h}4 ! \text{g}8 (4...\text{w}f6 5 \text{w}h7 \text{g}6 6 \text{w}h5 \text{g}5 + 7 \text{w}xh6 --) 5 \text{w}e7 \text{h}8 6 \text{w}f7 \text{g}7 7 \text{w}e8 + \text{w}h7 (7...\text{g}8 8 \text{w}e5 + \text{w}h7 9 \text{w}e4 + \text{w}h8 ?? 10 \text{w}h5 + --) 8 \text{w}e4 + \text{w}g8 9 \text{w}h5 \text{h}7 ?? 10 \text{w}e6 + \text{w}g7 11 \text{w}f6 + \text{w}h8 12 \text{w}f6 + \text{w}g8 13 \text{w}g6 +

1...\( \text{w}g5 2 \text{w}e4 \text{g}6 3 \text{w}e7 + \text{w}g8 4 \text{w}f4 \text{g}5 5 \text{w}f6 \text{h}7 ! 6 \text{w}f7 + \text{w}g7 7 \text{w}f5 + \text{w}g8 8 \text{w}e6 +
1. $\text{wa}7+ \text{\textbullet b5 } 2 \text{\textbullet g5 a4 } 3 \text{\textbullet f5 e4 } 4 \text{e4 } c3+ 5 \text{d5 } b3 6 \text{e3+} \ 
6 \text{c5 is faster: } 6...\text{c4+ } 7 \text{\textbullet b5 } (7 \text{d5? a3!} =) 7...\text{b4+} 8 \text{\textbullet a5 c4 } 9 \text{e3+ c3 } (9...\text{b2} \ 
10 \text{\textbullet b5 c3 } 11 \text{d4 } +) 10 \text{d6+ b3 } 11 \text{\textbullet b6 c4 } 12 \text{e5 h4 } 13 \text{c5+ h3 } 14 \text{c3+ } +. \ 
6...\text{a2 } 7 \text{\textbullet c5 b3 } 8 \text{e2+!} \ 
8 \text{d2+? } \text{b2 } 9 \text{d5+ b3 } 10 \text{c4 a3! =} \ 
8...\text{b2 } 9 \text{e6+ b3 } 10 \text{c2+! b2 } 11 \text{c4+! a3 } 12 \text{d4 b1 } 13 \text{d2 e8 } 14 \text{d6 } \ 
\text{d1 } 15 \text{wa6 } \text{d4 } 16 \text{wa5 } \text{b1 } 17 \text{c4 c5 } 18 \text{a7 b1 } 19 \text{c3 } \text{c1+ } 20 \text{d2 } \text{b1 } 21 \text{c2 } \ 
\text{b2+ } 22 \text{c1 } \text{b3 } 23 \text{d4 } \text{b5 } 24 \text{c2 } \text{b3 } 25 \text{c5+ a2 } 26 \text{c4 a3 } 27 \text{d4 } \ 
Black is now in a fatal zugzwang. \ 
27...\text{h3} \ 
Or: 27...\text{b7 } 28 \text{a1+ b4 } 29 \text{b2+ } +; 27...\text{a5 } 28 \text{a1+ b4 } 29 \text{c3#}. \ 
28 \text{b2# } (1-0) \ 

If the rook supports the pawn from behind, the queen also has very good winning chances, even if the pawn has reached its sixth rank:

[Diagram]

10.13 $=\text{-}\ 
J. Kling and B. Horwitz, 1851

This is a reciprocal zugzwang. If it is White to move, he can’t lose a tempo. However, with Black to move, a triangulation with the king serves the purpose:

1...\text{e8 } 2 \text{d6+!} \ 
2 \text{d5+? e7! } 3 \text{f7+ d8! } 4 \text{b7 d6! } 5 \text{b5 } (5 \text{d5+ e7! } =) 5...\text{e8 } 6 \text{c6 e7!} \ 
(now White is to play in the initial position and he can’t transfer the move to Black) 7 \text{f1 e2+!} \ 
8 \text{e1! } \text{e8! } 9 \text{d6+ c8 =.} \ 
2...\text{c8 } 3 \text{f1 e2+ } 4 \text{c1! } +\text{--} \ 
Black has to abandon his pawn.
The zugzwang motif also plays a crucial role in the winning process in the next example:

10.14
I. Yandemirov – V. Polovodin
St Petersburg 2000

1...We4+?!  
This lets the king get on the short side of the pawn, where stalemate motifs lurk and the win is much more complicated. The right procedure to win on the long side of the pawn was shown by Hecht in CBM 76: 1...Wb5+ 2 a3 Wc5+ 3 a4 (3 a3 Wc1 4 Wf3 Wd1+ 5 We4 We2+ 6 Wxe4 Wc1 7 Wg4 We5 8 Wg1+ 9 Wh4 Wg2 10 Wg3 We2 --++) 3...Wf4 (forcing the rook back) 4 Wf1 We4+ 5 a2 Wc4+ 6 Wc1 Wd3 (zugzwang no. 1) 7 Wf2 Wg7 8 Wf6+ (8 Wg2+ Wf7 9 We2 Wb1+ ++) 8...Wf7! (this is zuzgwang no. 2) 9 Wf1 Wc3+! 10 a3 Wg8! 11 f7+ Wf8! --+ and finally zugzwang no. 3 decides.

2 Wf1 Wd3+?!  
Setting the clock back by 32 moves, as the tablebase informs us.

3 Wg2 Wd5+ 4 Wg1 Wa8 5 Wf2 Wg8 6 Wf3?!

6...Wg5?! 7 Wf1 Wh4+ 8 Wa2 Wg4+ 9 Wf2 Wc4+

9...Wf4+ 10 Wg1?! Wh3! (10...Wg3+ 11 Wh1 Wc7! 12 f6+! Wf7 13 Wf2!! = Hecht) 11 Wf2 Wg3+! 12 Wf1 Wg4! --+ forces the king to the long side of the f-pawn.

10 Wg1 Wg5 11 f6?! Wg4?!

11...Wg4+ is necessary: 12 Wf2 Wx6+--; 12 Wh1 Wh3+ 13 Wg1 Wg3+ 14 Wh1 Wh4 15 Wf7 Wh3+! ++) 12...Wh4 13 Wf7 We2+ 14 Wg1 Wh3+ -->

12 Wf2!

C) Queen + Pawn(s) vs Rook + Pawn(s)

If the pawns are all on one wing and the rook has secure outposts, there are good chances of building a fortress. The following example is typical:

10.15
K. Georgiev – V. Anand
Las Palmas 1993

1 Wb6+ 2 Wa3 Wb5 3 We4 Wb8 4 b3 Wa8 5 Wc2 Wb8 6 Wc3 Wb7 7 Wc4 Wb8 8 We7+ D 9 Dd4 Dd6

Staying passive with 9...Wc8? leads to a disaster: 10 Wd6! (zugzwang) 10...b6 10...Dg5 11 Wf8+ Dd7 12 Wf7+ Dc8 13 Wc8+ Dc7 14 We7+ --) 11 Dc6+ Db8 12 Dd7 Da8 13 Dc7 +--

10 Wb8 (D)
10...g5
Or 10...e5 =, but not 10...c6? 11 d8 b6
(11...e5 12 f6+ =; 11...f5 12 c8+ =; 11...h5 12 e8+ 12 c8+ d6 13 xax6 +)
11 b3 b5 12 a4 d5 1/2-1/2

If the rook has two secure outposts, the defender might even hold when the number of
pawns is equal.

V. Salov – V. Korchnoi
Wijk aan Zee 1997

Salov managed to maintain his fortress intact:
1 d5 c1+ 2 g3 c7+ 3 g2 f4 4 h5
f6 5 d5

Not, of course, 5 f5+?? xfx5 6 gx5 xfx5 =+. One always has to watch out for possibilities of giving back the material in order to simplify into a won pawn endgame.

5...e6 6 h5 d2+ 7 g3 f6 8 f5 c1 9
h5 g1+ 10 f4 c1 11 b5
11 xhx6?? e5#.
11...c1+ 12 g3 g1+ 13 f4 h2+ 14
e3 f7 15 h5 g1+
15...xh5?? 16 g6 f5! =
16 f4 g6 17 h5 h2+ 18 e3
18 e4? c2+ 19 f4 c4+ =.
18...f7 19 h5 g1+ 20 f4 e6 21 h5
e6?? c3 d6 23 f5 b2 24 h5 e6
25 f4 e3 26 g3 c7+ 27 g2 f7??
This move sets a last nasty trap.
28 b5!

Staying in position is more important than grabbing material! Otherwise:
a) 28 g3? is bad in view of 28...xh5! 29
gh5 f5 =.
b) 28 xhx6? e5 29 g3 (29 h5+ f4 30
f5 b7 31 f5+ e3 32 g3 e7+ 33 g2
d6 =) 29...d4 and now:
   b1) 30 f2 f5 =.
   b2) 30 h8 c7+ 31 f2 f5 =.
   b3) 30 h1 c7+ 31 f2 f5 32 gxf5 c2+ =.
   b4) 30 h5 c7+ 31 g2 e3 32 f5 d6
   33 h5?? d2+ 34 h3 =.
28...e8 29 f5 g6 30 b5 1/2-1/2

If there are pawns on both wings, the queen's chances increase considerably. Dunninton used the next example in his book 101 Winning Chess Strategies to demonstrate how to unhide a defending rook and to destroy its outpost:

W

S. Rublevsky – I. Zakharievich
Russian Clubs Cup (Maikop) 1998

1 g4! hxg4
The knights are standing next to each other and the king is between them and the attacking king. However, even with this optimal piece set-up Black still has to play accurately to secure the draw:

1. \( \text{W} a5+ \text{K} d6! \ 2. \text{K} d3 \text{K} e5+ \\
2...\text{K} d5?? loses, but this is by no means trivial: \ 3. \text{W} a3+ \text{K} e5 \ 4. \text{W} b2+ \text{K} f5 \ 5. \text{W} f2+ \text{K} e5 \ 6. \text{W} e1+ \text{K} f5 \ 7. \text{W} a5 \text{K} e5 \ 8. \text{W} e4 \text{K} f4 \ 9. \text{W} e1+ \text{K} d6 \ 10. \text{W} g3 \text{K} e5 \ 11. \text{W} e5 \text{K} e4 \ 12. \text{W} h4 \text{K} f5 \ 13. \text{W} d4 \text{K} f6 \ 14. \text{W} f2+ \\
3. \text{W} c4 \text{K} e6

After 3...\text{K} d7? the knights get stuck to each other and immobilized: 4. \text{W} d2+ \text{K} e7 \ 5. \text{W} b4 \text{K} e5 \ 6. \text{W} a5 \text{K} d5 \ 7. \text{W} d2+ \text{K} e5 \ 8. \text{W} e6 \text{K} e4 \ 9. \text{W} d6 \text{K} f5 \ 10. \text{W} e3 \text{K} g4 \ 11. \text{W} d5 \text{K} f5 \ 12. \text{W} f3+ \text{K} g5 \ 13. \text{W} d6 \text{K} h4 \ 14. \text{W} g2 \text{K} h5 \ 15. \text{W} g7 \text{K} h4 \ 16. \text{W} g6 \text{K} h3 \ 17. \text{W} d5 \text{K} g5?? \text{K} e4+! =) \ 17...\text{K} h4 \ 18. \text{W} f5 \text{K} g3 \ 19. \text{W} d4 \text{K} h4 \ 20. \text{W} e3 \text{K} e3 \ 21. \text{W} g5+ \text{K} h3 \ 22. \text{W} f3+ \\
4. \text{W} b5

4. \text{W} a3+ \text{K} e5! =.

4...\text{K} e7? \ 5. \text{W} b8 \text{K} f7 \ 6. \text{W} b5 \text{K} g6 \ 7. \text{W} e5 \text{K} f7
8. \text{W} c6 \text{K} f8! =

Aiming at \text{g6}.

9. \text{W} f5 \text{K} g6 \ 10. \text{W} d6 \text{K} g7? \ 11. \text{W} e6 \text{K} f8+! \ 12. \text{W} e7 \text{K} g6+

Even 12...\text{K} g8+ is playable.

Reference work
Secrets of Painless Endings, Nunn, Batsford 1994, pp. 298-308
B) Queen vs Bishop and Knight

The queen normally wins against bishop and knight, but there is exactly one fortress (which can be set up in both corners that the bishop controls, of course):

\[
\text{...}
\]

\[
10.19
\]

\[
==/=
\]

M. Karstedt, 1903

Black's bishop and knight control a6, b6, c6, c7 and c8 creating a barrier against White's king, which can't be broken by zugzwang: 1 \(\text{\textit{b5}}\) \(\text{\textit{a7}}\) 2 \(\text{\textit{d8}}\) \(\text{\textit{a8}}\) 3 \(\text{\textit{a5}}\) \(\text{\textit{b7}}\) =.

Reference work

\textit{Secrets of Pawnless Endings}, Nunn, Batsford 1994, pp. 282-7

With additional pawns, one also has to watch out for possible fortresses:

\[
W
\]

\[
10.19A
\]

\[
==/=
\]

V. Anand - J. Costa

\textit{Biel 1988}

1 \(h5\)?

White plays this advance at an inappropriate moment, since no white passed pawn is created. Better is 1 \(\text{\textit{e5?}}\) \(\text{\textit{g4}}\) 2 \(\text{\textit{d5}}\) \(\text{\textit{f6}}\) 3 \(\text{\textit{c6}}\) \(\text{\textit{e8}}\) 4 \(h5\) \(gxh5\) 5 \(\text{\textit{xf5}}\) =.

1...\(\text{\textit{xh5}}\) 2 \(\text{\textit{wxg6}}\) \(\text{\textit{g7}}\) 3 \(\text{\textit{d5}}\) \(\text{\textit{h4}}\) 4 \(\text{\textit{c6}}\) \(\text{\textit{e1}}\) 5 \(\text{\textit{d6+}}\) \(\text{\textit{f7}}\) 6 \(\text{\textit{d5+}}\) \(\text{\textit{f8}}\) 7 \(\text{\textit{d6}}\) \(\text{\textit{c3}}\) 8 \(\text{\textit{d7}}\)

Now Black is in zugzwang and so the b-pawn is lost. However, this is not important.

8...\(\text{\textit{e6}}\)

Not 8...\(\text{\textit{c1?!}}\) 9 \(\text{\textit{wc5+}}\) \(\text{\textit{g8}}\) 10 \(\text{\textit{we3}}\) \(\text{\textit{c3?}}\)

(10...\(\text{\textit{h4!}}\) 11 \(\text{\textit{b3+}}\) \(\text{\textit{f8}}\) =) 11 \(\text{\textit{c7++}}\).

9 \(\text{\textit{wc5+}}\) \(\text{\textit{g8}}\) 10 \(\text{\textit{xb4}}\) (D)

\[
B
\]

\[
10.19B
\]

\[
==/=
\]

Without the f-pawns Black would be lost (with the black king on f7 and the white queen on g3 Black to move would have to abandon his fortress-like set-up).

10...\(\text{\textit{f7}}\) 11 \(\text{\textit{b3+}}\) \(\text{\textit{g6}}\) 12 \(\text{\textit{g8}}\) \(\text{\textit{h4}}\) 13
\(\text{\textit{d6}}\) \(\text{\textit{d6}}\) 14 \(\text{\textit{b3}}\) \(\text{\textit{h4}}\) 15 \(\text{\textit{h3}}\) \(\text{\textit{f6}}\) 16 \(\text{\textit{g2+}}\)
\(\text{\textit{f7}}\) 17 \(\text{\textit{d7}}\) \(\text{\textit{h4}}\) 18 \(\text{\textit{d5+}}\) \(\text{\textit{g6}}\) 19 \(\text{\textit{g6}}\) \(\text{\textit{f6}}\)
20 \(\text{\textit{d6}}\) \(\text{\textit{h4}}\) 21 \(\text{\textit{f8}}\) \(\text{\textit{f6}}\) 22 \(\text{\textit{d5}}\) \(\text{\textit{c3}}\) 23 \(\text{\textit{wc5}}\)
\(\text{\textit{f6}}\) 24 \(\text{\textit{d6}}\) \(\text{\textit{e8+}}\) 25 \(\text{\textit{d7}}\) \(\text{\textit{g7}}\) 26 \(\text{\textit{g1+}}\) \(\text{\textit{f7}}\)
27 \(\text{\textit{g3}}\) \(\text{\textit{d4}}\) 28 \(\text{\textit{b3+}}\) \(\text{\textit{g6}}\!\).

Not 28...\(\text{\textit{f6?}}\) 29 \(\text{\textit{b4}}\) \(\text{\textit{a7}}\) 30 \(\text{\textit{wa3}}\) \(\text{\textit{g1}}\) 31
\(\text{\textit{wa1+}}\) =.

29 \(\text{\textit{g8}}\) \(\text{\textit{f6}}\) 30 \(\text{\textit{d6}}\) \(\text{\textit{h4}}\) 31 \(\text{\textit{wa8}}\) \(\text{\textit{f6}}\) 32
\(\text{\textit{wc6}}\) \(\text{\textit{f7}}\) 33 \(\text{\textit{g2}}\) \(\text{\textit{e7+}}\) 34 \(\text{\textit{d7}}\) \(\text{\textit{h4}}\) 35 \(\text{\textit{wh3}}\)
\(\text{\textit{f6}}\) 36 \(\text{\textit{g3}}\) \(\text{\textit{d4}}\) 37 \(\text{\textit{d6}}\) \(\text{\textit{f6}}\) 38 \(\text{\textit{d5}}\) \(\text{\textit{e7}}\) 39
\(\text{\textit{wxg7+}}\) \(\text{\textit{f2}}\)

C) Queen vs Two Bishops

The situation is very similar to the bishop-and-knight case: there is exactly one fortress, which can be set up near all four corners.
1 \textit{W}c7+ \textit{B}c8 2 \textit{W}e6+
2 ...\textit{B}c4 \textit{B}b8! 3 \textit{B}b4 \textit{B}c8 4 \textit{W}d6 \textit{B}b7! 5 \textit{B}a4 \textit{B}a7! 6 \textit{W}e7+ \textit{B}b8 = and Black’s fortress remains in place.
2 ...\textit{B}b7 3 \textit{W}d6 \textit{B}a7 4 \textit{W}e7+ \textit{B}b6!
4 ...\textit{B}b8? 5 \textit{B}a5! \textit{B}b7 6 \textit{W}d8+ \textit{B}c8 7 \textit{B}b5 \textit{B}g1 8 \textit{B}c6 \textit{B}h2 9 \textit{W}b6+ \textit{B}a8 10 \textit{B}a5+ \textit{B}b8 11 \textit{W}b4+ ++ .
5 \textit{W}d8+ \textit{B}b7! 6 \textit{B}a5 \textit{B}c5! =
White can’t prevent ...\textit{B}b6(+), which sets up Lolli’s fortress again.

Apart from Lolli’s fortress, all other positions are lost. However, it should be noted that in several quite normal-looking positions, especially those similar to Lolli’s fortress, it requires more than fifty moves to win a bishop and so they are drawn with respect to the fifty-move rule. In absolute terms though, the fortress only holds near the corner.

\textbf{Reference work}

\section*{10.4 Queen vs Rook and Minor Piece}

Normally a queen is worth more than a rook and minor piece, but if the material is very reduced it can be difficult to prove that, especially if the pieces have safe outposts and can’t be forced into zugzwang. To sharpen the reader’s eye for this important subject, we give some fortresses:
1...\texttt{c2} \texttt{d6} 2 \texttt{e3} \texttt{e8+} 3 \texttt{d4} \texttt{f8} 4
\texttt{f4+} \texttt{e7} 5 \texttt{e4} \texttt{f6} 6 \texttt{b5} \texttt{d8} 7 \texttt{a6}
\texttt{c5+} 8 \texttt{a7} \texttt{d7} 9 \texttt{a4} \texttt{e8} 10 \texttt{c4+} \texttt{d8} 11
\texttt{d5} \texttt{c7} 12 \texttt{a6} \texttt{c5+} 13 \texttt{b5} \texttt{d7} 14 \texttt{e4}
\texttt{d6} 15 \texttt{c4} \texttt{c7} 16 \texttt{d4} \texttt{d6} 17 \texttt{e3} \texttt{f8}
\texttt{1/2-1/2}

\textbf{B. Carlier – D. de Vreugt}
\textit{Dutch Ch qual (Rotterdam) 2000}
1 \texttt{c6} \texttt{g7} 2 \texttt{c8} \texttt{f8}
Not, of course, 2...\texttt{f5}+?? 3 \texttt{xf5} \texttt{xf5} 4
\texttt{xf5}+--
3 \texttt{d7}+ \texttt{f7} 4 \texttt{e6} \texttt{f6} \texttt{1/2-1/2}
The next two examples show that it is not always possible to construct a fortress:

\textbf{V. Anand – J. Plaskett}
\textit{British Ch (Blackpool) 1988}
1...\texttt{a7} 2 \texttt{b3} \texttt{b7} 3 \texttt{g8} \texttt{c2+} 4 \texttt{b2}
\texttt{f5} 5 \texttt{g2+} \texttt{a7} 6 \texttt{b3} \texttt{b8} 7 \texttt{g8+} \texttt{b7} 8
\texttt{e8} 9 \texttt{c2+} 10 \texttt{a2} \texttt{f5} 10 \texttt{b2} \texttt{c2+} 11 \texttt{b3}
\texttt{c7} 12 \texttt{g8} \texttt{c2+} 13 \texttt{b2} \texttt{f5} 14 \texttt{g2+} \texttt{a7}
\texttt{1/2-1/2}
In this position Black’s passed b-pawn proves too strong:
1...f7 2 c4 b3 3 b6 c4 4 f3 f1 5
b4 b2 6 c2
6...xb2!! also comes into consideration although after 6...h1+ 7 c2 (7 f4? c5+ 8 xex5 wh8+! 7...wxe4 8 xxd2 3xh7 White should be lost in the long run.
6...c1 7 d3 d1+ 8 e4 g4+ f4 f5+
10 d4 d5+ 11 c3 c5+ 12 c4!!
Black also wins after 12 b3?? c1 13 a4
xd1+ 14 b3 xd3 ++ or 12 c4?? a3+ 13
d4 xd3+ 14 xd3 b1 wh ++ (Hecht in MegaBase 2001).
12...xb4+ 0-1

10.5 Queen vs Two Rooks

Two rooks usually match a queen and a pawn but the specific features of the given position are very important. A crucial role in the evaluation is played by king safety and pawn-structure — especially (connected) passed pawns and outposts for the rooks.

First we consider situations where the queen feels at home (see following diagram).

Black has many weak pawns and an exposed king, while his c8-rook is not so easily brought into an attack on White’s king:
1 g5 hxg5
1...c1+ frees White’s king at once: 2...g2
c2+ 3 g3 c7 4 f5 h5 xg5 5 h5 xg5 f8
xb5 c5 6...f2 7 xxa5 g2+ 8 h4
9 \( \text{Wc7+} \text{Sh6} \) 10 \( \text{Wd8} \) and the threat of \( \text{We8#} \) gives White a clear advantage) 7 \( \text{Wh7+} \text{Sh8} \) 8 \( \text{Wg7±} \).

2 \( \text{Wf5+} \text{Sh7} \) 3 \( \text{Wxg5+} \text{Sh6} \) 4 \( \text{Wxb5} \text{f8} \) 5 \( \text{Wd7+} \text{Sh8} \) 6 \( \text{Wc6+} \).

White should take on d6 sooner or later, although the win is by no means easy because White's king is cut off: 6 \( \text{Wxd6} \text{c2} \) 7 \( \text{g1} \) \( \text{xb2} \) (7...\( \text{Wf3} \)?) 8 \( \text{Wg6+} \text{Sh8} \) 9 \( \text{Wh5+} \text{Wg8} \) 10 \( \text{Wxa5} \)

6...\( \text{Wh7} \) 7 \( \text{Wd7+} \text{Wg8} \) 8 \( \text{Wg2} \text{C2} \) 9 \( \text{g3} \) \text{Cf2} ?

The greedy 9...\( \text{Wxb2} \) gives Black very good drawing chances; e.g., 10 \( \text{Wxd6} \text{Bf2} \) 11 \( \text{Wg6+} \text{Sh8} \) 12 \( \text{Wh5+} \text{Wh7} \) 13 \( \text{Wxa5} \text{Cf2} \) 14 \( \text{Wg4} \text{Wd3} \)±

10 \( \text{Wxd6} \)

Now White's connected passed pawns decide the outcome.

10...\( \text{Wg7} \)

10...\( \text{Xxb2} \) 11 \( \text{Wg6+} \text{Wh8} \) 12 \( \text{Wh5+} \text{Wg8} \) 13 \( \text{Wxa5} \text{Bf2} \) 14 \( \text{Wd5+} \text{Wh7} \) 15 \( \text{c5} \)±

11 \( \text{Wd5} \text{Wh8} \) 12 \( \text{e5} \text{Wh7} \) 13 \( \text{Wh3} \text{Gg6} \) 14 \( \text{d4} \text{Wf1} \) 15 \( \text{We4} \text{gg1} \) 16 \( \text{d5} \text{Hh1} \)

16...\( \text{Me1} \) 17 \( \text{Wf5} \text{gg7} \) 18 \( \text{Wf8+} \text{Sh7} \) 19 \( \text{Wf3} \text{gg1} \) (after 19...\( \text{Xe5} \) Black loses a rook: 20 \( \text{d6} \text{gg7} \) 21 \( \text{Wf4} \text{Xb5} \) 22 \( \text{Wxe4} \text{Wg7} \) 23 \( \text{Wg4+} \)++) 20 \( \text{d6} \text{gg1}+ \) (20...\( \text{Xe5} \) 21 \( \text{d7} ++ \)++) 21 \( \text{Xg4} \text{Xg1}+ \)

22 \( \text{Wxf5} \text{Xf1} \) 23 \( \text{Wxf1} \text{gg1}+ \) 24 \( \text{Wc6} ++\).

17 \( \text{Wg4} \text{gg8} \) 18 \( \text{gg5} \text{f7} \) 19 \( \text{e6} \text{e4} \) 0-0

Black resigned due to 19...\( \text{Xh7} \) 20 \( \text{Wxh7+} \text{Wxh7} \) 21 \( \text{Wc7} \text{e1} \) 22 \( \text{d6} \) ±

In the next example Black is even more tied down:

The only question is how to make progress for White. Shirov answered it convincingly by creating an inroad on the queenside:

1 \( c4! \text{b4} \)

Or:

1 a\( \text{a1} \text{a} \) 2 \( \text{b4} \text{a6} \) 3 \( \text{c5} \text{dxс} \) 4 \( \text{Wc5} \) ±

1 b\( \text{a1} \text{a} \) 2 \( \text{b4} \text{a6} \) 3 \( \text{c5} \text{dxс} \) 4 \( \text{Wc5} \) ±

1 c\( \text{c5} \text{dxс} \) 2 \( \text{Wc5} \) ±

1 d\( \text{d5} \text{exd} \) 2 \( \text{Wxd5} \text{exd} \) 3 \( \text{Wxd5} \text{exd} \) 4 \( \text{Wxd5} \text{exd} \) 5 \( \text{b3} \) ±

1 e\( \text{e5} \text{exd} \) 2 \( \text{Wc4} \text{exd} \) 3 \( \text{Wxd5} \text{exd} \) 4 \( \text{Wxd5} \text{exd} \) 5 \( \text{b3} \) ±

1 f\( \text{f5} \text{exd} \) 2 \( \text{Wc4} \text{exd} \) 3 \( \text{Wxd5} \text{exd} \) 4 \( \text{Wxd5} \text{exd} \) 5 \( \text{b3} \) ±

1 g\( \text{g5} \text{exd} \) 2 \( \text{Wc4} \text{exd} \) 3 \( \text{Wxd5} \text{exd} \) 4 \( \text{Wxd5} \text{exd} \) 5 \( \text{b3} \) ±

1 h\( \text{h5} \text{exd} \) 2 \( \text{Wc4} \text{exd} \) 3 \( \text{Wxd5} \text{exd} \) 4 \( \text{Wxd5} \text{exd} \) 5 \( \text{b3} \) ±

1 i\( \text{i5} \text{exd} \) 2 \( \text{Wc4} \text{exd} \) 3 \( \text{Wxd5} \text{exd} \) 4 \( \text{Wxd5} \text{exd} \) 5 \( \text{b3} \) ±

1 j\( \text{j5} \text{exd} \) 2 \( \text{Wc4} \text{exd} \) 3 \( \text{Wxd5} \text{exd} \) 4 \( \text{Wxd5} \text{exd} \) 5 \( \text{b3} \) ±

Against single passed pawns, the rooks have better chances:
White’s king is very safe and the d-pawn further advanced than Black’s c-pawn, and this is enough to give White the advantage. However, it is very difficult to convert it into victory.

1...\(\text{Wxd6}\) \(\text{a4x}c4\)

Or:

a) 1...\(\text{Wxd2} 2\text{Wxc5+ Wh3} 3\text{d6 Wxc4} 4\text{Wb6 Wh2} 5\text{Wxa6 Whd4} 6\text{Whb5}\).

b) 1...\(\text{Wd7?!} 2\text{Wxc5+ Wh3} 3\text{Wxa7 Whf1} (\text{or}\ 3...\text{Wxc4} 4\text{d6 Wxa6} 5\text{Wh7+ Whx4} 6\text{Whx4} 7\text{Wxd4} 6\text{Whb5 Whd4} 7\text{Wxa6+ Whb3} 8\text{Wd6 Wh2})\) is not totally clear as Black’s a-pawn gives him some hope.

2...\(\text{Wd7+ Wf4} 3\text{Wh5+ Whd3} 4...\text{Wb4+ Whc3} 5\text{Whb6 Whf3} 7\text{Wha5+ Whc1} 8\text{Wxa6 Whed4} 9\text{Whb5}\).

4...\(\text{Wd4!} 4...\text{Wxa6} 5\text{d7 Whd7} 6\text{Whf5+ -} 5\text{Whc5 Whf4} 6\text{Wg5 Whc3?} 6...\text{Whf2!} 7\text{d7 Whd7} 8\text{Wxa6 Whd2} 9\text{Wxa6 Whd6} 10\text{Whd4} 7\text{Whc5+?} 7...\text{Whh4+ Whd2} 10\text{Whg4+ Whd1} 11\text{Whh4+ Whc1} 12\text{Whg1 -}.

7...\(\text{Whf4} 8\text{Whg5+ Whd3?} 8...\text{Whc2! is necessary, so as not to lose a rook for the d-pawn.} 9\text{Whb5 Whd4} 10\text{Whf5 Whf4} 11\text{Whd6?} 11\text{Whc5 Whc3} 12\text{Whh6} + - .

12...\(\text{Whf1} 12\text{d7 Whd1!} 13\text{Whg4} 13...\text{Wha6 Whc3} 14\text{d8W Whxd8} 15\text{Whxa4 Whd4} 16\text{Whb5 Wha1} + .

13...\(\text{Whc3} 13...\text{Whg4??} 14\text{d8W Whxe1} 15\text{Whd7+ - + .} 14\text{d8W Whxd8} 15\text{Whb4+}

15...\(\text{Whxe1} 16\text{Whb7 Whf3} 17\text{Whxf3 Whd6} + .

15...\(\text{Whc2} 16\text{Wha4+ Whb2} 17\text{Wha6 Whd4} 17...\text{Whd6?!} 18\text{Wha4 Wha3} 19\text{a5 Wha4} 20\text{Whb6 Whd6} 21\text{Whc5 Whd5} 22\text{Whb6 Whd6} 23\text{Whc5 Whd5} 24\text{Whc3 Whb5} 25\text{Whg1} 25...\text{Whc7 Whd6} 26\text{g4 Whxg4+} 27\text{Whxg4 Whd5} + .

25...\(\text{Whd6} 26\text{Whf2 Whc6} 27\text{Whc3 Whd6} 28\text{Whb3+ Whxa5} 29\text{Whb4 Whb6} 30\text{Whxe3 Whb5} 31\text{Whc5 Whf6} 32\text{Whb3+ Whc6} 33\text{Wha4+ Whb7} 34\text{Whb4+ Whc6} 35\text{Whc4+ Whb6} 36\text{Whb4+ Whc6} 37\text{Whc4+ Whb6} 38\text{Whd4+ Wha7} = .

If the rooks support a dangerous passed pawn, their chances are improved. The following position is hard to assess, even though Black’s king is open and White has two extra pawns.

10.27

R LETELIER – G. STÄHLBERG
Mar del Plata 1946

10.28

A. Yusupov – Y. Dokhoian
Bundesliga 1993/4

1...\(\text{Whf4} 2\text{Wha6+ Whc7} 3\text{Wha7+?} 3\text{c5! is better. Stohl analysed 3...Whf6+ Whc8! 5 Whxe6+ Whb8, when “White gets the game position with an extra tempo, but his win still is not so clear; e.g., 6 Whb6+ Whc7 7 c6 Whf7 with the idea...Whc8.”} 3...\(\text{Whc8} 4\text{Whc5 Whc6} 5\text{Whc6+ Whb7} 6\text{Whf3}

6...\(\text{Whb7} 7\text{Whb6+ Wha8} = \) (Yusupov in CBM 40).

6...\(\text{Whd8} 7\text{Whd1 Whxf2} 7...\text{Whc2+! 8 Whc1 Whg8! 9 Whxf4+ Wha8 = .} 8\text{Whxf2 Whf3 9 Whh6 Whf6 10 Whh7 Whh8}

10...\(\text{Whd8+ 11 Whc2 Whh8} 12\text{Whg3+ Whc8} 13\text{Whg4+ Whh8} 14\text{Whf3 Whf8} 15\text{c5 Whc8} (15...\text{Whc6 -}) 16\text{Whd2 Whh8} 17\text{Whc6 - .}

11\text{Whg3+ Whc8} 12\text{Whg4+ Whd8} 12...\text{Whb8} 13\text{Whg7 Whd8+ 14 Whc2 Whf8} 15\text{Whh8 Whxh8} 16\text{Whg3+ -} = \) (Yusupov).
13 \textit{g5} 1-0

If there are no passed pawns, the rooks very often have the advantage, especially if they have secure outposts and are well coordinated.

\begin{center}
\begin{tikzpicture}
\end{tikzpicture}
\end{center}

\textbf{10.29}

\textit{A. Shirov – V. Anand}

\textit{Linares 1998}

```
"'The endgame is won for Black' (Anand). Nevertheless, it demands tedious manoeuvring and gradual improvement of the position of Black's rooks in order to be able to exploit the numerous white pawn weaknesses and win." (Hecht in CBM 64).

1 \textit{\textit{b1}!!}?

Shirov indirectly defends both pawns by threatening \textit{\textit{b8}+}, followed by \textit{\textit{b1}+}. However, this cannot save him in the long run.

1...\textit{\textit{d8}} 2 \textit{\textit{b7}} \textit{\textit{xc3}} 3 \textit{\textit{xa7}}

White has created a passed a-pawn, but it is not very dangerous. It will fall if Black manages to double rooks on the a-file.

3...\textit{\textit{cc8}} 4 \textit{\textit{a4}} \textit{\textit{a5}} 5 \textit{\textit{c7}} \textit{\textit{e6}} 6 \textit{\textit{b7}} \textit{\textit{e8}}

7 \textit{\textit{e6}} \textit{\textit{f6}} 8 \textit{\textit{c6}} \textit{\textit{e5}} 9 \textit{\textit{c4}} \textit{\textit{a5} \textit{+}.}

7...\textit{\textit{aa8}} 8 \textit{\textit{d7}} \textit{\textit{e8}} 9 \textit{\textit{c7}} \textit{\textit{d5}} 10 \textit{\textit{a5}} \textit{\textit{dxe5}} 11 \textit{\textit{a6}} \textit{\textit{f5}} 12 \textit{\textit{c6} \textit{f8}}!

"Now the doubling of the rooks on the a-file can no longer be prevented. The a-pawn falls. Afterwards, the kingside pawns will be wiped out." (Hecht).

13 \textit{\textit{h3}}

13 \textit{\textit{c5}} 14 \textit{\textit{a7}} 14 \textit{\textit{b6}} \textit{\textit{a8} \textit{+}.}

13...\textit{\textit{aa7}} 14 \textit{\textit{g4}} \textit{\textit{fa8}} 15 \textit{\textit{h4}} \textit{\textit{xa6}} 16 \textit{\textit{b7}} \textit{\textit{a5}} 17 \textit{\textit{c6}} \textit{\textit{f8}} 18 \textit{\textit{b6}} \textit{\textit{g5}} 19 \textit{\textit{b3}} \textit{\textit{h8}} 20 \textit{\textit{b4}} \textit{\textit{e8}} 21 \textit{\textit{a4}} \textit{\textit{d8}} 22 \textit{\textit{e4}} \textit{\textit{f5}} 23 \textit{\textit{gxh5}} \textit{\textit{f8}} 0-1
```

\textbf{10.30}

\textit{M. Krasenkov – F. Vallejo Pons}

\textit{Pamplona 1998/9}

White has queen and three pawns against the minor pieces, but Black's pieces seem to have secure outposts. However, Black's queenside and his king are not safe enough:

1...\textit{\textit{a5}}

1...\textit{\textit{xd4}} 2 \textit{\textit{h5}} \textit{\textit{xb2}} (2...\textit{\textit{g7}} 3 \textit{\textit{xe8}+ \textit{\textit{h7}} 4 \textit{\textit{g6}+ \textit{\textit{h8}} 5 \textit{\textit{h6} \textit{xb2}} 6 \textit{\textit{f7}+} 3 \textit{\textit{h6} with the idea \textit{\textit{h7}+} – (Khusman in CBM 69).}

2 \textit{\textit{h5}} \textit{\textit{xd4}} 3 \textit{\textit{c7} \textit{b5}}

3...\textit{\textit{f3}+ 4 \textit{\textit{f1}} \textit{\textit{d4}} 5 \textit{\textit{b3} \textit{+}.}

4 \textit{\textit{xa5} \textit{\textit{f3}+ 5 \textit{\textit{yg2 \textit{xb2}} 6 \textit{\textit{h3}! \textit{\textit{d4}} 7 \textit{\textit{xb5} \textit{g7}}}

7...\textit{\textit{xa2}} 8 \textit{\textit{w8+ \textit{\textit{h7}} 9 \textit{\textit{b7+ +.}

8 \textit{\textit{e8}} \textit{\textit{g5}+ 9 \textit{\textit{xf2} 9 \textit{\textit{g6}+ \textit{\textit{h8}} 10 \textit{\textit{h6} \textit{d4}} 11 \textit{\textit{a4} +} (Khusman).}

9 \textit{\textit{yg4 \textit{c7}}}

9...\textit{\textit{e4} 10 \textit{\textit{g6}+ \textit{\textit{h8}} (10...\textit{\textit{f8}} 11 \textit{f3} \textit{\textit{f6}+ 12 \textit{\textit{h4} \textit{xa2}} 13 \textit{\textit{h6}+ \textit{\textit{h7}} 14 \textit{\textit{yg2} +} – (Khusman).) 11 \textit{f3} \textit{\textit{f6}+ 12 \textit{\textit{yg3 \textit{xa2}} 13 \textit{\textit{h6}+ 14 \textit{\textit{g8} 14 \textit{\textit{yg2 +.}

10 \textit{\textit{yg3 \textit{c5} 11 \textit{f4 \textit{c3} 12 \textit{\textit{yg7 \textit{e1}+ 12 \textit{\textit{xa2}} 13 \textit{\textit{yg3 \textit{e1}+ 14 \textit{\textit{yg5 \textit{d5}} 15 \textit{\textit{yg3 \textit{a5} 16 \textit{\textit{yg1}+ \textit{\textit{f8} 17 \textit{\textit{c5+ +.}

13 \textit{\textit{yg3 \textit{xa2?}}}

13...\textit{\textit{f6} is better, but after 14 \textit{\textit{a4} +} – (Khusman) Black is lost in the long run.

14 \textit{\textit{yg1} 1-0}
The next example shows a very favourable situation for the minor pieces:

A) Queen and Knight vs Queen

The famous saying that queen and knight form a strong duo is attributed to Capablanca. Indeed, the knight’s L-shape movement ideally fits together with the queen. Nevertheless, the theoretical result of this endgame is a draw. However, if the defending king is badly placed near the edge or the queen is on an unfortunate square, there are a lot of winning motifs. These have been illustrated in many studies. When practical games are won by the queen and knight, it is most often by a series of checks forcing the king to the edge.

Black’s king is safe and the pieces have strong outposts. The queen on the other hand has no real targets.

1...\texttt{Qd}4+ 2 \texttt{hx}e6
2 \texttt{h}6?! \texttt{Qe}4+ 3 \texttt{e}3 \texttt{Qxc}5 4 \texttt{we}8 \texttt{Qf}5+ 5 \texttt{Qf}4 \texttt{Qd}6 6 \texttt{we}7 \texttt{Qce}4 --.

2...\texttt{bxc}6 3 \texttt{Qg}2 \texttt{Qd}5 4 h4?! h5
Fixing h4 as a target.
5 \texttt{Qh}3 \texttt{Qf}4+ 6 \texttt{Qh}2 \texttt{Qfe}6 7 \texttt{we}7 \texttt{Qh}6 8 \texttt{Qh}1 \texttt{Qf}8 9 \texttt{we}6 \texttt{Qg}7
9...\texttt{Qxc}5?! 10 \texttt{Qh}8#.

10 \texttt{Qe}7 \texttt{Qf}8 11 \texttt{We}3+ \texttt{Qh}7 12 \texttt{We}8 \texttt{Qg}8 13 \texttt{Qg}2 \texttt{Qf}6 14 \texttt{Qh}3 \texttt{Qde}6 15 \texttt{Wxc}6 \texttt{Qd}4 16 \texttt{Qd}5 \texttt{Qxc}5 17 \texttt{Bb}7 \texttt{Qd}4 18 \texttt{Qd}5 \texttt{Qh}7 19 \texttt{Qf}3 \texttt{Qg}7
20 \texttt{Qf}7 \texttt{Qd}4 21 \texttt{Qg}2 \texttt{Qfe}6 22 \texttt{Qh}3 \texttt{Qe}5 23 \texttt{Qe}7 \texttt{Qd}3 24 \texttt{Qe}3 \texttt{Qe}6

The knights defend each other thanks to the fork on f4.

25 \texttt{Qg}3 \texttt{Qe}5 26 \texttt{Qb}6 \texttt{Qf}8 27 \texttt{Qw}6 \texttt{Qf}7 28 \texttt{Qwe}7 \texttt{Qe}5+ 29 \texttt{Qh}3 \texttt{Qg}7 30 \texttt{Qg}2 \texttt{Qh}7 31 \texttt{Qh}3 \texttt{Qf}6 32 \texttt{Qw}6 \texttt{Qg}8 0-1

Lautier resigned as his h-pawn is doomed: 33 \texttt{Qd}7 \texttt{Qgh}6 34 \texttt{Qwe}6 \texttt{Qf}5 35 \texttt{Qwd}7 \texttt{Qf}6 --.

10.7 Queen and Minor Piece vs Queen

Obviously, there are two cases:

A: Queen and Knight vs Queen

B: Queen and Bishop vs Queen

The next position is more difficult (see following diagram).

Although Black’s king is near the centre, he is lost:

1 \texttt{Qf}4+! \texttt{Qe}6 2 \texttt{Qh}6+?

The knight has to enter the attack with check: 2 \texttt{Qe}5+! \texttt{Qe}7 3 \texttt{Qh}4+! \texttt{Qf}7 (3...\texttt{Qd}6 4 \texttt{Qg}3+ \texttt{Qe}7 5 \texttt{Qg}7+ \texttt{Qe}8 6 \texttt{Qd}7+ \texttt{Qf}8 7 \texttt{Qe}6+!
\texttt{Qe}8 8 \texttt{Qg}7#) 4 \texttt{Qh}7+! \texttt{Qf}6 5 \texttt{Qe}4+! \texttt{Qe}6 6
6 \texttt{Wf7+} \texttt{Gb6} 7 \texttt{Wb3+} \texttt{Cc7} 8 \texttt{Wg3+!} \texttt{Gb6} 9 \texttt{Cd7+!} \texttt{Gb7} 10 \texttt{Wf3+} \texttt{Ca7} 11 \texttt{Wa3+!} \texttt{Gb7} 12 \texttt{Cc5+!} \texttt{Gb8} 13 \texttt{Wg3+!} ++.

6...\texttt{Gb6} 7 \texttt{Cd7+!} \texttt{Cc7} 8 \texttt{Ce5+!} \texttt{Gb8} 9 \texttt{Wd8+} \texttt{Cb7} 10 \texttt{Wd7+} \texttt{Cb6} 11 \texttt{Cc4+} \texttt{Ca6} 12 \texttt{Wd6+} \texttt{Cb7} 13 \texttt{Wd7+} \texttt{Cb8}!?

13...\texttt{Ca6} 14 \texttt{Wa4+} \texttt{Cb7} 15 \texttt{Cd6+} \texttt{Cb8} 16 \texttt{We8+} \texttt{Ca7} 17 \texttt{Cb5+} \texttt{Cb7} 18 \texttt{Wb7+} \texttt{Cb6} 19 \texttt{Cc5+!} \texttt{Cb7} 20 \texttt{Cd6+} \texttt{Ca6} 21 \texttt{Wa3+!} ++.

14 \texttt{Wd8+} \texttt{Cb7} 15 \texttt{Cd6+} \texttt{Ca7} 16 \texttt{Wa5+} \texttt{Cb8} 17 \texttt{Wb6+} 1-0

However, not all the moves have to be checks. Rinck achieved three quiet moves in the following masterpiece:

1 \texttt{Cc5!} \texttt{Wa2}
1...\texttt{Wa8} 2 \texttt{Cd7+!} \texttt{Ca8} 3 \texttt{Cb6+!} \texttt{Ca8} 4 \texttt{Wd6+!} \texttt{Cf7} 5 \texttt{Cd7+!} \texttt{Ff8} 6 \texttt{Cd5!} \texttt{Ff8} 7 \texttt{Wd6+!} \texttt{Cg7} 8 \texttt{Wf6+!} \texttt{Cg8} 10 \texttt{Ce7+!} +.-

2 \texttt{Cd7+!} \texttt{Cb7} 3 \texttt{Cc5+!} \texttt{Cb6} 4 \texttt{Wc8+} \texttt{Cg7} 5 \texttt{Wb7+!} \texttt{Cg8} 6 \texttt{Cf6!} \texttt{Wf2+!} 7 \texttt{Cf3!} \texttt{Wg3 8 We8+} \texttt{Ch7 9 Cg5+!} +-

The following game shows that the defender has to play carefully, even when the position is drawn (see next diagram):

1...\texttt{Wd3+} 2 \texttt{Wg6} \texttt{Wg4+} 3 \texttt{Wf6} \texttt{Wf3+} 4 \texttt{Cc5} \texttt{Wc6+} 5 \texttt{Wc7} \texttt{Wc4+} 6 \texttt{Wc8+} 7 \texttt{Wc7} \texttt{Wc2} 8 \texttt{Wd5+} \texttt{Wb6} 9 \texttt{Wd4+} \texttt{Wb7} 10 \texttt{Wg6} \texttt{Wc6+} 11 \texttt{Wg5} \texttt{Wg2+} 12 \texttt{Wf6} \texttt{Wg8} 13 \texttt{Wb4+} \texttt{Wc6} 14 \texttt{Wd6} \texttt{Wd8+} 15 \texttt{Wd6} \texttt{Wg8+} 16 \texttt{Wd7} \texttt{Wg7+} 17 \texttt{Wc8} \texttt{Wf8+} 18 \texttt{Wc7} \texttt{Wg7+!} 19 \texttt{Wc6} \texttt{Wg2+!} 20 \texttt{Wc5} \texttt{Wf2+!} 21 \texttt{Wd5} \texttt{Wf3+} 22 \texttt{Wc5} \texttt{Wc3+} 23 \texttt{Wc6} \texttt{Wc1+!} 24 \texttt{Wd7} \texttt{Wf1}!
White can make use of the fact that Black’s king and queen are stuck in the corner with the following manoeuvre:

1 $\text{h}3!$

Frees h4 for the queen.

1...$\text{g}7$

1...$\text{f}7$ 2 $\text{d}4+$ $\text{g}8$ (2...$\text{g}8$ 3 $\text{c}4!$ --) 3 $\text{h}4+!$ ++

2 $\text{d}8+$! $\text{g}8$ 3 $\text{f}6+$ $\text{g}7$ 4 $\text{h}4+$! $\text{g}8$ 5 $\text{c}4+$! $\text{f}8$ 6 $\text{d}8$#

If Black is to play, he draws only with the stalemate trick 1...$\text{f}7$!.

The next study shows further winning motifs:

Now Black loses. He could have held the draw by 24...$\text{c}5!!$ 25 $\text{a}4+$ $\text{b}6!$ 26 $\text{b}3+$ $\text{a}6=$

25 $\text{a}4+$ $\text{b}6$ 26 $\text{c}4+$ $\text{b}7$

26...$\text{c}5$ 27 $\text{a}7+$! $\text{b}4$ (27...$\text{d}5$ 28 $\text{c}3+$! ++) 28 $\text{a}5+$ $\text{b}3$ (28...$\text{c}4$ 29 $\text{a}6+$! ++) 29 $\text{d}2+$ ++

27 $\text{b}5+$ $\text{a}7$ 28 $\text{b}6+$ $\text{a}8$ 29 $\text{c}6+$ $\text{b}8$

30 $\text{c}7+$ 1-0

Reference work

Secrets of Pawnless Endings, Nunn, Batsford 1994, pp. 68-120

B) Queen and Bishop vs Queen

In this endgame there are fewer winning prospects, but nevertheless some are left:

1 $\text{b}6+$! $\text{c}4$

1...$\text{a}4$ 2 $\text{a}6+$ $\text{b}4$ 3 $\text{d}2+$ $\text{c}5$ 4 $\text{a}3+$! ++

2 $\text{b}3+$! $\text{d}4$ 3 $\text{d}3+$! $\text{e}5$ 4 $\text{c}3+$! $\text{d}6$

4...$\text{f}6$ 5 $\text{g}5+$! ++

5 $\text{f}8$! $\text{xf}8$ 6 $\text{a}3+$! ++

Reference work

Secrets of Pawnless Endings, Nunn, Batsford 1994, pp. 121-52

10.8 Queen and Minor Piece vs Queen and Minor Piece

We only deal with opposite-coloured bishops and bishop vs knight. In both these cases, the
The light squares in Black’s camp are very weak, and this allows White’s pieces to infiltrate:

\[
\begin{array}{c}
1...\text{e}7 2 \text{g}4 \text{d}8 3 \text{h}6 \text{c}7 4 \text{c}4 \text{d}7 \\
5 \text{d}5+ \text{c}8 6 \text{f}5 \text{b}8 7 \text{d}6 \text{b}6 \\
7...a4 8 \text{h}5 \text{h}6 9 \text{d}7 \text{c}7 10 \text{c}7 \text{xc}7 11 \text{g}7+ \text{e}6 \\
8 \text{c}4 \text{c}7 9 \text{b}3 \text{a}7 10 \text{a}4 \text{b}8 11 \\
\text{b}5 \text{e}7 12 \text{c}6 \text{f}7 13 \text{d}6 \text{c}7 14 \text{xe}5 \\
\text{xe}5+ 15 \text{xe}5 \text{c}7 16 \text{c}4 1-0
\end{array}
\]

The next position is more balanced, but Black strays from the right track:

\[
\begin{array}{c}
1...\text{f}5 2 \text{f}2 \text{c}5 3 \text{e}3 \text{d}5 4 \text{d}3 \text{d}4? \\
\text{Now White gets very serious attacking possibilities.} 4...\text{d}6 is better.
\end{array}
\]
In the following example, queen and knight managed to save a draw, although the initial position should be winning for White:

\[\text{FURTHER QUEEN ENDINGS} 351\]

1. \(\text{Wg8?}\)
   This pawn-hunting move is not in the spirit of the position. Centralizing the queen with 1 \(\text{Wd5!}\) \(\text{Qc6} \text{2 Qe6 \pm}\) is much better.

   1...\(\text{Wd7}\) 2 \(\text{Qh2}\)

   Or:
   a) 2 \(\text{Wxa6}\) \(\text{Qd1+}\) 3 \(\text{Qh2}\) \(\text{Qh5+}\) leads to a draw.
   b) 2 \(\text{f3?!}\) was Kramnik’s suggestion in New in Chess Magazine 1/2001. He gives 2...\(\text{Qd1+}\) 3 \(\text{Qe2} \text{Qe2+} \text{4 Qg3}\) \(\text{Qf4} \text{5 Qe4}\) \(\text{Qxe4}\) 6 \(\text{Qe4}\) \(\text{Qc6}\), when it is unclear to him if White can win the resulting ending.

In the diagram on the left:

\[\text{W} 10.41 +/\]

\(\text{V.Kramnik – G.Kasparov}\)
\(\text{London BGN Wch (6) 2000}\)

...\(\text{Wd3} 3 \text{g3?!}\)
3 \(\text{Wxa6?!}\) \(\text{Wh7+} 4 \text{g3}\) \(\text{Wh4+} 5 \text{f3}\) \(\text{Wh5+}\) 5...\(\text{f5?!}\) \(\text{Kramnik}\)
6 \(\text{g4}\) 6 \(\text{Qe4}\) \(\text{Qg6+}\) 7 \(\text{Qd4}\)
\(\text{Cc2}\) 8 \(\text{Qb3}\) \(\text{Qxb3}\) \(\text{Qc4}\) \(\text{Qf5+}\) 10 \(\text{Qxf5}\) \(\text{Qd5+}\) 11 \(\text{Qg4}\) \(\text{Qg2+}\) 6...\(\text{Wh3+}\) 7 \(\text{g2}\) \(\text{Qe2}\) \(\text{Qg4+}\) 8 \(\text{f3}\)
\(\text{Qxe4+}\) 9 \(\text{Qf2}\) \(\text{Qc2+}\) 10 \(\text{Qg3}\) \(\text{Qxb2}\) 11 \(\text{Qa7+}\) and it is still not clear if Black can survive.

3...\(\text{Qf7!}\) 4 \(\text{Qb7}\)
4 \(\text{Wxa6}\) now leads to an immediate draw: 4...\(\text{Wh7+}\) 5 \(\text{g3}\) \(\text{Qe4+}\) 6 \(\text{Qf1}\) \(\text{Qd3+}\) = and White cannot evade the checks.

4...\(\text{Qg6}\) 5 \(\text{Qxa6}\) 6 \(\text{Qe5}\) 7 \(\text{g4}\) 8 \(\text{Qf2}\) \(\text{Qe3}\) 9 \(\text{Qf6}\) 10 \(\text{Qf3}\) \(\text{Qf6}\) 11 \(\text{Qg8+}\)
\(\text{Qd7}\) 12 \(\text{Qf4}\) \(\text{Qg5}\) 13 \(\text{Qd5+}\) \(\text{Qh7}\) 18 \(\text{Qe6}\) \(\text{Qc2}\)
19 \(\text{Qd4}\)
19 \(\text{Qe5}\) is even better: 19...\(\text{Qf6}\) 20 \(\text{Qf8+}\)
\(\text{Qg8}\) 21 \(\text{Qw8}\) ++.

19...\(\text{Wh2}\) 20 \(\text{Wh5+}\) 21 \(\text{Wh8+}\) 22 \(\text{Qh7}\) 22
\(\text{Qc2+}\) 1-0

However, the bishop isn’t always worse:

\[\text{W} 10.42 =/\]

\(\text{M.Solleveld – S.Dvoirys}\)
\(\text{Dieren 2000}\)

1 \(\text{Qd4}\) \(\text{Qe5}\) 2 \(\text{b4}\) \(\text{Qd5}\) 3 \(\text{Qd2}\) \(\text{f4}\) 4 \(\text{Qe2}\) \(\text{g5}\)
\(\text{Qd3}\) 6 \(\text{b3}\) \(\text{h6}\) 7 \(\text{hxg5}\) \(\text{hxg5}\) 8 \(\text{f2}\) \(\text{f6}\) 9 \(\text{c4}\)
\(\text{Qc6}\) 10 \(\text{Qd4}\)?
After 10 \(\text{Qe3}\) it is not clear if Black can break White’s defence.

10...\(\text{Qc4}\) 11 \(\text{Qc3}\) \(\text{Qg4}\) 12 \(\text{b5}\) \(\text{g3}\) 13 \(\text{Qf1}\) \(\text{Qg6}\)
14 \(\text{Qxg6}\)
14 \(\text{Qf2}\) \(\text{Wh5}\) 15 \(\text{Qxf3}\) \(\text{Qxf3}\)++.

14...\(\text{Wh5}\) 15 \(\text{Qe1}\) \(\text{Wh1+}\) 16 \(\text{Qf2}\) \(\text{Qg2+}\) 17
\(\text{Qe2}\) \(\text{f3}\) 0-1
Exercises
(Solutions on pages 391-2)

Why doesn’t White start with 1 \text{\textit{W}d6}?

Which of the following is true?
A) White has a dangerous passed b-pawn, which will cost Black a rook. Then it is questionable if Black can construct a fortress.
B) White’s b-pawn is doomed and therefore he is lost in the long run.
C) White has just enough resources to draw.

Can the fortress be taken?

White’s advantage is obvious. Do you see a way to convert it smoothly into victory?
11 Endgame Strategy

In this chapter we discuss a number of general concepts that are important in many types of endings:
A: Do Not Rush
B: Passed Pawns Must Be Pushed
C: King Activity
D: Mismatches
E: The Principle of Two Weaknesses
F: Fight to the End
G: Space Advantage
H: General Endgame Principles

A) Do Not Rush

An endgame is different from a middlegame in many respects. When the power of the queens has disappeared from the board, the king can become more active and in most cases it is more important to activate all the forces and make all other useful moves before advancing pawns (this is not valid in race situations of course!). Capablanca demonstrates this in the following classic:

1  \text{d}d4
Before advancing his queenside pawns, White wants to establish control over the fifth rank with \text{Ec}3, b4, f4 and \text{e}e3.

W

11.01 A

J. Capablanca – V. Ragozin
Moscow 1936

14 \text{Ec}3+ \text{d}d6 15 \text{Ec}3 \text{d}5 16 \text{b}5 \text{a}8
16...\text{xa}3 17 \text{e}e4+ \text{fxe}4 18 \text{xa}3 \text{xb}5 19 \text{x}e4 \text{c}6+ 20 \text{d}d4 \text{xe}2 21 \text{g}3 \text{c}5+ 22 \text{e}3++.

17 \text{c}4 \text{e}6+ 18 \text{b}4 \text{c}5+ 19 \text{bxc}6 \text{g}8 20
\text{b}5+ \text{xc}6 21 \text{d}3! \text{g}5 22 \text{d}6+ \text{b}7 23 \text{f}xg5
\text{hx}g5 24 \text{g}6 \text{f}8 25 \text{hx}g5 \text{f}4 26 \text{d}4 \text{e}8 27
\text{g}7+ \text{b}6 28 \text{g}6+ \text{b}7 29 \text{b}5 \text{f}8 30
\text{d}6+ \text{b}8 31 \text{b}4 1-0

‘Do not rush’ might also be interpreted in the following way: if you have one main winning try, prepare it as carefully as possible. If there
B) Passed Pawns Must Be Pushed

The next example shows the conversion of an outside passed pawn:

14...f6+ 15 e4 c6 16 b5xb7 17 axb7 b8 18 d4 d8 19 f4 c7 (19...f5 20 e5 c7 21 a4 a6 22 e6 h8 23 b3 --) 20 e8 --.

15 f4 a7 16 g5!

Forcing Black to exchange rooks.

16...xb7 17 axb7 c6 18 b5!

Coralling the knight decides the game.

18...b8 19 f4 d6 20 e5 f1 d4 f7 e3 23 d6 e2 24 b5 xg3 25 d6 1-

C) King Activity

It can’t be said often enough: in the endgame the king is an attacking unit; activate it! Don’t miss the point where a middlegame (king safety is important) changes into an endgame (king activity is important).

White’s bishop is stronger than the knight and his rook is well placed behind the pawn to support it.

1...d4

The hasty 2 a4? spoils it: 2...xb5 3 axb5 b1 =.

2...f8 3 a4 c4 a5 c6 a6 c7 6 h4?!

The immediate 6 b2 is more precise.

6...h5?!

6...b1 offers better resistance.

7 e2 d5

7...b1 8 xh5 --.

8...f3 b5 9 e2 d5 10 b2 g6 11 f3 e7 12 c4 f7 13 b7

The anchor square on the seventh rank is very strong as the rook completely ties Black down.

13...d7 14 e5

The rook ending arising after 14 b5 xb5 15 xb5 is won, but it is more difficult to assess due to the notorious drawish tendency of rook endings.

14...c6+

11.02

Bundesliga 1996/7

G.Meins – L.Donev

White now applied a middlegame strategy and lured White’s king into his position, only to realize that it is very safe there:

1...d3?

After 1...c4! 2 c1 White certainly has an advantage, but it is probably not sufficient to win.

2 d1 c5 3 b4 c4

After 3...b6? 4 a4 c8 5 a5 bxa5+ 6 xa5 d8+ 7 b4 c7 White is better, but it is not so easy to win.

4 a5 d6 5 b6 c6+ 6 a7 c7 7 b6 c6?!

7...d7 8 c5 (8 f3?? c8+--; 8 a8??) 8...c5 9 c1 =.

11.03

E.Sveshnikov – W.Browne

Wijk aan Zee 1981
8 a5 c5 9 f3 c6 10 b4
The bishops show their power.
10...c7 11 b6!
White is in no hurry and improves his position on the queenside before cashing in on b7.
11...d7 12 e1 f6 13 a4 d8 14 xd6
xd6+ 15 xb7 xd2 16 c1!
Exchanging the rooks gives White an elementary won endgame.
16...xd1 17 xd1 a5 18 b6 c7+ 19
a4 c8 20 d7 b6 21 b4 c6 22 g5
23 c6 b8 24 c4 e5 25 b4 a7 26 b7
xf2 27 bxa5 xg3 28 a6 f2 29 e6 f4 30
d5 h5 31 f3 1-0

B

G.Kasparov – T.Petrosian
Nikšić 1983

1 b8+
This was Kasparov's sealed move, and he followed it up very aggressively.
1...h7 2 g4! a4 3 e3 c4+ 4 f4 g5?!
This opens up Black's king position.
5 g3
Certainly not 5 f5?? a6! and White's king is caught in a mating net: 6 b7 (6 e7 g6#)
6...g7 =.
5...a2 6 b7 g6?
6...e3! 7 d6 (7 xf7?? g6 --) 7...g6
(7...f1?? 8 h3 g6 9 c6 --) 8 h4 gxh4+ 9
xh4
7 f5 a6?
7...d2 is tougher, but White should still win; e.g., 8 b6+ h7 9 b7+ g6 10 g1
d1+ 11 h3 e2 12 d6 h7 13 d7 e6 14
c7+ --
8 h4! xb4+ 9 h2+ g7
White also wins after 9...f6 10 d4+ a6
11 f5 --
10 f5+ g6
10...g8 11 b8+ h7 12 d4 ++
11 d4 1-0
Petrosian resigned due to 11 c6 d6 12 cxd6
xd6 13 f4 a6 14 h4 --

D) Mismatches
A mismatch arises when one side has more forces in a particular region of the board. This
happens particularly often when one king is active while the other is still at home. Andrew
Soltis explained this principle in Grandmaster Secrets: Endings with the following example:
Kasparov found a very elegant way to finish the game:

1 \( \varepsilon e8+ \varepsilon f7 2 \varepsilon x f6! \varepsilon x f6 3 g5+ \varepsilon f7 4 h6 \)

1-0

White's king will move to the queenside, create a passed pawn and win the bishop. Then it will return to the kingside and win the g6-pawn.

E) The Principle of Two Weaknesses

This is a very important principle in endgames. It is often possible to defend a position with only one weakness. However, when the attacker succeeds in creating a second one, his greater mobility decides the issue in many cases.

White's pieces are much more active and the c6-pawn is very weak, but where is the second weakness?

1 \( \varepsilon c7 \)

1 \( \varepsilon c8 c5! 2 dxc5 \varepsilon c6 3 \varepsilon a8 \varepsilon e7 \pm. \)

1...\( \varepsilon f5! \)

Now the second weakness is clear: the g6-pawn. Another disadvantage of \( \varepsilon f5 \) is that it makes the dark squares in Black's camp extremely weak. However, it is necessary since otherwise \( \varepsilon a8 \) will follow, e.g., 1...\( \varepsilon x d6 2 \varepsilon e2 \varepsilon f2 3 \varepsilon f4 \varepsilon f6 4 \varepsilon d6 5 \varepsilon d2 \varepsilon g7 6 \)

\( \varepsilon x e6 7 \varepsilon b4 \varepsilon d8 8 \varepsilon c5 \varepsilon e7 9 \varepsilon h3 \varepsilon f6 10 \varepsilon c8 \varepsilon e7 11 \varepsilon x d8 \varepsilon x d8 12 \varepsilon d6 f5 13 \varepsilon f1 + - \)

2 \( \varepsilon e2 \varepsilon d7? \)

Too passive. Active counterplay with 2...\( \varepsilon d8! \) was essential. 3 \( \varepsilon f3 \varepsilon a8 \) and now:

a) 4 \( \varepsilon f4 \varepsilon a2 5 \varepsilon e5 (5 \varepsilon f3 \varepsilon f2 =) 5...\varepsilon x f2 6 \)

\( \varepsilon f6 \varepsilon c2 7 \varepsilon h7 \varepsilon g8 8 \varepsilon c2 \varepsilon f8 =. \)

b) 4 \( \varepsilon f3 \varepsilon a1 5 \varepsilon a3 \varepsilon a6 6 \varepsilon e2 \varepsilon a2 + 7 \)

\( \varepsilon e1 \varepsilon g8 (7...\varepsilon b2 ? 8 \varepsilon a6 \varepsilon a2 9 \varepsilon c8 \varepsilon c2 10 \varepsilon e6 \varepsilon b2 11 \varepsilon f1 \varepsilon f2 12 \varepsilon g2 \varepsilon b2 13 \varepsilon f3 \varepsilon a2 14 \varepsilon f4 \varepsilon x f2 15 \varepsilon e5 + -) 8 \varepsilon f1 \varepsilon f8 9 \varepsilon g2 \)

\( \varepsilon a3 10 \varepsilon e2 \varepsilon a2 11 \varepsilon f3 \varepsilon a2 =. \)

3 \( \varepsilon f3 \varepsilon e7 4 \varepsilon f4 \varepsilon f6 5 \varepsilon f1 \varepsilon e8 6 \varepsilon d3 \)

\( \varepsilon e6 7 \varepsilon e2 \varepsilon d6 8 \varepsilon a4 \varepsilon d7 9 \varepsilon e7 \varepsilon e8 10 \varepsilon f3 \varepsilon c6 11 \varepsilon c7 \varepsilon d7 12 \varepsilon e2! \)

The king heads for the queenside to increase the pressure against the c6-pawn.

12...\( \varepsilon e8 \)

12...\( \varepsilon e7 13 \varepsilon d2 \varepsilon d8 14 \varepsilon a7 \varepsilon e7 15 \varepsilon c3 \)

\( \varepsilon f6 16 \varepsilon b4 \varepsilon d6 17 \varepsilon a8 \varepsilon e8 18 \varepsilon a5 \varepsilon e8 19 \varepsilon x e8 \varepsilon x e8 20 \varepsilon b6 \varepsilon d7 21 \varepsilon b7 \varepsilon e8 22 \varepsilon a8 \)

\( \varepsilon d7 + 23 \varepsilon e8 + - . \) White's king will reach c7 or e8, when one of the weak pawns will fall.

13 \( \varepsilon d3 \varepsilon d8 \)

Waiting passively with 13...\( \varepsilon d7 \) is also not enough; e.g., 14 \( \varepsilon c3 \varepsilon e7 15 \varepsilon b4 \varepsilon d8 16 \varepsilon a7 \varepsilon e8 17 \varepsilon e5 \varepsilon f6 18 \varepsilon b6 \varepsilon e8 19 \varepsilon a8 + \varepsilon d7 20 \)

\( \varepsilon b7 \varepsilon f7 21 \varepsilon c8 \varepsilon d6 + 22 \varepsilon b6 \varepsilon d7 23 \varepsilon d8 \)

\( \varepsilon e7 24 \varepsilon c7 \varepsilon e8 25 \varepsilon d6 \varepsilon f8 + 26 \varepsilon b6 + . \)

14 \( \varepsilon x e6 \varepsilon d6 15 \varepsilon x e8 \varepsilon c7 \)

15...\( \varepsilon x e8 16 \varepsilon g7 \varepsilon e6 17 \varepsilon a7 + - . \)

16 \( \varepsilon x g6 \)

Now Black even has three weak pawns!

16...\( \varepsilon f8 17 \varepsilon e2 \varepsilon d6 18 \varepsilon f3 \varepsilon e6 19 \varepsilon f4 \)

\( \varepsilon f6 20 \varepsilon x h 5 \varepsilon h 6 21 \varepsilon g 5 \varepsilon h 8 22 \varepsilon g 6 1-0 \)

F) Fight to the End

Even in equal positions it sometimes pays to play on and to pose problems for the opponent, as Viktor Korchnoi does so often:
G) Space Advantage

Just as in the middlegame, a space advantage plays a role in certain endgames. The following is quite typical:

1...d6

Not, of course, 1...d6??, which is met by 2 exd6++.

2 g3 e5 3 f4 exd7!

3...f6? opens a pathway for White’s king: 4 e4 d7 5 dxe5 e6 6 a1 ±.

4 g5 e7 5 h6 e6 6 xh7 f3 7 h1

7...e6 8 g7 c4 9 h3 e5 10 a3 f5

11 c3 e4 12 c1 d4 13 f4

13...d3 14 h4 e4 15 f5!! e5

15...gxf5? 16 h5 e5 17 h6 g6 18 f7 g7+ 19 g7++.

16 f6 g4+!

16...g3? 17 h7 gxh5 18 h5 e5! 19 f6 g4+ 20 e5 c3 21 e5 f6 22 e5 f1 c3 (22...f3+ 23 h6 c2 d4 24 e7+ c3 c3 e7 25 e1 c2 26 h6 c4 27 g6 28 f6 ++) 23 h5 c1 24 h6 c4+ 27 g6++ 28 g2 d3 24 f6++.

17 g5

17...f7 18 g5 f6 19 e5 c1 d3 20 f5 h6+ =.

17 e3 18 g6 g6 19 e1 c3 20 xg6 g2!

It wasn’t too late to blunder, as 20...d2? 21 g1 c3 (21...g5 22...g5 23...h5 c2 h5 c2 23...h6 c1 24 g2+ d3 c3 25 h2 +++) shows.

½-½

The players agreed a draw due to 21 h5 f4+ 22 g5 xh5 c3 =.

White’s queenside pawns are further advanced and his bishop is better than the black knight.

1...f8 2 f2 f7 3 g3

White is in no hurry. He calmly plays against the knight first.

3...e1 4 xel e7 5 f3 d7 6 g4

White’s strategy is to advance the pawns on both wings without giving Black’s knight an anchor square. At the right moment Shirov is going to open lines for his pieces.

6...h8 7 a3 h6?!

Just waiting passively is a risky strategy. The immediate 7...h5! is better: e.g., 8 gxh5 (8 g5 fxg5 9 fxg5 h8 = ; 8 h3 hxg4+ 9 hxg4 h3+ 10 e4 g3 =) 8 hxh5 9 g1 c6+ 10 g4 h6 11 g3 g6 =.

8 xh1 c7 9 xg1 c8 10 b3 f7 11 f5!

Fixing Black’s kingside pawns on dark squares and thereby further restricting Black’s knight.

11...e8 12 d4 a5 13 c3 b6 14 b4 axb4

15 xb4 e7 16 a1 h5 17 a7 hq4+ 18 bxh4 xe8 19 e3 e8 20 d4 f8 21 e4 f7 22 b4 e8 23 e3 f7 24 e5 c5 25 bxc5 dxe5 26 c5 g6?

26...e8! is correct:

a) 27 d4 d7 (27...g8??) 28 exd7 cxd7 29 c5 e8! (29...d7? 30 d6 c8 31 d5

B

A. Shirov – I. Sokolov
Las Vegas FIDE rapid 1999
The next example shows how to exploit a 4 vs 3 majority in a rook and knight ending:

11...\text{\textit{D}a3} 12 \text{D}a4 \text{D}c4 13 \text{D}d4 \text{D}c2 14 \text{D}f3 \text{D}c5 15 \text{D}a7 \text{g5}!!

15...D\text{\textit{a}3}, to meet 16 g5 with 16...h5 (Kramnik), offers better resistance.

\begin{itemize}
  \item 16 \text{D}b5 \text{D}g8 17 \text{D}d2 \text{D}a3 18 \text{D}e4 \text{D}e2 19
  \text{D}b7 \text{a}xa2 20 \text{D}xb4 \text{D}c2 21 \text{D}b6 \text{D}h7 22 \text{D}h7
  22 \text{D}f6+ \text{D}g7 23 \text{D}c8+ \text{D}h7 (23...\text{D}f8 24 \text{D}d6++) 24 \text{D}f6++.
  \item 22...\text{D}g8 23 \text{D}d6 \text{D}c6 24 \text{D}xf7 \text{D}c4 25 \text{D}d7
  \text{D}f6 26 \text{D}d4 1-0
\end{itemize}

Lutz resigned due to 26...\text{D}xe3 27 \text{D}xh6+

H) General Endgame Principles

1) An endgame is not a middlegame!

2) When up on material, exchange pieces; when down on material, exchange pawns.

3) Do not rush (if it is not a race situation, of course!)

4) The role of the king changes completely compared to the middlegame: in the endgame it is a strong fighting unit and is especially good at supporting friendly passed pawns.

5) Wing pawns are often more valuable than centre pawns as they are easier to queen. Rook’s pawns are especially strong against knights; however, in other endings they might be less valuable.

6) Don’t forget about the bishop and wrong rook’s pawn draw!

7) The rook is a very strong counterattacking unit. It is not so strong in blockading enemy passed pawns.

8) Rook endings occur very often in practice. Study them carefully!

9) No rule can replace concrete calculation - all ‘rules’ have exceptions. Calculation in the endgame is at least as important as in the middlegame.

10) The art is to find the exceptions, but you are already a very strong player when you know where and how to apply the rules!

Reference works

\textit{Endgame Strategy}, Shereshevsky, Pergamon 1985

\textit{Grandmaster Secrets: Endings}, Soltis, Thinkers’ Press 1997
12 Further Exercises

In this final chapter we offer 40 further exercises. The first six are of key importance, so study them especially carefully. The solutions are on pages 392-9.

How do you evaluate the position? What happens if Black's king starts on h2 instead of h2?

What hope is there for Black?

Can Black hold the position?

How do you defend with Black (to move)? What if White is to move and he plays 1 $g6$?
Is White’s king too far away?  
White’s last move was d5-e6, blocking his own pawn. Instead, any move to the c-file would have drawn. How did Black accurately exploit White’s mistake?

Black’s king blocks his pawn. Can Black nevertheless win?  
In the game Black scored a clear win after four moves. Was this the correct outcome?

Analyse the game continuation: 1 e7 f2+ 2 e1 f8 3 d7 e8+ 4 d1 a8 5 c7 a1+ 6 c1 a2 7 b8 a2 c1 b2 9 b1 d4 10 c7 b2+ 11 c1 a2 12 b7 g2 0-1.

Analyse the following play, especially with respect to the role of White’s king: 1 d8+ a7 2 g5 a5 3 c7+ a6 4 c6+ b6 5 c8+ b5 6 f4 a4 7 e4 d6 8 b7+ c4 9 f7+ c3 10 b7 c2 0-1.
How can White maintain the blockade?

Black’s rook is very well placed on e4, but there is still a way for White to save the position. Can you spot it?

White to play and win.

Black could take the pawn or the knight. What should he do?

Black seems to be almost in zugzwang. What should White do?

Can White’s fortress be taken?
What improvements can you suggest for Black in the following play? 1...b5 2 a7 c6 3 a6 b8 4 a5 d5 5 a6 c7 6 a7 b6+ 7 b8 c5 8 a8 c7+ 9 b8 b5 10 a8 b6 11 b8 a7.

Black has the more outside passed pawn. Is he winning?

Analyse the play: 1 f4 g5 2 d4 xh3+ 3 xh4 f5 4 a4 e5 5 d2 h1 6 a5 a1 7 b5 b1+ 8 c6 a1 9 b6 b1+ 10 a7 e6 11 d8 c7 12 h8 c1 13 a6 d7 14 h8 c7 15 h7+ c8 1/2-1/2.

In the game Speelman (playing Black) missed the opportunity to draw. Can you do better?

White can win after 1...e4, 1...d6 and 1...e6. Can you spot the three winning lines?

White wants to dislodge the knight from b5. Can Black do something about that?
White to play and win.

What should White play, how should Black react, and what is the correct result?

Find the mistakes in the following play:
1...b2 2 c3 c4 3 c5 4 h4 h5 5 d2 b5 6 d5 b4 7 d4 a3 8 a2 9 c2 a1 10 b1 a2 11 c3+ a1 ½-½.

Analyse the following play: 1 f6 xf6 2 f8 e3 3 xf6+ g3 4 e6 xh3 5 e4 g2 6 f4 h3 7 xe3 h2 8 e2+ h3 ½-½.

Where should Black's king hide from the checks? How is 1 h6 refuted?

It looks like only a miracle can save White. Is there one?
Where should Black's king go? After 1...g4, 2 Na4 looks effective.

Black wants to establish a third-rank defence with ...f3+. Can you stop him?

How do you assess this position?

It looks pretty grim for Black, but there is a defence. Can you find it?
B

E12.35
***

Can you find the beautiful way for Black to win?

W

E12.38
***/

Is White winning? Note that he has 1 g7 at his disposal.

W

E12.36
***/

Which is the right square for White's king?

B

E12.39
***/

Can Black convert his material advantage into victory?

W

E12.37
***/

How do you assess this position?

B

E12.40
***/

‘Both pieces have to be sacrificed for the passed pawns and the game will soon be drawn.’ True or false?
Solutions to Exercises

Chapter 1

E1.01
This was an easy start:
1 \( \text{d}7 \) (but not 1 \( \text{b}6?? \) stalemate) 1...\( \text{a}8 \)
2 \( \text{b}6 \) \( \text{b}8 \) 3 \( \text{b}7\# \) (or 3 \( \text{d}8\# \)).

E1.02
S.Siebrecht – J.Howell
_Hamburg 1995_
5 \( \text{d}2?! 
Continuing the knight’s ‘W’ manoeuvre is far more accurate than 5 \( \text{d}6?! \). After 5...\( \text{c}3 \) 6 \( \text{d}6 \) Black’s king is caught in the ‘right’ corner. A possible finish is 6...\( \text{c}2 \) 7 \( \text{e}5 \) \( \text{d}1 \) 8 \( \text{d}3 \)
\( \text{e}1 \) 9 \( \text{g}3+ \) \( \text{d}1 \) 10 \( \text{c}4 \) \( \text{c}1 \) 11 \( \text{f}2 \) \( \text{d}1 \) 12 \( \text{h}2+ \) \( \text{c}3 \) 13 \( \text{b}1 \) 14 \( \text{h}3 \) \( \text{c}1 \) 15 \( \text{e}3+ \)
\( \text{b}1 \) 16 \( \text{c}4 \) \( \text{a}1 \) 17 \( \text{d}2 \) \( \text{h}1 \) 18 \( \text{a}3+ \) \( \text{a}1 \)
19 \( \text{c}3\# 
Compare the main line of 1.04.

Chapter 2

E2.01
V.Sanduleac – A.Cioara
_Calimanesti 1999_
No, only the pawn is lost: 1...\( \text{g}5! \) (1...\( \text{f}7?! \) 2 \( \text{g}5! \) \( \text{g}6 \) 3 \( \text{h}6! \) --) 2 \( \text{g}6 \) 1/2-1/2. Black can defend the key squares of the g4-pawn: 2...\( \text{a}8 \) 3 \( \text{x}g5 \) \( \text{g}7= \). (2.06) and the white king can’t force its way to f6, g6 or h6.

E2.02
V.Tukmakov – E.Ubilava
_USSR Cht (Moscow) 1972_
The solution is to transform White’s good knight’s pawn into a bad rook’s pawn, but the right timing is necessary: 1...\( \text{e}6 \) (1...\( \text{a}3? \) 2 \( \text{bxa3!} \) \( \text{e}5 \) 3 \( \text{b}7 \) \( \text{d}5 \) 4 \( \text{a}++) \) 2 \( \text{b}5 \) \( \text{a}3! \) (not 2...\( \text{d}5?! \) 3 \( \text{xa4} \) \( \text{c}6 \) 4 \( \text{a}++) \) 3 \( \text{bxa3!} \) \( \text{d}7! \)
1/2-1/2. Black’s king reaches c8 in time. See 2.11 and 2.20. A useful guideline: _if a piece or pawn is doomed anyway, seek a favourable way to lose it._

E2.03
A.Abdulla – J.Emms
_British Ch (Scarborough) 1999_
It was the second move which had to be detected:
1 \( \text{d}4 \)
The game went instead 1 \( \text{c}4? \) \( \text{xa6!} \) 2 \( \text{e}5 \)
(2 \( \text{h}4 \) \( \text{b}5 \) 3 \( \text{e}5 \) \( \text{c}4 \) 4 \( \text{xe6+} \) \( \text{d}3 = \)) 2...\( \text{b}5! \)
3 \( \text{f}6 \) \( \text{c}4 \) 4 \( \text{x}g7 \) \( \text{d}3 \) 5 \( \text{x}h7 \) \( \text{e}2 \) 6 \( \text{x}g6 \)
\( \text{xf}2 \) 7 \( \text{h}4 \) \( \text{e}5 \) 8 \( \text{f}5 \) \( \text{xf}3 \) 9 \( \text{xe}5 \) \( \text{g}4 \) 10 \( \text{h}5 \)
\( \text{x}h5 \) 1/2-1/2.
1...\( \text{xa6} \) 2 \( \text{c}5!! 
This amazing blow, found by Nick Frost, prepares h4 before going to the kingside. Black is lost:
2...\( \text{e}5 \)
2...\( \text{a}5 \) 3 \( \text{h}4! \) \( \text{a}4 \) 4 \( \text{d}6! \) \( \text{b}4 \) 5 \( \text{xe}6! \) \( \text{xe}4 \)
6 \( \text{f}6 \) \( \text{d}4 \) 7 \( \text{g}7 \) \( \text{e}5 \) 8 \( \text{x}h7 \) \( \text{f}6 \) 9 \( \text{g}8 \) \( \text{f}5 \)
(9...\( \text{f}5 \) 10 \( \text{h}5! \) ++) 10 \( \text{g}7 \) \( \text{g}4 \) 11 \( \text{x}g6 \) \( \text{xh}4 \)
12 \( \text{f}4 \) ++.
3 \( \text{f}3! 
3 \( \text{h}4? \) \( \text{e}4 \) 4 \( \text{d}4 \) \( \text{b}5! \) 5 \( \text{xe}4 \) \( \text{c}4 \) 6 \( \text{f}3 \)
\( \text{c}3! \) 7 \( \text{h}5 \) \( \text{e}4 \) 8 \( \text{f}4 \) \( \text{c}3! \) 9 \( \text{h}6 \) \( \text{d}4 \) 10 \( \text{xe}5 \)
\( \text{c}5! \) 11 \( \text{f}6 \) \( \text{d}6 \) 12 \( \text{g}7 \) \( \text{e}7 \) 13 \( \text{x}h7 \) \( \text{f}7= \).

3...\( \text{a}5 \) 4 \( \text{d}4!? 
4 \( \text{h}4!! \) 5 \( \text{d}6 \) \( \text{g}5 \) 6 \( \text{x}g5 \) 7 \( \text{g}6 \) 8 \( \text{h}4 \) \( \text{h}5 \) 9 \( \text{g}8 \) 10 \( \text{d}5+ \) \( \text{b}4 \) 11 \( \text{xe}5 \)= and the queen ending with the bishop’s pawn is won (compare 9.17).
4...\( \text{a}4 \) 5 \( \text{h}4! \) 5 \( \text{d}3?! \) ++

E2.04
D.Ellison – S.Collins
_Port Erin 1999_
White isn’t lost; you needed to foresee the third moves in both the solution and the game:
1 \( \text{g}3! 
The game continuation was 1 \( \text{d}1?! \) \( \text{d}2? \) 2 \( \text{g}3 \) \( \text{g}2! \) 3 \( \text{e}2 \) \( \text{h}4!! \) (3...\( \text{xe}2? \) 4 \( \text{f}2! \) \( \text{h}1 \) 5 \( \text{f}1= \) 4 \( \text{e}3 \) (4 \( \text{xe}4 \) 4++) 4...\( \text{xe}4 \) 5 \( \text{x}g3 \) 6 \( \text{e}2 \) \( \text{f}4 \) 7 \( \text{f}1 \) \( \text{f}3! \) 8 \( \text{g}1 \) \( \text{e}2? \) 0-1.
1...\( \text{f}3 \) 2 \( \text{d}3 \) \( \text{g}2 \) 3 \( \text{e}3! \) 4 \( \text{f}3 \)
\( \text{xe}2 \) 5 \( \text{f}2! \)
(Hecht in CBM 74).
E2.05
W.Rocha – G.Vescovi
São Paulo 1999
Black wins by means of a typical break-through:
1...b4! (1...c7? 2 d5 b6 3 d4 c6 4 a4! =) 2 axb4 (2 d4 c5! 3 bxc3 bxa3! 
+- Hidemburg in MegaBase 2000) 2...c3!! (but not 2...axb4? 3 d4 c3! 4 bxc3! bxc3! =) 0-1.
White resigned due to 3 bxc3 a4!, when the a-pawn runs through.

E2.06
M.Adams – J.Lautier
Tilburg 1996
1...d7!
Distant opposition! The key squares are e5 and d5, while Black also has to deal with a possible c5 break. The greedy 1...f5? allows a breakthrough: 2 b4 axb4 3 c5! bxc5 4 a5! +-; 1...d6? also fails: 2 d4! c6 3 c5! bxc5+ 4 
ac4! +-

2...c3! c7!
2...c6? 3 b4! axb4+ 4 xb4! c7 5 b5 
7 c6 c5 +

3 b4 axb4+ 4 xb4 c6! 5 b3 d6 6 
c2 c6 7 d3 d6 8 c3 c5 9 b3 d6! 
10 c4 c6! 11 c5 bxc5+ 12 c4 c6! 13 
d5 a5 14 c5 c4! 15 c4 1/2-1/2

E2.07
M.Magomedov – R.Scherbakov
Koszalin 1999
The road to victory is tricky. After either g4 from White or ...f5 from Black, White needs the 
side opposition for a winning encirclement, so he has to calculate those tempo moves:
1 g4?
1...g6? f5 2 g7 e7! 3 g8 e8! =
1...g7 (anti-opposition to get the opposition after the following pawn move!) 1...f5 (1...g7 
2 g4 e6 3 f8! +-; 1...e5 2 f7 f5 3 e7 
e4 4 e6 --; 1...f5 2 g4+ e6 3 f8! +-)
2 c6 c5 3 c7 +-
1...d6! 2 h7 d7! 3 g8
3 h8 d8! =
3...e8! 1/2-1/2

E2.08
J.Nogueiras – J.Hjartarson
Biel 1993
Surprisingly, Black can win if he saves all his spare tempi:
1...h5!!

Chess can be so beautiful! 1...g5? 2 f3! 
5 4 g4! h6 allows White to draw by 5 f3! =, but not 5 h3? f4! 6 h4 
f3 7 h5 (7 h3 c3 8 h4 d3 9 h5 
c2! 10 h6 hxb2 11 g5 b4! ++) 7...g3! 
+-.

2 f3 g5! 3 f2
Or: 3 g4 h4! 4 f4 h6 5 f3 h3! 6 f4 
g2! 7 g5 hxg5+! 8 xg5 f3 +--; 3 g2 
g4! 4 h2 f3 5 h3 e3 6 g4 d2 +--,
3...g4! 4 g2 h6!
One tempo is used to enter the white posi-
tion...
5 f2 h3! 6 f3 h5 0-1
...and one for the encirclement, which No-
gueiras didn’t want to be shown:
7 f2 h2! 8 f3 g1! 9 f4 f2 10 g4 
hxg4! --

E2.09
V.Topalov – J.Timman
Wijk aan Zee Blitz 1999
Did you find the way to close the kingside?
1 g4!
Not: 1 h4? g5! 2 h5 g4! ++; 1 f3? f6! 2 
h3 c3 3 e3 c2 4 d2 f5! 5 xc2 e4! 6 
w2 f3! +--; 
1/2-1/2

White’s fortress is impregnable after 1...f6 
2 h4!.

E2.10
A.Ilyin Zhenevsky – M.Botvinnik
USSR 1938
White has the spare tempo g3 and decided to 
move to the ‘don’t touch me’ square f4 imme-
diately, in accordance with the rule given in 2.60.
However, the rule doesn’t apply here as Black has the additional option ...g6:
1 f4!
In the game, 1 f4? allowed Botvinnik to 
save himself: 1...g6! 2 hxg6+ xg6! 3 g3 h5! 
(3...h5? 4 e6! 4 xf5? stalemate) 4...g6 5 
e5 ++; 4 e6 f6 5 f7 xg6 h4! 7 
xe4 xf7 1/2-1/2.
1 xf7
Or: 1...e6 2 f4! +--; 1...g6 2 hxg6+! xg6 
3 f4 h5 4 g3 +--; 
2 f4 e6 3 g3! +--

E2.11
A.Albin – R.Charousek
Berlin 1897
E2.12
H. Mattison, 1918

The position looks hopeless, but when you have seen the solution everything seems so easy:

1 hXg5+!
Not: 1 fxg5+? hxh5! 2 g6 fxg6! --; 1 g2? gxh4 2 g3 hxh5! --.

1...hxh5 2 g6! fxg6
2...gxh6 3 g2 gxh5 4 g3 =.
3 f5! gxw5 4 g1! g5 5 f1! = (compare 208).

Chapter 3

E3.01
A. Chéron 1924, version by J. Fischer 1941

No problem:

1...f4!
Not: 1...g1? hxd1! --; 1...g5? c2! 2 e4 b2! --; 1...g7? c2 2 e4 b2! --; 1...f2? c2! 2 e4 d3+ (2...e4 b2! 3 c5 e3! --); 2...d2 c5 e3! 4 e4+ b3 5 c5+ c4 --.

1...c2
Or: 1...d1 2 d5! c2 3 e3+ =; 1...d2 2 c6! c2 (2...d3 3 f4+! b4 4 e2 c2 5 c1 =) 3 d4! c1 wb 4 b3+! =.

2 c2+!
2...d3+? c2 3 c5 e3! --.

1...d1 3 e3+! d2 4 a2! =

Note that this method of defence would not be possible against a knight’s pawn.

E3.02
A. Troitsky

White can deliver Stamma’s mate (3.07):

1...f3!
1...f2? h1 2 g3+ h1 2 3 f1+ h1 =.

1...h1 2...f2! h2 3 d4 h1 4 f5 h6 5 e3 h6 6 f1! h2 7 g3#!

E3.03
V. Chekhover, 1955

Attack, attack, attack and then a check!

1...c6!
1...h3? g4! 2 f3 f4 d3 b7 d4 d4 4 e2 f4 --.

1...g4 2 g7! f4
2...g3 3 fxg5! g2 4 e3+! =.

3...h5! f3 4 c6 f3 5 g4 f1 w 6 e3+! =.

5...c4 6 g2
5...f2 6 xg3! h6 7 f1 e2 8 g2 =.

6...d2+! e3 7 xf3! e3 8 g1! f2 9 g3 10 g1! =

Chekhover’s original study is: w a8, f4; b a2, c3, f5, g7. White to play and draw (Chéron 813): 1 d5! c2 2 c3+! b3 3 cxe2! c4 4 f4! and after 4...g5, E3.03 is reached.

E3.04
E. Asaba, 1986

Yes, passed pawns must be pushed, but did you choose the right one?

1 b4!
1 f6? c6! 2 b4 b5 c6! 3 b5 c4! 4 b6 b5! 5 b7 b6! 6 b6 b5! 6 b6 b7! 6 c7 b7! 6...d7+! 7 d7+! 7 c7 c6! 8 b6 c6+! =.

1...d3
1...d4 2 f6! b3 3 f7! c6 4 b5! =.

2 b5! c4
White also wins after 2...d4 3 b6 f4 f6 4 b7 c7 b7+ 5 c8+ =.

3 b6! c6 4 b7! d5 5 b8+! d7+ 6 c8!

6 b6 f6! c8+ 8 c8+! d7 9 f7+! =

E3.05
After Y. Averbakh

Hopefully you remembered the rule that the knight should protect the passed pawn from behind:

1...h2!
Not:

a) 1...b6! b3! (1...c3! 2 e3! b3 3 a4! b4 4 d4! c5 5 c3+! --; 2...b4! b4! 3 b3 d5 a5! =.

b) 1...c5! e3! 2 a4 (2...c3 c4! 3 d3 b3! =) 2...b4! = (2...d4 3 b3 +).

1...b3
1...xb2 2 a4! ++ and the passed pawn runs through.

2 a4! =

Averbakh has White’s king on e1 instead of e2 (Av 406).
E3.06
An easy one again:
1...e6 2 g8 e7 h8 3 b6! g6 4 e7?+
Note that with a bishop of either colour instead of a knight, E3.06 is drawn (see 4.10C and D).

E3.07
P. Prokeš, 1946
This is really a nice little study:
1 e4!
 1...ex6? 2 f2+ e4 e3+ 3 g5 f4! =.
 1...f2 2 d5! f3 3 c3! =.
 3...f6? f4! =.
 3...e3 4 a2!!
 4 b2? b2 5 b3 d3 6 b4 d4! =.
 4...4 d4
White now wins in similar fashion to Blackburne-Zukertort (3.19):
5 b2! d3
5...c4 6 a2 d4 7 d2! c4 8 c2 +=
6 b3! d4 7 b4! e5
7...d3 8 c3! =
8 b5 xc3 9 c5! +=

E3.08
A. Dohr – R. Wildner
Graz 1991
This was a difficult but, we hope, rewarding task.
1...e7! 2 e5 g8 3 h4
3...e6 f4! 4 f7 e5!! 5 xg8 h5! 6 f7
h4! = (6...f5?? 7 c7? =)
3...d3 4 h5 e5 5 f5 d4 6 f6 e4? 6...h6! 7 f7 e5! 8 xg8 f6! +=
7 f7! f5 8 h6??
8...xg8! h6 9 f7! g5 10 e6! xh5 11 f5! =
8...g5! 9 g7 f6 10 h8?? f5 10...xb6?? is stalemate.
11...g7 e6 12 h8 e7 13 g7 d7
The pawn sacrifice is the only way to win!
14 g8 f6 15 xh7
15...f7! 16 h8 h8! 0-1

E3.09
V. Neverov – V. Malanuk
Minsk 1997
Yes! The following variations prove that Black can build a fortress while White is winning the b-pawn:
1 f3
1...e3 f5 2 e3 e4 =.
1...f6! 1...d6?? 2 e4+ --.
2 d3 f5 3 c2
3 e3 g5 4 e4 f6 =.
3...f4 4 xh2 (NC) 4...e3! 5 e3 e2! 6 c2 e3! 7 d1 f2! =

E3.10
P. Svidler – V. Anand
Dos Hermanas 1999
Svidler missed that the knight will be out of play on a7 and cannot come back easily:
1...xd4 b5 2 c5! xa7 3 c6! b6! (NC)
3...c8+ 4 c7! a7
4...e7 5 h7! g7 5...d5+ 6 d6 g7 7 xd5 += 6 f6! +=
5 d7!!
5...h7? g7! =.
5...b5
5...f6 6 h7! g7 7 f6+! xh7 8 f7! g7 9 e8! +=
6 h7! g7 7 f6+! xh7 8 f7! g7 9 e7! +=

E3.11
V. Halberstadt
=1st/2nd Pr., Gros, 1938
Did you use the method of exclusion? Otherwise the study was probably unsolvable as the winning line is very far from obvious.
1...a3!!
The only move to win. Other moves lead to a draw: 1...d5? d6! 2...e4 d5+ =; 1...c3? c5! 2 d6 d6 3 e4+! c4+! =; 1...c4? c5+ 2...d5 c6 =; 1...b5? a5+ 2...c3 c4 =;
1...b3? c5+ 2...c4 c4+! 3...d6 c7 4...b5 cxb5 =.
1...e6 2 a2! b6
2...e5 3 d6! f6 4 e4+! +=
3...e7 f6 4 d5+! +=

E3.12
E. Bacrot – S. Agdestein
Havana Capablanca mem 1998
The offside position of White's knight proves to be disastrous:
1...f4+!
1...e5? 2 f4 f3 3 d6 =.
2 xd3 g3 0-1
Bacrot resigned in view of 3...hxg3+ fxg3! (NC) 4 e2 e3 5 f1 h2! +=.
E3.13
S.Arkhipov – S.Erendzenov
Russian Club Cup (Malkop) 1998
As is so often the case, active defence is best:
1...c3+!
In the actual game, the passive 1...d7?? ran into 2...xf6 (there are not only knight forks!)
2...f8 (2...xf6 3...e5+=) 3...c7 4...d5+ c7 5...f4 c7 6...g5 c7 8...d5+ f7 9...h4+ 10...d4 f6 11...e5 f8 12...e6 c8 13...b6 b=0.
2...c3
2...f6 a5 (3...d4 f5 =) 3...c2+=.
2...f3 3...f4
3...f2 c4 4...f5 5...d2 5...b6 c6 =
(Tsesarsky in CBM 66)

E3.14
K.Müller – O.Koeller
Manx 1990
White shouldn’t allow Black’s king to attack his pawns from behind:
1...c8!
1...c4? d2 (the difference) 2...d5 (2...h5)
3...c5 f5 c5 d4 xe5+ 5...e5 c8 6...d3 3...d4 e6 4...xe6 c6 = 5...f6 6...xh7 c7=.
1...h5
Or: 1...h6 2...f3 c4 3...e4 h5 4...h4++; 1...e4 2...e4 c8 3...e5 d3 4...xe6 c3 5...f5
c6 6...c7 c7 7...c8 f6 ++.
2...f3 xh4 3...xh4 c8 4...e5 f6 5...g5
c7+ 6...d2 f8 7...d7 1-0
Black resigned in view of 7...d2 8...f8
c2 9...c6 f2 10...e5 f5 11...f6 b4 12...f8 ++.

E3.15
V.Topalov – V.Anand
Linares 1999
The obvious is best:
1...g4!
"A nice intermezzo" (Anand in CBM 70).
Not: 1...d4?? 2...xf4 cxf4 3...f3 =, nor
1...e1?? 2...f3! cxb3 3...xb5 g5 4...f7+
c7 5...d6 a4 6...b5 h6 7...d4 a5 8...d3
c2 9...d3 c6 10...d2 =.
2...g5
2...f2 cxf2 3...xf2 a5++; 2...xd3 gxd3 ++.
2...e1+
2...d4+ followed by...xh5 also yields very good winning chances.
3...e3 cxb3 4...h6 a5 5...f4
5...g4 g3? =.
5...d4! 6...xg4 a4 7...h5
d4 a3 b5 + (Anand); e.g., 9...a2
c2 10...f4 b4 11...c1 d4 12...e4 b3 13
xd4 b2.
7...c6
7...c2?? 8...g6 ++.
8-0
Topalov resigned in view of 8...g6 e5 9
t5 a3! 10...xe5 a2 ++.

E3.16
D.Vanovský – H.Golombek
Hastings 1951
1...b8?
After this mistake Black could have saved himself in the ensuing ending with queen vs
queen and knight, but it is true the correct variation was very difficult to spot: 1...c8! c6+ 2
f7 c4 c5 3...c7 c8 (3...d5 c6 c4 4...d5 5...d6 c6++) 5...c6 c8 6...b7 ++.
1...c6 2...d4 g4 3...b5 g3! 4...xd6 g2 5
f1 g1 6...f5+ c3
6...c3? 7 c5++.
7...c4+ g2 8...g4+ h2?? (D)
8...f1 =.

E3.16A
++/

The following scenario is very famous:
9...h4+ g2 10...g3+ h1
10...c1 11...d2++; 11...h3+ h2+ 12...g3+ 1-0
The following game shows a similar motif
(see next diagram):
1...d2! cxd2 2 a5

E4.08
M.Peczyński
Ogier 1982
White’s threat is e5 followed by d7 and e6, with a ‘last-stop’ position. There are two solutions to avoid this:

1...e3?

This, the game continuation, is not one of them! Also wrong are 1...g7? 2 e5! f8 3 d7! c7 4 b5! c5 5 e6! — (the bishop is overloaded), and 1...f4? 2 e5! d2 3 b5! a5 4 d7 ++. The correct methods are 1...d2 2 b5 a5! 3 e5 c7! = and 1...d8 2 d7 f6! =.

2 e5! d4

In principle it is correct to bind the king to the defence of the e-pawn, but White will soon gain a tempo with d5.

3 b5! 1-0

Due to 3...g7 (3...f2 4 d7 ++) 4 d5!! f2 5 d6 f7 6 d7! ++.

E4.02

A.Troitsky, 1896

The fine play of this classic study is truly instructive.

1 e6!

Protecting f7 and g8. Not 1 h6? f7! 2 f5 g8! = (4.09).

1...e7

1...f8 2 h6! ++.

2 h6! f6 3 f5!

Protecting g6.

3...f7 4 h7!

Protecting g8.

4...f6 5 f4! ++

and finally protecting g5!

E4.03

L.Paulsen – J.Metger

Nuremberg 1888

This position is once again best solved with the thinking method of exclusion. However, it is no disgrace if you didn’t succeed:

1 d4!!

Other moves don’t work: 1 b6? b8! = (4.10f): 1...c5? b6+! 2 axb6+ b7! = (4.08); the game in fact ended 1 c4? b5+! ½-½ (in view of 2 xb5 b7! =; see 4.09).

1...c6

Or: 1...b6 2 a6! c6 3 c4! d6 4 xb6 c6 5 a5++; 1...b5 2 a6! c6 3 c3! c4c7 4 b4 c6 5 a5+ ++.

2...b6!

2 c4? b5+! =; 2...c3? b6! 3 a6 b5! =.

2...d6
2...cxb5 3 cxd5 c6 4 d6 d5 5 c7 c6 6 c8 b5 7 cxb7 +.
3 dxe4 cxe6 4 bx b4 d6 5 b5 c7 6 c5 c8 7 e7 8 cxb5! d7 9 c8 b8 10 h2 d7 11 b6 c8 12 c7 +--

E4.04
D. Saulin – G. Tunik
Russian Ch (Elista) 1995
Tunik won the game as follows:
1 1 c4 2 a3
2 b4 c6 3 a3 f7 4 a4 d5 b5 5 d5

2...c3! 3 c4 b4 2 4 d5 5 c5
3 e4! 4 e5 9 d5 8 d5 b4 9
3 e4 d6 10 d5
10 cxd3 a5 11 cxe5
Due to 11 c4 c4! 12 c3 c3 a3! +--

E4.05
B. Alterman – A. Raetsky
Rostov 1993
In the game Raetsky missed Alterman’s response and played...

1...h4?
After the correct 1...h4! White is totally helpless; e.g.,

a) 2 g5 c2 (waiting) 3 g2 c3 4 h3
b) 2 f4 g4 f5 g5! 4 g2 (f4 e5 --)
4...g4 f5 e3 (zugzwang) 6 f6 gxf6 a5

2 c3!!
Oops! A surprising resource, which one can easily overlook. 2 fxg4? g5 3 f3 g3 c4 4 f3 c4 c4 5 c4 d5 6 f4 c5 +-- is probably what Raetsky expected.

2...gx f3 3 xf3 d4 4 g4 d2 5 a5!
Not 5 b4 g4 6 a5 b6 g6 7 b6 g5 8 b7
d4 f6 a5 c8 b8 10 c7 b7 +--
6...f6 7 a6 c8 8 f3 c7 9 c4 g5 10 b5
c6 +--

h2/2
Black can’t make progress: 5...c5 (5...c5 b4 + g5 b5 7 h4 =) 6 a6 c3 7 a7 x a7 8
g5 =.

E4.06
V. Ganshin, 1951
We wouldn’t ask if this study had no solution, would we?

1 h4!!
After 1...x f4? h4! 2 f3 (2 g4 hxg3 3 f3 d5 4 h4 e5 --) 2...g3 the h3-pawn proves White’s undoing since it prevents stalemate: 3 c2 d5 4 f1 e4 5 g1 c3 6 h1 e2 7
xg1 f2 + 8 h1 f1 9 h2 g3 + 10 h1
f4 11 g4 hxg3 12 h4 g2#.

1...g3
Or: 1...d2 2 e4 d6 3 f3 c5 4 g3 =;
1...h4 2 x f4 d8 (2...e1 3 g3 d2+ 4
f5 =) 2 h4 d5 g5 = 5 f3 = (1.09).

2 g5 d5 3 x h5
Now White has a fortress. The play is similar to 4.18, as Black can’t win a pawn without exchanging or losing his own.

3 e1
3...e5 4 g4 f6 5 h5 g7 6 g5 h7 7
h6 h2 8 hxh5! g1 9 g5 e3 10 g4 xh6
11 g3 =.

4 g4 e4 5 h5 b4 6 h6 c7 7 b6 8
h5! f5 9 h6! g4 10 g6 e5 11 c6
g3 12 g5 x g2
12...c3 13 f5! =.
13 c8 =

E4.07
Sike (end of a study)
Yes, you can lose a tempo! As your king has to stay on c4, the bishop has to do the work. The g1-h2 diagonal is too short, but the h2-b8 diagonal is clearly long enough:

1 h2!
Not: 1 b5? a5 2 h2 a3 3 c7+ a4 4 b6
a2 5 e5 h2 =; 1...c3? b5 2 h2 a2 d3 b3 a2 =.

1...b6 2 f4 a6 3 g3
The tempo move!

3...b4 4 b2 a4 5 g1
Here we are: the bishop has returned and now Black is to move!

5...b7 6 c3 a6 7 b2 h5 8 a3 +--

E4.08
A. Troitsky, 1895
Astonishingly, White has to sacrifice his only remaining pawn to deliver mate:

1 h6+!
1 gxh7 # =
1...g8 2 g7 #
2...e6+ 3 h6 f6 (2...f6 =) 4 e5! e8 5 f6 e5 6 b6 e4 7 f6 e3 8
e3 9 = #.

Now it looks like a fortress, but...
3 g8#!!
Not 3...e5? when Black draws by 3...e6 4 e4 e5 5 xe5 g8 =.
3...exg8 4 e6 h8 5 f7 e5 6 g7#
Just once I (FL) want to deliver mate like this!

E4.09
J.Capablanca – D.Janowski
New York 1916
Black has no time to lose:
1...g4? 2 b5 fxg3 3 xe5 e3 4 c6! d3 5 c7! =
2 d4 f3!! 3 b5 e2! 4 c6 d3! 5 b6
f6 6 c7 d4! 7 d6
7 d5?! c3! (7...e3? 8 d6! b6 9 c6! a5 10 c7! =) 8 b6 a5! =.
7...c4! =
There is a famous example of the correct defence being applied in practice:

E4.09A
M.Taimanov – R.Fischer
Buenos Aires 1960

Fischer probably knew the Capablanca-Janowski game and drew easily: 1...f4 2 b5
e4 3 d4 c7 4 c5 d3 5 c6 c4 6 b6
g3 7 a7 c7 ½–½.

E4.10
K.Müller – O.Romanishin
Lippstadt 1999
It is tempting to win the pawn immediately, but in the following forced sequence White
loses the advantage of the more active king and has suddenly to deal with Black’s dangerous d-
pawn:
1...xf7?

1 f5! is correct. Then the material will be equal for some time, but Black’s pieces are ter-
ribly placed:
a) 1...e8 2 a4 d7 3 e5 c6 (3...c7 4
d5 b6 5 db6 =) 4 d3 g5 5 e4+ c7 6
f6 d6 7 d3 d7 8 b5 c5 9 h6 f6 10
g7 f7 11 c2 e8 12 c4 f7 13 g5 fg5
14 f6+ =;
b) 1...gx5 2 gx5 e8 3 a4 d7 4 e5 c6
5 d3 (zugzwang) 5...c7 6 d5 b6 7 d6
c5 8 bxc5 bxc5 9 b6 10 xh1 =
1...xg4 2 xg6 e2 3 f5 d3 4 f6 d5 5 c2
e5!
5...d1 c7 6 xh1 d1 7 g6! (7...g7? h5
8 f7 xh7 9 e5! 10 c7 d4! 11 a6
a4 12 c6 a3! =) 7...xh6 8 f7 h5+ 9 xh5
xh7 10 g5 e6 11 h4 h6 12 c4 c6 e6 13
a4 d6 14 f5 =.
6...e7 7 d4 7 f7 3 c2 8 f6 9 b5
d3 10 f2 c1 11 c5 d1 12 bxa5 b1
13 c5 f2+ 14 d8 b5 15 a4 c5+
16 c7
d6+ 17 xh8 e8+ 18 c7
18 b7? c6+ 19 b6 20 xh6 (20
a6 21 b6 h7#) 20...xh6 =.
18...e6+ 19 b8 e8+ 20 c7 ½–½

E4.11
P.Heinäcker
Neue Presse, 1930
This classic exercise is well known, but too
time to leave out:
1 a7!!
Not 1 h7? e4 =, when Black has a comfort-
able draw.
1...a1
1...xa7 2 h7 ++.
2 h1 a3 3 c2 a4 4 d4!! xh4 (NC)
4...xh4 5 d3! =.
5 d3! g5 6 h7! a1
6...f4 7 h8 e4+ 8 xh4! =.
7...e4! ++

E4.12
G.Kasparov – N.de Firmian
New York Intel rpd 1995
Black’s bishop has to protect the b-pawn,
which allows a pretty pawn sacrifice:
1 g5! fxg5
Or: 1...hxg5 2 h6 ++;
1...xg5 2 xb6 c8
3 xe6 ++.
2 g4!
Sealing Black’s fate. It is now impossible to
protect the h-pawn from the front.
2...\textit{e}6 3 \textit{c}6 \textit{d}4 4 \textit{d}6 1-0
Black’s b-pawn is doomed.

\textbf{E4.13}
J.Pinter – B.Altman
\textit{Beersheba} 1991
This innocent-looking position is quite tricky. The numbers in the following diagram should help you to understand the bishop moves.

\begin{center}
\[
\begin{array}{cccc}
& 3 & 2 & 2 \\
4 & 1 & \text{\textbullet} & 1 \\
& 2 & 3 & 7 \\
5 & 4 & 7 & 7 \\
4 & 3 & 2 & 6
\end{array}
\]
\end{center}

\textbf{B}
f3=5; f7=6

We didn’t want to mess things up with bishop moves into the opponent’s camp, so after, e.g., \textit{w}x\textit{b}7 you have to find the correct answer \textit{b}x\textit{e}6 yourself.

You will certainly have recognized that we have a reciprocal zugzwang with bishops on d3 and d7. It is much more difficult to see that White always wins when the bishop gets to the central d5-square! You can than find two other reciprocal zugzwang situations: g2-f7 and f3-c4. By saying this, we have already told you the solution:

1...\textit{e}8?!
2...\textit{g}6? 2...\textit{c}5 ++ and 1...\textit{e}6?? 2...\textit{e}2 ++ are both bad. Correct is 1...\textit{c}4! 2...\textit{b}7 \textit{c}6 3...\textit{g}2 \textit{f}7 4...\textit{h}3 \textit{g}6 5...\textit{c}3 \textit{c}7 (Black generally keeps the distant opposition if White’s king steps back) 6...\textit{f}1 \textit{e}8 7...\textit{d}3 \textit{d}7 8...\textit{d}4 \textit{d}6 =.

2...\textit{b}7 \textit{d}7
Or:

a) 2...\textit{c}7 3...\textit{d}5 \textit{d}6 4...\textit{b}3 ++.

b) 2...\textit{f}7 3...\textit{e}8 \textit{g}6 4...\textit{e}3! \textit{d}5 5...\textit{d}3 \textit{c}6 6...\textit{e}6 \textit{d}6 7...\textit{b}3 \textit{h}5 8...\textit{d}4 \textit{a}8 9...\textit{c}2 \textit{d}7 10...\textit{d}3 ++.

c) 2...\textit{h}5 3...\textit{d}5 \textit{d}1 (White now transfers the move to Black) 4...\textit{a}2 \textit{c}2 (4...\textit{a}2 5...\textit{b}1 \textit{e}6 6...\textit{c}5 ++) 5...\textit{f}7 \textit{d}1 6...\textit{d}5 (zugzwang) 6...\textit{h}5 7...\textit{h}3 \textit{e}8 8...\textit{c}2 \textit{d}7 9...\textit{d}3 ++.

3...\textit{d}5 \textit{e}8 4...\textit{b}3 \textit{d}7 5...\textit{d}1 \textit{e}6 1-0
Due to 6...\textit{e}2 \textit{d}7 7...\textit{d}3 ++.

\textbf{E4.14}
G.Kaidanov – A.Shabalov
\textit{USA Ch (Key West)} 1994
White quickly loses his b-pawn:

1...\textit{f}2?
1...\textit{g}3+? 2...\textit{d}1 \textit{c}3 3...\textit{e}1 \textit{b}3 4...\textit{e}2 ++.

2...\textit{d}1+ \textit{c}1 3...\textit{e}2
3...\textit{f}3 \textit{g}3+ 4...\textit{e}2 \textit{c}2 ++.

3...\textit{d}2!
Zugzwang.

4...\textit{b}4 \textit{a}xb4 5...\textit{a}4 \textit{f}4 6...\textit{f}3 \textit{b}2 7...\textit{e}4
\textit{c}3 8...\textit{d}5 \textit{e}3 0-1

Note that the starting position with the bishop on a4 would be a “Type 1” fortress.

\textbf{E4.15}
Y.Averbakh, 1954
The first edition of Averbakh’s work claimed that White is winning, but Yusupov found the defence in a training session with Dvoretsky. Averbakh corrected the error himself in the next edition:

1...\textit{d}7 2...\textit{c}3 \textit{e}6 3...\textit{d}4 \textit{b}7 4...\textit{e}5 \textit{d}7
5...\textit{b}6 \textit{f}3 6...\textit{a}6 \textit{e}8 7...\textit{a}7 \textit{g}4!
7...\textit{c}6? 8...\textit{b}2 \textit{b}5 (8...\textit{f}3 9...\textit{d}7+ \textit{x}d7 10...\textit{b}8 ++) 9...\textit{b}6 \textit{e}2 10...\textit{d}7+ \textit{x}d7 11...\textit{b}7 ++.

8...\textit{b}6 \textit{f}3! 9...\textit{e}5 \textit{d}7 10...\textit{d}4 \textit{e}6 =

\textbf{E4.16}
S.Cvetković – D.Stanković
\textit{Yugoslav Ch (Vrnjačka Banja)} 1999
The position looks similar to the previous exercise, but the unfortunate pawn on c5 hampers Black’s bishop:

1...\textit{c}3

1...\textit{e}5 2...\textit{h}7 \textit{d}6 3...\textit{e}4 (zugzwang)
3...\textit{e}7 4...\textit{g}6 \textit{d}6 5...\textit{c}7+ \textit{x}e7 6...\textit{g}7 \textit{e}5+ 7...\textit{g}8 ++.

2...\textit{h}7 \textit{d}2
2...\textit{f}6 3...\textit{e}4 \textit{h}4 4...\textit{g}6 \textit{f}2 5...\textit{e}7+ \textit{x}e7 6...\textit{g}7 ++.

3...\textit{e}7+! \textit{xe}7 4...\textit{g}7 \textit{c}3+ 5...\textit{g}8 1-0

\textbf{E4.17}
O.Hindle – G.Möhring
\textit{Tel-Aviv OL} 1964
We all love chess for the beauty of such unexpected solutions:

1...e3!!

Preparing a free ride for the knight's pawn!

2 $\text{ hxh6}$

Or: 2 $\text{fxe3 g4} = 2$ $\text{f3 a2 3 $\text{axa2 xa2 4}$}$

$\text{hxh6 g4+} = .

2...$\text{g4+ 3 fxe3 g3 4 $\text{hxh7 g2}$ 5 $\text{hg1}$ 6 $\text{h8}$}

$\text{a2 7 $\text{xa2 axa2}$}

Without the e-pawn it is drawn. Now Black wins easily:

8 $\text{h7}$ $\text{gg6}$ 9 e4 $\text{ff7}$ 0-1

Chapter 5

E5.01

A. Brustman – I. Radziewicz

Sawalki 1999

White has to sacrifice his rook's pawn under favourable circumstances:

1 $\text{g4!}$ (NC)

1 $\text{g5}$ $\text{h6}$! 2 $\text{hxg6}$ $\text{h4}$! 3 $\text{fxg5+}$ $\text{gg4}$! 4 $\text{dd5}$ $\text{hxh5}$! = .

1...$\text{h6}$

After 1...$\text{g6}$ White wins by 2 $\text{g5!}$ $\text{ce8}$ 3 $\text{h6}$! –

2 $\text{hxh6!}$ $\text{hxh4}$ 3 $\text{fxg5+}$ $\text{h3}$

3...$\text{h4}$ 4 $\text{g7+}$ $\text{gg6}$ 5 $\text{xe8!}$ $\text{f7}$ 6 $\text{f5}$

$\text{xe8}$ 7 $\text{e6}$! –

4 $\text{d6!}$ 1-0

Black resigned due to 4...$\text{hxh5}$ 5 $\text{g5!}$! –, when all four squares of the stopping diagonal are controlled.

E5.02

B. Gulkov – R. Dellaune

New York Open 1998

Black must force matters immediately:

1...$\text{f2!}$

Waiting moves lose, e.g., 1...$\text{c5}$? 2 $\text{h4+}$

$\text{ff6}$ 3 $\text{e4}$ $\text{f2}$ 4 $\text{f3}$! – and White will soon regroup the knight.

2 $\text{d4+}$

2 $\text{e2}$ $\text{xg3}$ 3 $\text{dxe4}$ $\text{xf4}$ 4 $\text{e6}$ $\text{h8}$

$\text{xc7}$ 6 $\text{d3}$ $\text{c5}$ 7 $\text{cxh8}$ 8 $\text{e4}$ $\text{f2}$ 9

$\text{g5}$ 10 $\text{hxg4}$ $\text{hxg4}$ 11 $\text{b6}$ $\text{xb6}$ 12 $\text{bxh6}$

$\text{g3}$! =

2...$\text{f6}$?

Black strays from the correct path, viz.

2...$\text{xd4!}$ 3 $\text{xd4}$ $\text{h4}$ 4 $\text{gxh4}$ $\text{xf4}$ 5 $\text{ed5}$ $\text{f5}$!!

(the point: Black uses Bähr's rule (see 2.30) to draw the pawn ending) 6 $\text{ed6}$ $\text{f6}$ 7 $\text{ed7}$ $\text{f7}$ 8 $\text{d7}$ $\text{d7}$ 9 $\text{d7}$ $\text{d7}$ 10 $\text{xa7}$ $\text{c7}$ 11 $\text{h5}$

$\text{gxh5}$ 12 $\text{h4}$ $\text{e8}$ 13 $\text{b6}$ $\text{h8}$ 14 $\text{b6}$ $\text{a7}$ 15

$\text{d6}$ $\text{xa6}$ 16 $\text{e6}$ $\text{b7}$ 17 $\text{e6}$ $\text{c7}$ 18 $\text{g6}$

$\text{d7}$ 19 $\text{xh5}$ $\text{e7}$ 20 $\text{g6}$ $\text{f8}$ = (K. Müller in CBM 64).

3 $\text{g4}$ $\text{hxg4}$ 4 $\text{hxg4}$ $\text{e7}$

...5 $\text{g5}$ 5.5 $\text{e5}$ 6 $\text{e6}$! –

5 $\text{e4}$ $\text{d6}$ 6 $\text{f3}$ $\text{e6}$ 7 $\text{e5}$ $\text{f6}$ 8 $\text{d5}$

$\text{g1}$ 9 $\text{e6}$ $\text{e3}$ 10 $\text{d3}$ $\text{e6}$ 11 $\text{b7}$ $\text{d6}$ 12

$\text{e5}$ $\text{xf4}$ 13 $\text{e6}$ $\text{e3}$ 14 $\text{xa7}$ 1-0

Due to 14 $\text{xa7}$! 15 $\text{f5}$ $\text{f5}$ $\text{xh5}$ 16

$\text{g5}$ $\text{f2}$ 17 $\text{e7}$ ++, 15 $\text{xa7}$ $\text{c7}$ 16 $\text{g5}$ $\text{c8}$

17 $\text{b6}$! –

E5.03

S. Siebrecht – R. Webb

Highgate 1997

In fact, it is quite simple:

1...$\text{h5!}$

1...$\text{h1?}$ 2 $\text{g5+}$ $\text{h5}$ (2...$\text{g7}$ 3 $\text{f3}$! – 3 $\text{g6}$ $\text{h6}$ 4 $\text{f3}$! –

2 $\text{f5}$ $\text{g7}$ 3 $\text{f6}$ $\text{h5}$ 4 $\text{e5}$ $\text{g5}$ $\text{c2}$

$\text{f6}$ 5 $\text{e6}$ $\text{e4}$ 7 $\text{e4}$ $\text{g4}$ 1-2

E5.04

M. Tratar – W. Hug

Mitropa Cup (Baden) 1999

1 $\text{c5}$!

White opens up a route for his king. 1 $\text{db8}$, with the idea $\text{d7}$ and $\text{c5}$, also wins but is more complicated.

1...$\text{dxex5}$

1...$\text{xcxc5}$ 2 $\text{xa5}$ $\text{ac4}$! – followed by

$\text{xc6}$, $\text{a5}$, $\text{a6}$ and $\text{a7}$ (Ribli in CBM 71).

2 $\text{e4}$ $\text{f6}$

Or: 2...$\text{e4}$ 3 $\text{d6}$! –; 2...$\text{c7}$ 3 $\text{xc5}$ $\text{g3}$

$\text{a5}$ 4 $\text{f4}$ 5 $\text{e6}$! –

3 $\text{b5}$

3 $\text{d6}$ $\text{e4}$ $\text{b5}$, winning the bishop, is also nice.

3...$\text{c4}$

3...$\text{c7}$ 4 $\text{xc5}$! – (Ribli).

4 $\text{xb6}$ $\text{c5}$ 5 $\text{d5}$ 1-0

E5.05

A. Karpachev – D. Frolov

Tomsk 1998

1...$\text{a5}$!

Rapid counterplay is essential since White's h-pawn is very dangerous. 1...$\text{b3}$? 2 $\text{f4}$ $\text{xa3}$

3 $\text{g6}$ $\text{xb4}$ 4 $\text{h5}$ $\text{a2}$ 5 $\text{h6}$ $\text{g8}$ 6 $\text{f6}$! –

(Atlas in CBM 67).

2 $\text{bxa5}$ $\text{b5}$ 3 $\text{d4}$+
Chapter 6

E6.01

V.Korchnoi – E.Kengis

Berne Cup 1996

After 1...\texttt{c4} Black's position is clearly lost, but it was certainly worth trying 1...\texttt{f2}?! (after 1...\texttt{f3}! 2...\texttt{d3} g3 3...\texttt{f8}+! -- White does not have any difficulties), which forces White to find a unique winning move. However, Kengis can be forgiven if he assumed that Korchnoi would have found it!

\texttt{2...\texttt{f8}+!}

\texttt{2...\texttt{e1}! 4...\texttt{g8} \texttt{f2}! 5...\texttt{d2} \texttt{g2}! 6...\texttt{f8}+ \texttt{g3}! =}

\texttt{2...\texttt{e2} 3...\texttt{g8}! \texttt{f3} 4...\texttt{d3} g3 5...\texttt{f8}+ \texttt{g2} 6...\texttt{e2} +--}

E6.02

E.Liss – B.Lalić

Isle of Man 1997

This time the king moves in first to avoid a bodycheck:

\texttt{1...\texttt{a}7!}

Not:

a) 1...\texttt{b1}? \texttt{e4} 2...\texttt{b7} c3 3...\texttt{c6} \texttt{e4}! (sho
dering away) 4...\texttt{c5} \texttt{d3}! =

b) 1...\texttt{e7}?

b1) 1...\texttt{e4} 2...\texttt{b7} \texttt{f4} 3...\texttt{c6}! (3...\texttt{b6}?
\texttt{e3}! is again a bodycheck) 3...\texttt{e4} \texttt{d5} \texttt{f3} 5...\texttt{d4} \texttt{e6} \texttt{d3} +--

b2) 1...\texttt{e4}! (Black is preparing a bodycheck!) 2...\texttt{b7} \texttt{d4}! 3...\texttt{c6} \texttt{e4}! 4...\texttt{b5} (4...\texttt{d6}
\texttt{c3}! =) 4...\texttt{e3} 5...\texttt{b4} \texttt{d3}! 6...\texttt{b3} (6...\texttt{d7}+ \texttt{c2}! =) 6...\texttt{e2} =.

\texttt{1...\texttt{e4}}

White also wins after 1...\texttt{e4} 2...\texttt{b6} \texttt{f4} (or
2...\texttt{e3} 3...\texttt{d7} \texttt{f4} 4...\texttt{c5} +-- ) 3...\texttt{c5} \texttt{e3} 4...\texttt{b3} +
\texttt{d2} 5...\texttt{d4} +--

\texttt{2...\texttt{b6} \texttt{d4}}

\texttt{2...\texttt{d3} 3...\texttt{c5} (3...\texttt{d7}+ \texttt{c3} 4...\texttt{c7}! \texttt{d4} 5
\texttt{b5} \texttt{e4} 6...\texttt{b4} \texttt{d3} 7...\texttt{b3} \texttt{e3} 8...\texttt{d7}+ +--) 3...\texttt{e4}
4...\texttt{b3}+ 1...\texttt{d2} 5...\texttt{d4} +--

\texttt{3...\texttt{b5} \texttt{c4} 4...\texttt{b4}! \texttt{d3} 5...\texttt{b3} \texttt{e3} 6...\texttt{d7}+!} 1-0

E6.03

V.Kraft – P.Vavra

Germany 1998/9

Four mistakes in a row is certainly a record for our game exercises. We don’t know if the players were in serious time-trouble, if the ChessBase file is incorrect, or if it was simply too hot to play chess that day. Anyway, this is a good example of how carefully you should play your endgames.

\texttt{a4?!}

Both black pieces need to be activated, but this move merely invites White to improve his king position. Instead Black could have won by either 1...\texttt{d1}! (controlling the queening square from behind) 2...\texttt{e4} \texttt{f2} 3...\texttt{d5} \texttt{e2}! 4...\texttt{e5}
\texttt{d3}! (taking the other side) 5...\texttt{d6} \texttt{c4}! 6...\texttt{e6}
\texttt{c5} +-- or 1...\texttt{g2} (bringing the king into play)
2...\texttt{d5} \texttt{g3} 3...\texttt{d1}? \texttt{e4}! =) 3...\texttt{e4} \texttt{g4} 4
\texttt{e5} \texttt{g5}! 5...\texttt{g6} 6...\texttt{d6} \texttt{e1}+! +--

2...\texttt{f3}?

Returning the compliment. From f3, White shoulders Black’s king away, but loses the tempo he needs to support the pawn. Instead 2...\texttt{f4}! \texttt{f2} 3...\texttt{d5} \texttt{d1}! 4...\texttt{e5}! \texttt{e3} 5...\texttt{d6}! \texttt{d2} 6...\texttt{e6}!
\texttt{d4} 7...\texttt{e7} \texttt{c5} 8...\texttt{e7}! = draws.

2...\texttt{e8}?

The third half-point is handed across the board. 2...\texttt{d1} +-- wins as above.

3...\texttt{e5}??

The final mistake. 3...\texttt{e4}! \texttt{f2} 4...\texttt{d5}! \texttt{e5}! \texttt{d3} 6...\texttt{d6}! = draws.

3...\texttt{e5}! 0-1

The pawn is lost and the errors are over.

E6.04

A.Troitsky (end of a study), 1895

1...\texttt{c7}! \texttt{f6}+ 2...\texttt{d5}!

Did you use the method of exclusion? (2...\texttt{e6}?? \texttt{c6}+ --; 2...\texttt{e5}? \texttt{f1} =; 2...\texttt{d7}? \texttt{f1} 3
\texttt{e8} \texttt{d1}+! =).

2...\texttt{f5}+ 3...\texttt{d4}! \texttt{f4}+ 4...\texttt{d3} \texttt{f3}+ 5...\texttt{c2}
\texttt{f2}+ 6...\texttt{b3}+ \texttt{f3}+ 7...\texttt{b4}+ \texttt{f4}+ 8...\texttt{b5}+ \texttt{f5}+
9...\texttt{b6}+ \texttt{f6}+ 10...\texttt{b7}+ +--

After a long journey White has finally escaped the checks!

E6.05

A.Volokitin – S.Krishovski

Polanica Zdroj 1999

The a-pawn is not important and so Black wins by cutting off White’s king: 1...\texttt{e4}! (not
1...\texttt{e2}? 2...\texttt{f4} =) 0-1 (see 6.01).
E6.06
V.Topalov – A.Beliavsky
Linares 1995
If White tries to queen the a-pawn, Black’s
ing will arrive just in time to deal with the b-
pawn, but this doesn’t work the other way round:
1...b6!
Not:
a) 1 b6? a5+= (1...axa6? 2 b7! a5+ 3
a4! a4+ 4 e3 a3+ 5 b5+-).
b) 1...b6 2 b7 3 a6+ 3 a5 a5+ 5 b5+-.
1...db5 =.
2 a7! a5 3 a7 4 a6 b6 c5 = (Stohl in
CBM 46).
1-0
b6-b7-b8= follows.

E6.07
Variation from R.Ferry – A.Villeneuve
French Ch 1985
When I (FL) first solved this instructive ex-
ample from Dvorak's famous book Secrets
of Chess Training, it made a big impression on
me.
1...d4!
1...e8? 2 c3 e4 3 b4! e5 4 c5! (4
c5? d5 5 b5 a8=++ 4...e6 5 b7 a7 6
a7=)
2 e8!
Not: 2...c5?? 3 b7=++; 2...e5? 3 b4
d5+ 4 b4! e1 5 b5 e5 6 b7! b1+- 7
a7=
1...d3!
3 c6 e5! 4 c7 d6=++
3...e4 4 e6! 5 b5
Or: 5 c6 d6! 6 b5 d5=++; 5 b7 a6= 6
b5 c7= 7 c6 d6=++
5...d7! 6 a4 c8!
6...a7 7 c7! d7 a6= 8 b5 c6= 9 a5= 10
b7 a7= stalemate.
7 a6 e1 8 b5 c6 9 a6 b8
9...c6?? 10 a7=.
10 b5 c2 11 c7+ b7 12 a5 b2=++
1...a3 2 b5 a5+ 3 e4 f2 4 f5=++
2 d5 g4 3 e4!
3 cxf4? g3 4 e4 g2!=
3...f3 4 e3?
This looks natural, but now the f-pawn can
be sacrificed under favourable circumstances.
Instead, 4...f4!! (4...g3 5 a3+--; 4...g4
5 a3=--) 5 xg2 g3 6 f6 g2 7 f3 g1= 7
(7...h2 8 b8=++ 9 g8 h1 10 f2=++)
8 g2 9 b9 h8=+ 10 f3=++ wins.
1...g5 4 b7
5...g3!! 6 f3 f2 7 f3 g1 8 f3
h2 9 g8= 10...h2 7 g8 g2! 8 h8+ g1= 9
f3 f1 10 a8 g1=++
6 a4 1-0
Black resigned due to 6...d3 (6...f2 7 f4
++) 7 f2 h4 8 g8=++

E6.09
V.Tukmakov – A.Shiinato
Donetsk Z 1998
1...xd6? (NC)
After this move we soon reach the main line
from 6.06. Therefore 1...xd6+! 2 b7 d7+!
was correct:
a) 3 b6 d3! and then:
a1) 4 a6 d7? (4...xb3?? 5 c7 a3 6
b7= 7 d7 a7 b1+= 8 b8 a8= 10 c4 b8=++
2 b4 d7 5 b7 b3 6 a6xb4+! 7
a8 c8 8 a7 a4= 8 b6 h8=,
2 b4
d6 4 b4 h7 5 b5 e5 6 b6 c6
7 w8 b7 8 w8 9 b7 c8 9 a5= 10 w8
b5 11 a8 c7=++
2 b4
c) 3 e6 e7 4 b4 (4 a6 d8=++) 4...d8
5 b5 c8 6 a6 d1 7 a7 (7 b6 c1+ 8 b5 a1
a7 b6 10 c5 c5= 11 b4 cxb6=++)
9 a7 c1+ 8 c6 h8=++.
2 a6!
Staking everything on the a-pawn. Not 2 b4?
a7 3 b7 (3 b5 c8=--) 3...b2=++ (Ribli in
CBM 68).
3...b2 3 a7??
3 b7! b8 d8=++
3...d8=++
2 c7! 6 b1 0-1

E6.08
R.Ovetchkin – O.Selin
Russia Cup (Tula) 1999
The position is difficult and, as the exclama-
tion marks show, White’s first three moves were
very accurate:
1...f8! g5
E6.11
W. Benischek – S. Grimm
Germany 1998/9
1...\text{\textsf{\textcopyright{}}}b4g2
1...\text{\textsf{\textcopyright{}}}d2+ is no improvement: 2 \text{\textsf{\textcopyright{}}}e6 \text{\textsf{\textcopyright{}}}g2 3 a5!
=.
\hspace{1em}2 \text{\textsf{\textcopyright{}}}c7?
\hspace{1em}2 a5! =.
\hspace{1em}2...\text{\textsf{\textcopyright{}}}c2?
\hspace{1em}2...\text{\textsf{\textcopyright{}}}d2+! 3 \text{\textsf{\textcopyright{}}}c6 \text{\textsf{\textcopyright{}}}c2+ 4 \text{\textsf{\textcopyright{}}}b7 a5! --.
\hspace{1em}3 \text{\textsf{\textcopyright{}}}d7?
\hspace{1em}3 a5! \text{\textsf{\textcopyright{}}}h4 4 \text{\textsf{\textcopyright{}}}d7 \text{\textsf{\textcopyright{}}}xh3 5 c8\text{\textsf{\textcopyright{}}}xc8 6 \text{\textsf{\textcopyright{}}}xc8 g5 7 \text{\textsf{\textcopyright{}}}b7 g4 8 \text{\textsf{\textcopyright{}}}xa7 g3 9 \text{\textsf{\textcopyright{}}}b7 g2 10 a6 g1\text{\textsf{\textcopyright{}}}a1 11 a7 = (9.02).
\hspace{1em}3...\text{\textsf{\textcopyright{}}}h4?
\hspace{1em}3...a5! 4 c8\text{\textsf{\textcopyright{}}}xc8 5 \text{\textsf{\textcopyright{}}}xc8 \text{\textsf{\textcopyright{}}}h4 6 \text{\textsf{\textcopyright{}}}c7 \text{\textsf{\textcopyright{}}}xh3 7 \text{\textsf{\textcopyright{}}}b6 g5 8 \text{\textsf{\textcopyright{}}}axa5 g4 9 \text{\textsf{\textcopyright{}}}b6 g3 10 a5 g2 11 a6 g1\text{\textsf{\textcopyright{}}}a1 --. The pawn is still on the sixth rank, so White is lost.
\hspace{1em}4 a5!
\hspace{1em}4 c8\text{\textsf{\textcopyright{}}}xc8 5 \text{\textsf{\textcopyright{}}}xc8 a5! --.
\hspace{1em}4...\text{\textsf{\textcopyright{}}}xh3 5 a6 g5 6 c8\text{\textsf{\textcopyright{}}}xc8 7 \text{\textsf{\textcopyright{}}}xc8 g4 8 \text{\textsf{\textcopyright{}}}b7 g3 9 \text{\textsf{\textcopyright{}}}xa7 g2 10 \text{\textsf{\textcopyright{}}}b7 g1\text{\textsf{\textcopyright{}}}a1 11 a7 g2+ 12 \text{\textsf{\textcopyright{}}}b8 g8+ 13 \text{\textsf{\textcopyright{}}}b7 d5+ 14 \text{\textsf{\textcopyright{}}}b8 ½-½

E6.12
G. Polerio, 1585
1 \text{\textsf{\textcopyright{}}}a1!! (NC)
1...\text{\textsf{\textcopyright{}}}g1? a1\text{\textsf{\textcopyright{}}}a1! 1\text{\textsf{\textcopyright{}}}xa1! 3 \text{\textsf{\textcopyright{}}}c3 \text{\textsf{\textcopyright{}}}b2 =.

E6.13
Black should try to set up a Philidor position! Please begin looking through the book by 6.33 again if you haven't solved this exercise, since it is extremely important.
1...\text{\textsf{\textcopyright{}}}b4?!
There are four weaker drawing moves which all lead to a known maneuver: 1...\text{\textsf{\textcopyright{}}}b4?! 2 \text{\textsf{\textcopyright{}}}d6 \text{\textsf{\textcopyright{}}}e4! =; 1...\text{\textsf{\textcopyright{}}}a4?! 2 \text{\textsf{\textcopyright{}}}d6 \text{\textsf{\textcopyright{}}}e4! =; 1...\text{\textsf{\textcopyright{}}}f8?! 2 \text{\textsf{\textcopyright{}}}e6 \text{\textsf{\textcopyright{}}}e4 =; 1...\text{\textsf{\textcopyright{}}}e8?! 2 \text{\textsf{\textcopyright{}}}d6 \text{\textsf{\textcopyright{}}}d4+! 3 \text{\textsf{\textcopyright{}}}e6 \text{\textsf{\textcopyright{}}}e4 =. Not, however, 1...\text{\textsf{\textcopyright{}}}f1?! 2 \text{\textsf{\textcopyright{}}}e6! \text{\textsf{\textcopyright{}}}f8 3 \\text{\textsf{\textcopyright{}}}a8+! \text{\textsf{\textcopyright{}}}g7 4 \text{\textsf{\textcopyright{}}}e7 \text{\textsf{\textcopyright{}}}b1! 5 \text{\textsf{\textcopyright{}}}e6 --.
2 \text{\textsf{\textcopyright{}}}c5
2...\text{\textsf{\textcopyright{}}}a6 \text{\textsf{\textcopyright{}}}e7 =.
3...\text{\textsf{\textcopyright{}}}b1 3 \text{\textsf{\textcopyright{}}}d6 \text{\textsf{\textcopyright{}}}b6+ =
with a Philidor position.

E6.14
Here an important stalemate trick secures the draw:
1...\text{\textsf{\textcopyright{}}}a7!
Not: 1...\text{\textsf{\textcopyright{}}}a8? 2 \text{\textsf{\textcopyright{}}}f7++ --; 1...\text{\textsf{\textcopyright{}}}b6? 2 \text{\textsf{\textcopyright{}}}a2 \text{\textsf{\textcopyright{}}}b8 3 \text{\textsf{\textcopyright{}}}a7 ++ (6.33 A).
2 \text{\textsf{\textcopyright{}}}h2 \text{\textsf{\textcopyright{}}}g7+!! 3 \text{\textsf{\textcopyright{}}}xg7 stalemate
Or 3...\text{\textsf{\textcopyright{}}}f5 \text{\textsf{\textcopyright{}}}g1 =, reaching a Philidor position.

E6.15
No, he can't:
1...\text{\textsf{\textcopyright{}}}b8+
After 1...\text{\textsf{\textcopyright{}}}xe7 White wins the rook by 2 \text{\textsf{\textcopyright{}}}f1+! \text{\textsf{\textcopyright{}}}e6 3 \text{\textsf{\textcopyright{}}}e1+! --.
2...\text{\textsf{\textcopyright{}}}e7 \text{\textsf{\textcopyright{}}}e8 3...\text{\textsf{\textcopyright{}}}d6! \text{\textsf{\textcopyright{}}}b8
3...\text{\textsf{\textcopyright{}}}xe7 costs Black's rook just as before: 4 \text{\textsf{\textcopyright{}}}f1+! --.
4 \text{\textsf{\textcopyright{}}}f1+! \text{\textsf{\textcopyright{}}}g7 5 \text{\textsf{\textcopyright{}}}c7 \text{\textsf{\textcopyright{}}}a8 6 \text{\textsf{\textcopyright{}}}a1! +=

E6.16
J. Klings and B. Horwitz, 1851
1...\text{\textsf{\textcopyright{}}}a6!
1...\text{\textsf{\textcopyright{}}}b7?? \text{\textsf{\textcopyright{}}}e7 3 \text{\textsf{\textcopyright{}}}b8 ++ --.
2 \text{\textsf{\textcopyright{}}}c7
With all the pieces shifted to the left, 2...\text{\textsf{\textcopyright{}}}h8 would win, but here there is 2...\text{\textsf{\textcopyright{}}}xe6! 3 \text{\textsf{\textcopyright{}}}h5+ \\text{\textsf{\textcopyright{}}}g4! =.
2...\text{\textsf{\textcopyright{}}}f6+! 3 \text{\textsf{\textcopyright{}}}g7 \text{\textsf{\textcopyright{}}}g6+!
3...\text{\textsf{\textcopyright{}}}e6? 4 \text{\textsf{\textcopyright{}}}f8+! --.
4...\text{\textsf{\textcopyright{}}}h7 \text{\textsf{\textcopyright{}}}f6! 5 \text{\textsf{\textcopyright{}}}g8+ \text{\textsf{\textcopyright{}}}xe7!
Note: Black would also draw if he could move the rook to the h-file; e.g.:
miscalculated this ending. The game concluded
1 ed3? Be1!! 0-1. A possible continuation is 2
d2 ed6 3 eb1 g5! 4 eg1 ed5 5 fh5+ eg6 6
dg1 ed5! 7 ed3 ed5! 8 ed4 ec4+ 9 dd3 g4
t1 ed4! (10...ec5 11 ef2 =) 11 ed1
e3! 12 ed7 ef4 ++.

The right way was:
1 eb1!! g5 2 ed3! ed8 3 eg1 ed5 4 ed1+!
ed6 5 eg1 ec6 6 ed4! ed2 7 ed3! ed8 8
e4! ed5 9 ef1+= (6.45)

E6.20
1...eb8!

Now White cannot make any progress. Instead,
1...ec8?? loses to 2 eb4 (2 eb6 ++) 2eb8+
3 ed5! ed8+ 4 eb5 ed6 5 ed6 d5 6 d5 d6+!
2 eg6
After this little side-step, Black simply holds
on to the b-file:
2...eb1
Not 2...ed5?? 3 ed6! ed5 4 ec5! +--.
3 ec5 ed5!=

E6.21
1...al1
1...eb1 = also draws, but he must avoid both
1...eb2 2 ed8 +-- (6.54) and 1...ed7 2 eb8!
al1 3 ed7 4 ed1+ 5 ed6 al+ 5 bd6 ed1+ 6
e5! +--.

2 eb7
2 eb8 ey7 =.
2...eb1+! 3 ed6 al+! 4 eb6 eb1+! 5
al5 al1+=

E6.22
N. Grigoriev (end of a study), 1934
1 ed3!!
Not: 1 ec4? eg7! 2 ed4 ec6+ 3 ec4 eb7 =;
1 eg5? ed7! 2 ed4 ed5! 3 ec3 ed7+! 4
d3 ed7! 5 ec3 ec7+! 6 eb4 ec6! =.
1...ed7 2 ec4!!
Reciprocal zugzwang!
2...ed7 3 ed4 ed6
After 3...ed7 White wins by supporting the
pawn with his king: 4 ed4! ec7+ 5 eb5 ed7 6
ed6+--.
4 ec4 ed5 5 ec5
Attacking both b6 (protecting the pawn) and
d6 (driving the rook away), so Black is in zug-
zwang again.
5...ed6
5...ed6 6 ed6 +=.

E6.17
R. Fischer – J. Sherwin
Portorož IZ 1958
1...ed6?

This was Sherwin’s unfortunate choice in the
game, which you, young Fischer, exploited mer-
cilessly. Instead 1...eh8! 2 eh4 (2 g5 ef8 =)
2...eh8+ 3 g3 (3 g5 ef8+ 4 ef5 eh8+!
=) 3...ef8 is an easy draw.
2 eh4! eh8 3 g5! eh8+ 4 gf5 ef7
4...fg8 5 gh5 eh8+ 6 gh6 fg8+ 7 gh6
eh8+ 8 gh7=.
5 gh6 ef8 6 ef5!
Fischer won after a few more moves. Note
the point 6...efx5 7 efxf5! ed8 8 ef6+-.

E6.18
V. Filippov – I. Novikov
Kosztalin 1999
Did you find where the problem was?
1 ec1! ef52 ef1+! ec63 ec1 ed84 ec2?
White can hold the draw with, e.g., 4 ec4 or
4 ec1 ef4 5 ef2 ec5 6 ef1! =.
4...ef5! 5 ef1+ fg4 6 ec1 ef4 7 ef1+
e7 8 ed5 ef8+ 9 ef3 10 ef5 ef4 11
eh5 eg4 12 eh8 ef4 13 ec3 ec3 0-1
Black will reach a Lucena-type position.

E6.19
M. Tal – J. Zaitsev
USSR Ch (Riga) 1968
Don’t get too distressed if you didn’t find
the solution, since even the former world champion

2 h3 5

was the

impossible

position!

But

at

least

1...eb8!!

was

on

board!
6 $b6! +--

As a general rule, the above defensive set-up (after 1... $a7) is safe on the c-, f-, g- and h-files if the attacker can’t drive the rook away. However, there are exceptions for the c- and h-file (see, e.g., E12.12). On the d- and e-files, the defender tries to regroup his pieces to a safe file. If the attacker can prevent this, he is winning. See SoRE 12-20 for more details.

E6.22

H.Seyboth. 1899
1 $c4!
Not 1 $b4? $d3! 2 $b3 $b8+! 3 $a3 $c2!
4 $xa2+ $c3! +-.
1...$d2 2 $b3! $b8+ 3 $c4!
3 $xa2+ $c2! +-.
3...$b2 4 $h1
4 $d4? $b4+! 5 $c5 $a4 6 $b5 $a8 7 $b4
 $c2 =.
4...$c2 5 $a1
Nunn points out that this position is again a reciprocal zugzwang. Not 5 $g1? $b8 --, but
5 $h2+ is another way to draw.
5...$d2 6 $h1 =

E6.24

V.Smyslov – J.Donner
Palma de Mallorca 1967
1...$a2+!!
1...$b1? 2 $a4! $b3 3 $g2 $d5 4 $f2 $c5
5 $e2 $b5 6 $a8 $b4 7 $d2 =.
2 $h3
2 $g3 obstructs White’s own rook: 2...$d5
3 $a4 $a1 4 $g2 $c5 5 $a8 $b4 ++. Black
hides at a2 freeing his rook, while the white king
can’t help due to the possibility of ...$a2.
2...$b2
2...$d5? 3 $g3 = (6.57).
3 $a4 $a2 4 $g3 $d5 5 $f3 $c5 6 $e3
$b5 7 $a8 $c4 0-1

E6.25

G.Marković – M.Rendon
Thessaloniki wom OL 1984
1 $f3 $c5?! 2 $g3?
This allows Black to set up an ironclad fortress. White must prevent Black from achieving
a set-up with the king safe on g5: 2 $f6+ $g7
(alternatively, 2...$g5 3 $g6+ $f4 4 $h6 $c2+ 5 $h3 $c1 6 $g5 --) 3 $f5 $c3 4 $f3 $c5 5
$g3 --.
2...$g5 3 $a3 $b5 ½-½

E6.26

M.Solmundayson – J.Polgar
Reykjavik 1988
It was quite difficult to find the mistake, as the young Judit Polgar put up strong resistance.
1...$g6?! 2 $f4! $a5 3 $h4 $h5 4 $f8?
This lets the win slip. After 4 $f6! ++ (Burgess), White’s king can hide from the checks on
$g7, leaving Black defenceless.
4...$a3+ 5 $f4 $a4+ 6 $f5 $a5+! 7 $f6

7...$a6+? 8 $g7 $xh4 9 $f5 ++.
8 $g6 $a6+! 9 $f5 $a5+! 10 $e6 $a6+! 11
$f7 $f2
Due to 11...$g5! 12 $g7 $a7! 13 $g8 $g6!
=.

E6.27

D.Gurevich – J.Hjartarson
Brighton 1982
With careful play it is possible to win:
1 $g2!
1 $b8+? $h7 2 $b7+$h8 3 $g7 $f5 4 $g6
$h7! 5 $g7+$h8 6 $g3 $f3+! 7 $g4 $f4+!
8 $h5 $h4+! 9 $g6 $xh6++! 10 $xh6 is stalemate.
1...$h7 2 $g6+! $g8!
2...$h8 3 $g7+ $g7 4 $h7+ --.
3 $g3!!
The game continued 3 $g7? $f2+.
3...$h5+ 4 $h3 $g5 5 $g7! $h6 $g3 $h5+
7 $g2 $g8 8 $g6 ++ (6.71A)

E6.28

F.Leveille – J.Desforges
Quebec 1990
In the game Black was wide awake and found the only way to draw. White’s intention is to
bring his rook back to the fifth rank. As long as White’s king is not on the a- or b-file, Black can
only prevent this by posting his own rook on one of those files. Once we have understood
that, we find that with $b3a3 and $a2c2 we have a reciprocal zugzwang. Thus $b3b3 and $w2d2 is
also a reciprocal zugzwang, and so on. This idea was discovered by Kasparian back in 1946:
$wxa1, $h7, $g6, $h5; $b2g8, $g3: 1 $a2!! ++.
But back to our game.
1...$d3+!!
Not: 1...$b3? 2 $d2!! ++; 1...$a3? 2 $c2!!
++; 1...$h3? 2 $g7? $a3 (2...$h5 3 $a6 ++) 3
$g5 $b7 4 $b5 ++.
2 $e1 $c3+! 3 $f1 $f3+! 4 $g2 $a3!
4...b3? 5 f2! +-.  
5 f2 b3! 6 e2 a3! 7 d2 b3! 8 c2  
8 h7 h6! =. 
8...a4? 9 b2 g3 10 c2  
10 h7 g5! 11 a6 b5 +,  
\[\text{\(1/2-1/2\)}\]  
White reconciles himself to the draw. Splendid defence!

E6.29  
Minsk 1996  
B.Larsen – E.Torre  
Leningrad IZ 1973  
1...\(e6!\) 2 f3 e1!  
White's king can't break through to support one of its pawns, so the game is drawn:  
3 f4  
3 c7 e1 4 e4 (4 d7 exf6 =) 4 xc7 5 e5 e1 =.  
3...e2 4 d5 e2! 5 d6 d6 f7+ xf7  
5 f5 e7 8 d7+ e8 9 f6 e8 =.  
3...e4 12 f1+ 12 e6 e1+ 13 d5 d1+ 14  
3...e5 e6 15...d8 h-1/2

E6.31  
J.Tikhonov – Y.Shulman  
Belarussian Ch (Minsk) 1998  
No, there is no way to save the day:  
1...g4  
1...h3 a6 (1...h7 2...h5 f3 3...d2 g4 4 f5 d7+ 5 e3 e7+ 6 f2 e4 +) 2 c2  
and now:  
\[\text{\(a\)}\] 2 d6? 3 c3 f2 4 h5 g3 5 h1  
\[\text{\(b\)}\] 2...g2 and then:  
b1) 3 h4 g3 4 h1 (4 xc4 h5 5 e3+  
\[\text{\(c\)}\] 3 h5 g3 4 h2+ 5 c3 h2 +.  
3 g2 6 e4 h6 +) 4...a2+ 5 c3 h2 +.  
3...d6 c3 d6 5 h1 a3+ 6  
\[\text{\(e6 h5 +\)}\]  
1...c3  
1...h5 2...xc4 h7 also wins.  
2...g8  
2...c2 c7 3...g6 h5 4...g5 h4 5...g4 h7 +.  
2...c7 3...h8 c6 4...f3 5...f8+...g4  
6 g8+ h4 7 d8 h5 8 d4+ g3 9 d3+  
10 d4 c5 11...e4 g3 12 c3+ f4 13  
\[\text{\(E6.32\)}\]  
E6.32  
I.Bondarevsky – I.Kan  
USSR Ch (Leningrad) 1939
In the game it was White to play: 1 $a1+! $e1 2 $a3? (..$f3 has to be prevented) 2...$e2+ 3 $h1! $e3 4 $a1+! $f2 5 $h2 $e1 6 $a4 $f3
7 $a2+ $e2 8 $a1 (White has set up a back-rank defence) 8...$e3 9 $b1 $e7 10 $b2+! $e2 11 $b1 $e1 12 $b2+ $e3 13 $b3+! $f4
14 $b4+! $e4 15 $f8 $e2+ 16 $g1 1/2-1/2.

If Black is to move, he wins: 1...$f3! (1...$e2+ 2 $h3 $e3+! 3 $h2 $f3 --++) 2 $a1+ (2 $a7 $f2 3 $a2 $f3 --++) 2...$e1! 3 $a3 $f2 --++.

E6.33
A. Kotov – S. Flohr
USSR Ch (Moscow) 1951
Flohr won the game as follows:
1...$e1 2 $a2+
2 $a3 and now:
   a) 2...$f3? 3 $h3 $e3 (3...$e8 4 $a2+! $f1 5 $g3! =) 4 $a1! =;
   b) 2...$e8 3 $a2+ $f1 4 $a1+ $e1 5 $a3 $e2+ 6 $h1 $e3 7 $a1+ $e1 8 $a3 $f3 --++.
2...$f1 3 $xh3
3 $xh3 $e2+ 4 $h1 $e3 5 $a1+ $e1 6 $a3 $f3 7 $a3 $f3+ $e2 --++.
3...$e3+! 4 $g4 $f3 5 $g3 $f2+! 6 $h2 $e8
7 $a1+ $e2 8 $a2+ $f3 0-1

E6.34
S. Tiviakov – M. Ashley
Wijk aan Zee 2000
With precise play Ashley could have drawn:
1...$a8+ 2 $b3 $c5 3 $f5+ $b6 4 $b4 $a2?
This very unfortunate move allows White’s king to penetrate. 4...$a1 5 $f6+ $b7 6 $c5 $c1 or 4...$b7 5 $f7+ $b6 6 $f6+ $b7 7 $e5 $e8+ 8 $c6 $h8 leads to a draw.
5 $f6+ $b7 6 $e5+ $xb2 7 $f7+! $c8 8 $b6 $b1 9 $f8+ $d7 10 $b8
and White went on to win.

E6.35
E. Grivas – A. Naumann
Corfu tt 1999
Yes, he can:
1...$h1?
1...$c6? also loses, to 2 $a6+ $f5 3 $xh7 $c7+ 4 $g8 $g6 5 $f7+ ++ (Hecht in CBM 74).
1...$a6! is the correct defence: 2 $xh7 (2 $a1 $c7 =; 2 $a5+ $c6 3 $a7 $f5 =) 2...$g5
3 $f8 $h6 and White can’t make progress as 4 $f7 allows 4...$g6+ 5 $h7 $h6+ with perpetual check.

2 $a5+ $e6 3 $a6+ $f5 4 $xf7 $h7+ 5 $g8 $h6 6 $g7 $g6 7 $f7 $g5 8 $e7 $h6
9 $e6 1-0

E6.36
J. Kaufeld – M. Wiertzema
Bad Wildbad 2000
No, White can draw in several ways; e.g. 1...$a3 2 $g5+ (2 $e2 $d3 3 $f1 $xh3+ 4 $g1! $f3 5 $g5+ =) 2...$xe3 3 $g1 $a1+ 4
$e4 $h2 5 $a5 =.

E6.37
K. Müller – M. Thesing
Bundesliga 1998/9
No, with accurate defence White can hang on:
1...$g7
1...$f6 is met by 2 $g4! $xg4 3 $xg4 $fxg4 4
$e4!! =
2 $h4 $e6 3 $g2
3 $e4 $g6 4 $h3 (4 $g4? $xg4+ 5 $xg4 $fxg4
4...$e4 5 $g3 $c6 6 $f2 $xh3 7 $a7 4 $h8 $a2+ 5 $e3 $a3+ 6 $f2
$f3+ 7 $g2 $e5 8 $a8 $d3 9 $f2 $d5 10
$e3 $b5 11 $e8+ $d5 12 $f4 $b3 13 $f5
$f3+ 14 $g4 $d4 15 $a8 $e3 16 $f4 $f3+
17 $g4 $f7 18 $a4+ $d3 19 $a3+ $e2 20
$e2+ $f1 21 $a1+ $g2 22 $a1 $g7+ 1/2-1/2

E6.38
R. Dautov – V. Milov
Essen 2000
1...$b3? was the game continuation: 2 $h5
$c6 3 $xf5 $xh5 4 $g4 $h3 5 $g5 $h8 6 $f6+
$e7 7 $f5 $d8 8 $g5 $g8 9 $g6 $g7 10 $f5
$g8 11 $f7+ $e6 12 $a7 1-0.
After the game, Milov immediately demonstrated the correct method:
1...$d5! 2 $h5 $e6 3 $h6+ 4
$g5 $d1 4 $g6+ $e7 5 $xf5 $f1+ 6 $g5
$f3 =;
3...$e7 4 $b6 $a5 5 $h6
5 $g5 $e5 =;
5...$d5 = (Dautov in CBM 77)

E6.39
P. H. Nielsen – J. Emmes
Esbjerg 2000
Hecht showed in CBM 78 that White could have survived:
1 $g2!
Certainly not 1 $h4?? $g5+ 2 $h5 $h3#.
E6.40

Z. Ribli – M. Wahls

Bundesliga 1998/9

1...d4? =

The white king hides away from the checks. Now the b-pawn is unstoppable.

1...d4?! d5 g2 =

The b-pawn queens after 7...d4+ 8...d3 d8=9. 2...d4+ 3...d6 g5 e3+ 4...f4 f1+ 5...d5 e1+ 6...f4 f1+ 7...d5 d8=9.

E6.41

G. Kasparov – A. Morozevich

Sarajevo 1999

1...d4+ 2...d5 2...d6 3...d7 g2 f1 =

Nunn’s suggestion 2...d3 also wins, but is much more complicated; e.g., 3...a3 1 4...d6 5...c6+ 6...d2 c5+ 7...f1 c4+ 8...f1 c5 9...a7...
FUNDAMENTAL CHESS ENDINGS

Topalov resigned because he loses his new-born queen immediately: 3...bxc5+ (a7 loses to 3...bxc3+, as it is check) 3...bxc5 4 a7 c1=Q 5 a8=Q Qh1+ --.

E6.44
V.Kramnik – L.Smirin
Moscow rpd 1995
Yes, he is winning.
1...bxa2??
But not this way! Black's rook has to be activated with 1...g5: 2 a8=Q g2 3 g5 f6 4 b5 c1=Q 5 a5 (4 b3 g3 5 a5 Qf4 6 a6 Qe5 --) 4...c4 5 a6 Qc2 --.
2 a8=Q xh2 3 g5
c4+ 4 Qxc4 Qg3 5 b4 Qf4 6 a5 Qe5 7 Qc5! f5 8 b5 f4+ 9 b6! Qd6 10 f7 Qc5 11 Qb6. 4 a5 c4+ 5 Qxc4 Qxa5 6 b4! (NC) 6...h5 6...Qb1?? 7 b5! Qc5 and now 8 Qd5!! = (but not 8 Qd5? Qxe5! 9 Qe6! 10 b6 c1=Q+ --).
7 b5! Qf4 8 b6! Qe5 9 b7 Qh8 10 Qc5! Qe6
11 Qc6! 1/2-1/2

E6.45
N.McDonald – A.J.Mestel
London 1994
1...g2?
This immediate advance of the pawn is wrong due to the bad position of Black's king. 1...h2! is also bad in view of 2 g6 h8 3 Qh3 =, 1...g2! would have won: 2 Qd3 (2 g6 h8 3 Qg4 h3 --) 2...h2 3 g6 h4 --.
2 Qg6 Qh2 3 f2
3 Qd3? h4! 4 f3 g1=Q 5 f5 g1=Q 6 f5 Qa3 7 f6 Q5 a4 =.
3...Qh1
3...f8+ 4 Qe3 d8 (4...g1=Q 5 Qd5 g1=Q 5 Qd5 g1=Q 6 Qd4+ 5 Qh6+ g1=Q 6 b5 Qe8+ 7 f4 d8 g8 a6 Qf2 9 Qa2+ Qf3 10 Qxg2 Qxg2 11 b6 =, 4 Qxg2
4 b5? Qh5 5 b6 Qf5+ --.
4...Qf8+ 5 Qe3! (NC) 5...Qxg2 6 d4! Qf3
7 b5! Qf5 8 Qc4! Qe4 9 b6! f1=Q 10 Qc5! Qe5
11 b7 Qb1 12 Qc6! Qxb7 1/2-1/2

White's rook becomes too active: 2 Qxg6 Qc2 3 Qa6 Qa2 4 Qa7+.
2 Qxg6 Qa5! 3 Qf2
3 Qb1 Qe7 4 Qf2 Qd6 5 Qe3 Qc5 6 Qd3 a3 7 h5 a2 8 Qa1 Qa3+ 9 Qe4 Qxc4 10 Qf5 Qb3 11 Qg6 Qa7 12 Qe1 Qc7 13 g4 Qb2 14 Qe2+ Qh1 --.
3...a3 4 Qb1 a2 5 Qa1 Qa3 6 Qd4
6 Qc1 Qe7 7 Qd1 Qd6 8 Qc2 Qc5 9 Qh2 Qg3 10 Qxa2 Qxc4 --.
6...Qxg1 7 Qxe4 a1=Q 8 Qxa1 Qc2 1/2-1/2
10 Qb2 Qd4 11 Qg5
11 Qe1 a1=Q+ 12 Qxa1 Qxa1 13 Qxa1 Qc5 --.
11...fxg5 12 hXg5 Qd6
12...Qb3 13 Qc2 Qa3 14 Qh1 Qb2+ 15 Qd3 Qb1+ --.
13 Qc2 Qg3 0-1
The pawn endgame arising after 14 Qxa2 Qg2+ 15 Qb1 Qxa2 16 Qxa2 --> is hopeless.

E6.47
L.Polugayevsky – E.Vasiukov
USSR Ch (Tbilisi) 1966/7
1 b7?
Now the e-pawn will fall prey to White's king due to zugzwang, after which the f-pawn will march down the board.
1...Qe3?! is less effective:
a) 1...Qg6 2 b7 Qf5 3 g4+! hXg3 4 Qxg3 Qb3+ 5 Qc4 Qb4+ 6 Qxe5 Qb5+ 7 Qd6 Qb1 8 g4+ Qh4 9 g5 ++.
b) 1...h3 2 gXh3 Qg6 3 b7 Qh5 4 Qd3 Qh4 5 Qc3 Qb1 6 Qc4 should be winning for White, but it is certainly not easy to calculate to the end.
c) 1...Qb2 2 Qd3? (White can still win by reverting to the correct plan with 2 b7 ++) is wrong because it gives up the valuable f-pawn: 2...Qxf2 3 Qc3 Qf1 4 Qc2 Qf4 5 Qc3 Qf1 6 Qc4 Qh1 7 Qd5 Qb2 =.
1...Qg7 2 Qe3 Qd4 3 f4 Qh7 4 Qe5 Qg7 5 Qd5 Qb2 6 Qxe4 Qb4+ 7 Qd3 Qb3+ 8 Qc4 Qb1 9 Qf4 Qc1+ 10 Qd3 Qb1 11 Qf5 Qb6 12 f6+ 1-0
Due to 12...Qf7 13 Qh8 Qxb7 14 Qh7+ ++.

E6.48
R.Dautov – B.Alterman
Bundesliga 1997/8
1 Qe6?!
1 Qe4? wastes valuable time. Black's counterattack will be faster after 1...f6 2 Qa7+ Qh6.
E6.49

V. Ivanuch – A. Karpov
Monaco Amber Blindfold 2000
1...b6!

Making space for the advance of the pawn and restricting Black’s counterplay at the same time. After 1...b8? Black’s typical play on the kingside develops much more quickly: 1...f6 2 b4 b2 3 b3 b5 4 b6 gxh4 5 gxh4...g6.

1...g7 2 h4 c3+

A simple line after 2...b8? b5+ c6 3 b5+ c7 b5+ c4 b6 4 c6+ b8 7 c5 c6+ 8 c4=]

1...f6 2 b4 b6 5...h6 3 b6+ c5 b6 4...g5 c5+ 2 b7 c4 b7 3 c7 c7 4...d4 d4 5...b5 b5+ 6 c6 c6 7...a7 a7 8 b8 b8 9 a7 a7 10...

E6.50

F. Marshall – J. Capablanca
New York (9) 1909
1...b7!

This is best. Others:

a) 1...d4? 2...d4...d4 c3 4 h4+...d7

b) 1...c6?? 2...g5...g5 b6 3...b8? 3...b6 4 h5 c6 5...b4 6...b4 f6 7...f6 c5 8...c5 g5+ 3...c5 3...c5 f6 4...f6 d6 5...d6 e5 6...e5 b6 b6

E6.51

E. Bacrot – V. Tkachev
Enghien les Bains 1999
1...h5!

1...c5? 2...b4 axb4 3...c4...f5 4...f4= 2...b4 axb4 0-1
The resignation may be a bit premature, but White's king will be cut off from the d-pawn: 3...c4 e5+ 4...f3 c5 5 h3 b6 6 db2 (6 d4 c5 7 db3 b3 6 dbd6 6 c4 7 e4 8 e3 8 d7 ed5 9 ed3 b3 10 ec7 ed3+ 11 ed2 ed5 6 b5 8...xc3+ 9...xc3 e5+ 10...f3 d5 →.

E6.52
J. Klovans – I. Glek
2nd Bundesliga 1997/8
1...e3?
Black should play 1...h4+! 2...d2 e3+ 3...e2 g1= mates; see the game.
2...d1?
2...h6!...h6 3 gxh6...c6 = (Glek in CBM 63).
2...h1+ 3...e2 g1 4...e8+
Or: 4...g7...g7 5...e1 c7 = (Glek); 4 g6...g6 2 g7...c7 8 g8...g8 9...e2...g2+ 10...f1...xc2 11...c2+...c7 =.
4...c7 5...e7+...e6 6...e7...b7 7...g2+ 7...e1...d5 8...b3...b3 9...b3...f4 0-1.

E6.53
M. Röhssov – M. Sadler
Pula Echtp 1997
1...b4! (not 1...a4?, after which White takes control over the 7th rank; 2...d1! a3 3...d7 =) 2...d1 (2...d4 a4 3...a3...b3 =) 2...x e4 3...d7...b4 4...c7 a5 5...c6 a6 6...c7...b4 7...c1 a2 8...a1...b4 9...c1...b2 0-1.

E6.54
U. Bönisch – K. Müller
Bundesliga 1992
1...a1!
1...c6?...c7 2...xa6...c2 =.
1...d2 2...d2+...d3
2...d1 3...h2...d7 (3...e7 4...c2...d5 5...c2...d6 6...c4...c3 7...c1+...c1 8...h1+...c1 9...e1+ =) 4...h1+...d2 5...c1...d3+ 6...f2+ =. Black cannot prevent...h1#.
3...c2...c5 4...c2 1-0
Black resigned because...e2# follows.

Chapter 7

E7.01
N. Borge – E. Mortensen
Danish Ch (Aarhus) 1999

In the game, White first missed the win, and then from the way to draw:
1 a5?
1...c6? is also bad: 1...f3 2...xd6 f6 3...f6...f6 (3...g1+ =) 4...e6+...f1 5...f6...e2 = (Hecht).

White should play 1...c7! (Ribli in CBM 71)
1...f3 (1...d3 2 a5...c5 3...b4 4...d7+...f2 5...f7 =) 2...g3 f2 3...c2+...d3 4...x f2...d5 5...b2, and now:
a) 5...d5 6...d4 7...d6...d6 8...c6 9...c7 10...c7...b5 9...d2 10...c6+...d5 11...c8 = 10 a7...xa7 12...e4 12...e2 =.
b) 5...f6 6...d2 7...d5 7...d4 8...e6...c4 9...e7 =
...c3 10...a5 11...e5 12...f6...f6 (or 11...f4 12...f6...d5 13...c1...c5 14...b4...d6 15...b4...c7 16...b5...c3 17...a5 =) 12 a5 d5 13...a2...c6 14...a6 15...b6...b2 =.
c) 9...f3 10...d3 11...f3 12...d6 13...h8 14...d8 15...d7...a5 15...d5 +=.
1...f3 2...c7
2...c8 is also possible, as Hecht showed in CBM 71: 2...f2 3...f8 and now:
a) 3...f1+ 4...c1...f1 5...c6 6...c7 7...b6 8...c4 9...f2 10...c5 10...f6 = 6...d5 7...f5 8...f4...e2 9...e2 =.
b) 3...f3 4...e8 5...f1 5...f8...c2 =.
2...f2 3...c2+...f3 4...c3+??
Now White loses. Otherwise:
a) 4...f2+? also fails, to 4...f2 5 a6...c6 6...g4...c3 7...f5 d5 += (Ribli).
 b) White can survive by playing 4...c1!...c3, and here:
   b1) Not 5...c1?...c1 6...c3+...d4 7...b4+...e5 8...b5+ d5 += (Hecht).
   b2) 5...f1...c2 6...f2+...c2 6...c2+ 7...b4! = 7...d6 8...c4...g3 9...c7 10...c5...c3 11 a8...c8 12...c8 =.
   b3) 5...c1...c4 5...c6 6...a1 = 6...a1 d5 7...a6...a6 8...a3+...a2 9...d5 += (Ribli).
4...d3! 0-1
After 5...d3+...c2 6...d6 f1+ 7...g4...f3+ = White loses his rook at once (Hecht).

E7.02
P. Adamek – B. Hala
Czech Ch (Prague) 1994
1...c8??
1...c8? is also bad: 1...g1 2...e2 3...e1 4...d4 5...a4+...d3 +=.
1. B6h is correct: 1...c2 2. Bxh1 Qe3 3. Bxe1
1...c2 2. Bxd8+ Bxe3 0-1

E7.03
M. Bezdol – C. Lingnau
Budapest 1994
1. h5! (NC) 1...Bh4
Or 1...Qe7 2. Bb7 Qf8 3. Bxe7 Bxe7 4. Bxg6
=.
2. Bb4+ Bf3+
2...g5 3. Bb6! Bh7 4. h6 g4 5. Bf4! g3 6. Bxg3!
10. Qh7+! +–.
3. Bf4!! Qe1 4. Qe4 Bxh5 5. Bb2 1-0

E7.04
A.P. Santos – L. Reis
Portuguese Ch (Lisbon) 1999
1. Qd1! Bc4
After 1...Qd5 2. Qe3+! Bxd4 the fork 3. Qc2+!
= saves the day.
2. Qe3 Ba4 3. Bf5 Bb4 4. Qg4 Qc6 5. Qe5
Qb5 6. Qe3! Qe5 7. Qg4 Ba4 8. Bc3! Bxd4 9
Qf5 Bb4 10. Qe3 Qb5 11. Qg4 Qa4 12. Qe3!
Qb3 13. Qf4 Ba4 14. Qf5 Bc3 15. Qe3! Bb4 16
Qd6 Bb8
Black acknowledges that he can’t make any
progress and gives up his pawn.
17. Qxe4 Bb8 18. Bxe5 Bxd3 19. Qd5 Bb8 20
Qe5 Bb8 21. Qf5 Bh5 22. Qf4 Qh8 23. Qe5
Be8+ 24. Bxe5 Qxe4 25. Bd6 Ba4 26. Qh5 Bh4
27. Qe5 Qh5+ 28. Qb4 Qg5 29. Bd6 Qd5 30
Qb5 Qh5 31. Bd6 Bb6 32. Qc5 Qh7 33. Qd5
Bh5+ 34. Qe6 Bdd 35. Qf5+ Qd3 36. Qe5
Qxf5+ 37. Qxf5 ½-½

E7.05
R. Tischbier – L. Gutman
Bad Endbach 1995
It certainly does!
1. Bc5?
1. Bb2? is also bad: 1...Qf1+ 2. Qa2 Bc2 3
Bd4 Qb1 4. Qxb6?! Bxb2 –+
1. Bb8! is necessary, because 1...b5 doesn’t
work now: 2...axb5 Qb7 3. Bb2 Qxb5 4. Qa3 Bc2
5. Qa4 = (Hecht in CBM 47).
1...Qf5! 2. Qg7
2. Qc7 b5 3. axb5 (3. Qxa5 bxa4 4. Bc4 4 --)
3. Bxb2 Qa2+ 4. Qb1 Qc3 +– 3...Qxb5 4. Qa2
Bc3 5. Qa3 Bh3+ 6. Qa4 Bb7! ––;
2...b5 3. axb5
3. Qa2 bxa4 4. Bxa4 Qc4 ––.

E7.06
D. Tyomin – A. Greenfeld
Israeli Ch (Ramat Aviv) 1998
1. Bd4!
Not: 1. Bc3? b2 2. Bxb2 Qxd3 –+; 1...h2? b2
3...Bf6 4. Qc4 Qg7 5. Bb4 Bb1 6. Bc2 Qb1 +– (Tyomin
in CBM 68).
1...b2 2. Bb1! Bf7
2. Bf1 3. Bb2 Bg5 (3...Qe7 4. h7 Qxh7 5
Qc3 Bb2 6. Qb1 Qb2 7. Qc2 =) 4. h7 = (Tyomin).
3. h7 Qg7 4. Qd6! Bf6 5. Qd5! Qe7 6. Qe5 Qh1
7. Qg6 Qb6 8. Qb1 Qh5+
9 ♦d4 ♤h3 10 ♦e5 ♤h4 11 ♦g6 ♤h1 12 ♦c2 ♤h4 13 ♦g6 ♤h5+ 14 ♦d4
14 ♦xh5? ♤b1 15 ♦g6 (15 ♦b8 ♤b2 + --)
15... ♤b8 + --
14... ♤h3 15 ♦e5 ♤h1 16 ♦e2 ½-½

E8.07
Y. Averbakh, 1978
1 ♦g4! (1 ♦c6+? ♤g5 2 ♦e4 ♤g7 3 ♦d5 ♤f6 4 ♦e6 ♤xg6 5 ♦c2 ♦d4 =) 1... ♤g7 (or:
1... ♤g5 2 ♦xg5 ♤xg5 3 ♦g1! ++; 1... ♤g7 2 ♦g3 ♤f5 (3 ♦h4 ♤h6+ 4 ♦h5 + --) 2 ♦g3 ♤e3 3 ♦h4
4 ♦d2 4 ♦h5 + --

E8.08
J. Lechtynsky - P. Milčević
Kragujevac 1984
1... ♤h8? (1... ♦c8! 2 ♦b7 ♤f8 3 ♦d5 ♤c8 4 ♤d7 ♤f8 =) 2 ♦e8! 1-0

Chapter 8

E8.01
H. Olafsson - M. Petursson
Akureyri 1988
1 ♦f2! :
Not:
a) 1 ♦g2? ♤b8+! 2 ♦a1 (2 ♦c1 ♤b1 +!) 3 ♦d2 ♤h2+! ++ 2... ♤b1 + 3 ♦a2 ♤c3 ++.
b) The game featured 1 ♦c1?:
   b1) 1... ♤d4? 2 ♦f2 occurred in the game, which was drawn later.
   b2) 1... ♤a1 +! 2 ♦b2 ♤h1 3 ♦g2 (3 ♦a3 ♤c3 ++) 3... ♤b1 +! 4 ♦a2 ♤c3 ++.
1... ♤b8 + 2 ♦c1! ♤b1 + 3 ♦d2 ♤d4 4 ♤f4 +
      ♤e4 5 ♦f2 =

E8.02
J. Nunn, 1995
The following win is often overlooked in practice:
1 ♦c7 +!
Not: 1 ♦d6? ♤c1 =; 1... ♦c6? ♤c1 + 2 ♦d6 ♤c2 =
   1... ♤d8 2 ♦d6!! ♤h1
Or: 2... ♤e5 3 ♤a7 +! ++; 2... ♤e2 3 ♤c1 ♤d2 +
   4 ♤e6 +! ++; 2... ♤d1 + 3 ♤e6! ♤d2 4 ♤e4 ♤e8 5
   ♤h4 ♤f2 6 ♤h7 ++.
3 ♤f6 +! ♤e8 4 ♤e6! ♤e1 + 5 ♤e5! ♤d1
   Or 5... ♦d8 6 ♤c2 ♤e4 7 ♤h2 ♤c8 8 ♤b2 +!
   ++
   6 ♤c3 ++

E8.03
I. Novikov - J. Polgar
Pamplona 1990/1
In spite of the bad position of the black king, it was still possible to reach a second-rank defence:
1... ♤a7
1... ♤b5? was the game continuation: 2 ♤g5!
   ♤b2? (2... ♤b8 3 ♤h6+ ♤g7 4 ♤h7 +! ♤g6 5
   ♤e7! ♤h8 6 ♤e6 ♤b7 7 ♤e8+ ♤g7 8 ♤g8 +!
   ♤h7 9 ♤f6 +! ++) 3 ♤f4 ♤h2 4 ♤g3 ♤f2 5 ♤h3 + 1-0.
2 ♦e5 ♤g7 3 ♤a6
3 ♤h6+ ♤g8! 4 ♤e6 + ♤f8! 5 ♤f6 ♤f7 +! =.
3... ♤g8 4 ♤g6
4 ♤e6 ♤f7 =.
4... ♤f8 =

E8.04
V. Kramnik - G. Kasparov
London BGN Wch (4) 2000
1 ♦a6 +?
1... ♤d5 +! is correct: 1... ♤d6 2 ♦b4 + ♤b5
   (2... ♤xa5? 3 ♤c6 +++) 3 ♤f4 ♤h5 4 ♤g4 ♤e3 5 ♤a6 ♤b3 6 ♤c2 ♤h3 7 ♤d4 ♤b6 8
   ♤d7 ++) 4 ♤a6 ♤h1 + 5 ♤e2 ♤a1 6 ♤d2 ♤c3 +
   7 ♤e2 ♤g8 8 ♤d4 ♤c5 9 ♤a6 ♤b5 10 ♤b2 ♤h3 11
   ♤e8 ♤h7 (11... ♤xh7 12 ♤c3 ♤h3 + 13 ♤d4
   ♤h4 +! 14 ♤d5 ++) 12 ♤b8 + ♤c5 13 ♤b7 ♤h8
   14 ♤a7 ♤a8 15 ♤c3 ♤g4 16 ♤d2 ♤g3 17 ♤e2 ♤g2
   (17... ♤f8 18 ♤b8 ++) 18 ♤f2 ♤g8 19 ♤g1 + --.
1... ♤b6 2 ♤g7 ♤a5!
2... ♤e5? 3 ♤a7 ♤xa7 4 ♤e6 + --
3 ♦a2 ♤a1 4 ♦a2 ♤h1?
   It was necessary to stay on the a-file: e.g.,
   4... ♤a5 5 ♦d3 ♤a1 6 ♦d4 ♤c1 =.
5 ♦b2?
Kramnik misses his chance. 5 ♤g8! wins for
White:
a) 5... ♤h7 6 ♤b8 + ♤a7 7 ♤b7 #.
b) 5... ♤xc7 6 ♤a7 + --
c) 5... ♤a1 6 ♦d5 + ♤a7 7 ♤d4 ++
   d) 5... ♤h2 + 6 ♤d3 ♤h3 + 7 ♤c2 ♤h2 + 8
      ♤f3 ♤h3 + 9 ♤g2! (van Os in CBM 79: 9 ♤g4 +
      ♤a3! =) 9... ♤a3 10 ♤d5 + ♤c5 (10... ♤a7 11
      ♤b4 + --; 10... ♤xa6 11 ♤a8 + ++) 11 ♤g5 ♤b5
      12 ♤g6 ♤c5 13 ♤c7 + --.
5... ♤h8 6 ♤b3 ♤c7 7 a7
7 ♤b4 ♤xc7 8 ♤xc7 ♤xc7 9 ♤c5 ♤b8 =.
7... ♤xa7 8 ♤b4 ♤b6 9 ♤d5 + ♤a6 10 ♤g6 +
   ♤b7 11 ♤h5 ♤c1 12 ♤g2 ♤c8 13 ♤g7 ♤d8 14
   ♤f6 ♤c7 15 ♤g5
15 ♤g8 + ♤e7 16 ♦d5 + ♤f7 =.

E8.05

A. Morozevich – Y. Yakovich

Russia Cap (Samara) 1998

In the game Morozevich undermined Black's centralized knight with great effect:

1...f4!

1...c4?! d5 is less clear.

2...cxd5

Note the possible forks on d7 or c4 after other moves! 1...a5? 2...c6+!!

2...cxd5 3...c4 d5 4...b3 e6 5...d6+ e7 6...xc6 1-0

E8.06

S. Movsesian – V. Ivanchuk

Polanica Zdroj 2000

1...a6+!

Weaker are 1...d7 e8 2...e5 f8 = and 1...f7 f6 2...c5 h5 = (2...xh4! 3...d4 =), when the fight is still not over. Certainly not 1...f7?? 2...h5+! 1-0 or 1...c8?? 2...c6+! 1-0

fxg6 3...d7+ f8 4...g5 d5 =

1...h7 2...h8+!!

2...d7 f6+.

2...d7 3...f7+ g8

3...f1 4...e6+ d4 and now:

a) Even 5...xc6?! is possible: 5...xc6 (NC)

6 f7? g7? 7 f8= and f8= 8...f1! g8 9...g5! =.

b) 5...c66? g5 (freeing g6 for the knight) 6

f7 g66 (6...f8?? 7 f8 8 f6 9...f6 10...f1! =)

4...xf6+ 5...e5 d4+ 6...d5 e2 7

xe6+ f7 8...e5+ d6 9...g4+ g6 =

4...e3 b7! 5...xa5 b8! = traps the rook.

4...d6

The extra pawn now guarantees an easy win.

5...e4 f6 e5

6 f4 e5 e5 7 fxe5 7 fxe5 5...f3 9...d4 c3 10...d3 c5 =

7...a7! 8 f5 exf5 5...d6 10...h3 c4 11...d4 c3 12...xc3 e5 =.

6...fxe6 7 g4 d6 e6 8 h4 e5 9 f5 c4 10 h5 c3 11

d3 e4+ 12...xc3 e5 13...f4 f4 14...d4

xc6 0-1

E8.08

Xu Jun – N. Short

Shenyang FIDE WCup 2000

Not yet! Short found an excellent risk-free way to sharpen the fight:

1...f5!! 2...g6+

After 2...d5? Black wins by 2...a4; e.g., 3...e4 4...xe4 4...a4 (4...d6 5...f3 f7 6...f7+ a4++) 4...f3? 5...cxd4 c3 =.

2...h5 3...exf5

3...g8 h1+ 4...f2 fxe4++.

3...f4 4...g8?

4...g4+ is also bad, due to 4...xg4 5...xe4

4...e2+ ++

4...g4! is essential: 4...a2+ 5...a2+ 6...d4 7 a4 8 a5 8...f6 5...d5 with drawing chances.

4...e2 5...e4

The only move. After 5...d6+ e5 6...h7+ g6 7...g6+ h7 8...g8+ h8 White runs out of checks.

5...e4 6...e4+ 7...d3

7...e8 8...f3+ 9...h8 c2+ 10...f1...g3 10...xd4 e3!! (threatening...g2++) 11...xd4 a6 and Black mates.

7...d3

Not 7...d3? 8...xd4 e2+ 9...f1...g3 10...d3 =

8...d4?

White could still fight with 8...f6 e2+ 9...d1 (9...f1? e3 again mates) 9...f2 10...d4=.

8...e2+ 9...d1...g5 0-1

The threat of 9...f4 followed by 9...d3 is too strong.

E8.09

S. Ovseevich – V. Nevertov

Orzonomikide 2000

1...e6?

This is wrong. Otherwise:

a) 1...b2 is also bad: 2...h6 g2+ 3...f4

f6 4...h1 5...f6+ ++.

b) 1...f6

2...xf6 gxf6

3...c6+ 4...xe6+
E8.10
A.Fominykh – A.Korotylev
Moscow 1999
Answer ‘B’ is correct as only 1...\texttt{b}8! saves the draw.

1...\texttt{xb}2++?
1...\texttt{b}8! 2 \texttt{xf}6+ (2 \texttt{h}3 \texttt{f}7 3 \texttt{e}2 \texttt{e}8 =) 2...\texttt{g}7 3 \texttt{f}6 \texttt{f}8 4 \texttt{b}3 \texttt{f}6 and Black should be able to hold on. Not 1...\texttt{e}5? 2 \texttt{d}6 \texttt{b}8 3 \texttt{d}7 ++.

2 \texttt{e}2 \texttt{e}5
Or: 2...\texttt{b}8 3 \texttt{xd}6 \texttt{cxd}6 4 \texttt{a}6 ++; 2...c4 3 \texttt{xd}6 \texttt{c}3 4 \texttt{xf}6+ \texttt{g}7 5 \texttt{f}3 ++; 2...\texttt{e}7 3 \texttt{d}6 \texttt{d}8 4 \texttt{xf}6+ \texttt{g}7 5 \texttt{e}6 \texttt{f}7 6 \texttt{e}7+ ++.

3 \texttt{d}6! \texttt{h}8
3...\texttt{xd}6 4 \texttt{xd}6 \texttt{cxd}6 5 \texttt{c}7 ++.

4 \texttt{d}7 \texttt{d}8 5 \texttt{d}3 \texttt{d}4+ 6 \texttt{f}3 \texttt{f}5
6...\texttt{f}7 7 \texttt{e}8 \texttt{xe}8 8 \texttt{x}g6+ ++.

7 \texttt{xg}6 \texttt{x}e7 8 \texttt{x}f5 \texttt{x}f6 9 \texttt{d}3 \texttt{h}8 10 \texttt{c}4 \texttt{f}8 11 \texttt{e}4 \texttt{h}8 12 \texttt{g}8 1-0

E8.11
J.Timman – G.Kasparov
Sarajevo 1999
After 1...\texttt{d}3 Timman resigned immediately. The mating threat on \texttt{e}4 would have forced him to exchange the rooks, leaving no hope of stopping Kasparov’s outside passed pawn: e.g., 2 \texttt{c}6+ (2 \texttt{h}x\texttt{h}5 \texttt{d}4#) 2...\texttt{e}6 3 \texttt{xe}6+ \texttt{xe}6 4 \texttt{g}5 \texttt{e}4 5 \texttt{hx}5 \texttt{a}5 6 \texttt{x}g4 \texttt{a}4 –++. 1...\texttt{e}8?? should win in the long run, but is much less convincing!

E8.12
D.Sadvakasov – A.Morozevich
Astana 2001
1...\texttt{d}6+!
Morozevich gives his opponent no chance to sacrifice the knight for the pawns. 1...\texttt{e}7?

is bad in view of 2 \texttt{h}5! \texttt{d}6+ 3 \texttt{f}4 \texttt{g}1+ 4 \texttt{f}2 \texttt{b}1 5 \texttt{hx}h3 =.

2 \texttt{f}4
2 \texttt{hx}g4 \texttt{h}2 –+

2...\texttt{g}1+! 3 \texttt{h}2
3 \texttt{f}2 \texttt{h}2 –+

3...\texttt{f}1
3...\texttt{g}2+ also leads to victory: 4 \texttt{h}1 \texttt{f}2! 5 \texttt{g}3+ \texttt{f}7 6 \texttt{f}5+ \texttt{e}8 7 \texttt{h}5 \texttt{x}b2 –+

4 \texttt{g}5+ \texttt{f}7 5 \texttt{x}g4 \texttt{f}3!!

Simple but beautiful. There is no hurry to take the knight. Such intermediate moves can easily be missed. Not 5...\texttt{x}f4+?? 6 \texttt{hx}h3 =.

6 \texttt{a}4
6 \texttt{g}3 \texttt{x}f4 –+

6...\texttt{xf}4+ 7 \texttt{g}1 \texttt{h}2+ 8 \texttt{g}2 \texttt{f}1 0-1

Chapter 9

E9.01
Black’s king is very near to the winning zone, so a certain amount of precision is required to save the draw:

1 \texttt{f}6! \texttt{h}8+
1...\texttt{h}4+ 2 \texttt{g}7! =.

2 \texttt{e}7! \texttt{g}7 3 \texttt{e}8! \texttt{e}5
3...\texttt{g}4 4 \texttt{e}7! \texttt{g}5+ 5 \texttt{e}8 =.

4 \texttt{f}8! =

E9.02
Y.Zeziulkin – Y.Yakovich
Swindon 1999
Black must hinder White’s king from escaping into the drawing zone in the upper left-hand corner:

1...\texttt{f}4?!
1...\texttt{f}3 was played in the game, and after 2 \texttt{a}4 g4 (2...\texttt{f}5 3 \texttt{a}2+ \texttt{h}3 4 \texttt{b}3+ \texttt{h}4 5 \texttt{h}2 \texttt{g}4 6 \texttt{h}8+! \texttt{g}3 7 \texttt{c}3+ \texttt{h}2 8 \texttt{d}2+! \texttt{h}3 9 \texttt{h}6+ =) 3 \texttt{a}2+ \texttt{f}2 4 \texttt{d}5+ a draw was agreed – somewhat prematurely as Black has practical chances because White’s king is still in a dangerous area.

2 \texttt{a}2+ \texttt{f}3 3 \texttt{d}5+ \texttt{g}3 4 \texttt{e}6 \texttt{f}3+ 5 \texttt{c}2
5 \texttt{d}4+! \texttt{g}4+ –+

5...\texttt{g}4 6 \texttt{d}2 \texttt{g}2 7 \texttt{g}8 \texttt{g}3 8 \texttt{g}7 \texttt{g}1 \texttt{a}1+ \texttt{f}1 10 \texttt{e}5 \texttt{g}2 –

The pawn has advanced to its seventh rank and the tablebase informs us that it takes another 40 moves to mate White with optimal play.
E9.03

E. Mortensen – C. Hansen

Copenhagen 1996

Black wins surprisingly quickly due to his threats against White's king:

1...\(\text{We}4!\) 2 \(\text{Wg}3+\)

Or: 2 \(\text{Wc}8 \text{dc}3+ 3 \text{d}a1 \text{Wh}1+ 4 \text{d}a2 \text{Wh}2+ --;

2 \(\text{Wg}7 \text{xd}2+ 3 \text{d}a1 \text{Wa}4+ 4 \text{d}b2 \text{Wc}2+ --;

2 \(\text{Wf}6 \text{wb}4+ 3 \text{d}a2 \text{Wc}4+ 4 \text{d}b1 \text{Wc}2+ --.

2...\(\text{d}a2+ 3 \text{d}a1\)

Or: 3 \(\text{d}a2 \text{Wc}2+ --; 3 \text{d}b2 \text{Wc}2+ --.

3...\(\text{We}1+\)

3...\(\text{Rc}2?!\) is winning in 59 moves according to the tablebase.

4 \(\text{Wxe}1+ \text{Wxe}1! 0-1\)

E9.04

P. Witt – K. Müller

Hamburg 1983

Black could have avoided the perpetual:

1...\(\text{Rf}1+!\)

1...\(\text{Rd}6!\) was played in the game, and after 2 \(\text{Wg}6+ \text{Wg}8\) 3 \(\text{Wf}8+! \text{Wh}7 4 \text{Wf}5 \text{Wa}3 5 \text{We}8+ a draw was agreed.

2 \(\text{Wg}4\)

2...\(\text{Rc}4+! 3 \text{Rb}5 \text{Wh}1 4 \text{Wg}6+ \text{Wh}8! 5 \text{We}8+ \text{Wg}8! --\)

E9.05

L. van Wely – P. van der Sterren

Dutch Ch (Rotterdam) 1999

A stalemate trick saves the day:

1...\(\text{Wd}6!!\)

1...\(\text{Wxf}7+? 2 \text{Wxf}7! \text{Wh}7 3 \text{Wf}6 \text{Wh}6 4 \text{Wf}6\) (now Black can't maintain the opposition because of the edge of the board; 4 \(\text{f}5? \text{gx}f5! 5 \text{Wxf}5! \text{Wh}7 6 \text{Wg}5 \text{Wh}7 7 \text{Wx}h5 would be drawn due to Bähr's Rule) 4...\(\text{Wf}7! (4...\text{Wx}h7 5 \text{Wf}7+ --) 5 \text{Wxe}7! \text{Wg}8 6 \text{Wf}6+! \text{Wh}7 7 \text{Wf}7! \text{Wh}6 8 \text{Wg}8+!! (Hecht in CBM 72).

2 \(\text{Wxe}6\) stalemate

Or 2 \(\text{Wf}8 \text{Wd}6+ 3 \text{Wg}8 \text{We}6! =\).

E9.06

O. Romanishin – M. Krasenkow

Lvov 2000

The creation of a far-advanced passed pawn secures the draw:

1...\(\text{b}4! 2 \text{cxb}4 \text{ec}3 \text{f}4\)

3 \(\text{Wd}3+!! \text{Wc}7 4 \text{Wc}2 \text{Wc}4 5 \text{b}5 \text{Wb}4 is only dangerous for White.

3...\(\text{Wc}7 4 \text{Wf}2 \text{Wc}4 5 \text{f}5 \text{c}2 1/2-1/2\)

A possible continuation is 6 \(\text{Wc}1! \text{Wd}4+ 7 \text{Wxe}2 \text{Wxe}4+ 8 \text{Wd}2 \text{Wxb}4+ 9 \text{Wxc}2 \text{Wc}4+ 10 \text{Wd}1 \text{Wxc}1+ 11 \text{Wxc}1 \text{exf}5! =\).

Chapter 10

E10.01

M. Euwe, 1958

1 \(\text{Wd}6? \text{bl}+ in 1...\text{Wb}7! 2 \text{Wc}6 \text{Wc}6! 3 \text{Wxb}6\) stalemate (see 10.06)

E10.02

K. Arakhamia – L. Portisch

Roquebrune (Ladies vs Veterans) 1998

Yes. By putting Black in zugzwang, Arakhamia managed to penetrate with her king using the fact that several of the arising pawn endings are won:

1 \(\text{Wd}8 \text{Wg}7\)

For 1...\(\text{h}5 2 \text{Wd}7+ \text{Wf}8 3 \text{Wc}6 \text{Wg}7 4 \text{Wc}7+ \text{Wg}8 5 \text{Wf}6 ++, see the game.

2 \(\text{Wf}7+ \text{Wg}8\)

2...\(\text{h}7 3 \text{Wc}5+ \text{Wg}8 (3...\text{h}6 4 \text{Wf}8+ \text{Wf}7 5 \text{Wf}8+ \text{Wg}7 6 \text{f}5 ++) 4 \text{Wf}5+! \text{Wf}5+ (4...\text{h}7 5 \text{We}6 \text{Wf}5+ 6 \text{f}5 提 ++) 5 \text{Wxg}6 ++.

3 \(\text{Wd}7 \text{Wb}5\)

3...\(\text{Wf}8 4 \text{Wh}7 \text{Wh}6 5 \text{Wh}5+ --,

4 \(\text{We}6+ \text{Wg}7 5 \text{Wc}7+ \text{Wg}8 6 \text{We}6 \text{Wh}6\)

6...\(\text{h}7 7 \text{Wf}7+ \text{Wh}8 8 \text{Wxg}6 \text{Wh}4+ 9 \text{Wg}5 \text{Wg}4+ 10 \text{Wf}6 (10 \text{Wxg}4?? delivers stalemate) 10...\text{Wxh}4+ 11 \text{Wc}6 ++.

7 \(\text{Wg}5 \text{Wh}5+ 8 \text{Wxg}6 \text{Wh}6+ 9 \text{Wg}5 1-0\)

E10.03

E. Sutovsky – M. Illescas

Pamplona 1998/9

Answer 'C' is correct:

1 \(\text{Wc}3+!\)

Not: 1...\(\text{Wc}5? \text{Wb}3 2 \text{Wc}7 \text{ff}5 ++; 1 \text{Wc}7? \text{Wb}3 2 \text{b}7 (2 \text{Wg}1 \text{ff}5 3 \text{Wd}7 \text{ff}6 4 \text{b}7 \text{ff}4 5 \text{Wd}5 \text{ff}4+ 2...\text{ff}4 3 \text{We}5+ \text{Wg}6 4 \text{Wd}6+ \text{Wh}7 = (Illescas in CBM 69).

1...\(\text{Wh}7\)

1...\(\text{Wg}6 2 \text{b}7 \text{Wb}6! 3 \text{Wc}2+ \text{Wg}7 4 \text{Wc}3+ \text{Wg}6 =

2 \(\text{Wc}7 \text{ff}6 3 \text{b}7 \text{ff}6 4 \text{Wxf}7+ \text{We}8 5 \text{Wf}8+ \text{Wh}7 6 \text{ff}7+ 1/2-1/2\)

E10.04

Z. Varga – T. Fögarasi

Hungarian Ch (Budapest) 1996
Chapter 12

E12.01
W. Schlaag – C. Ahues
Berlin 1921

Black defensive strategy is known to us: it is based on hindering the white king from escaping from the edge after he has captured the a-pawn. However, White can prevent Black from imprisoning him if he uses the geometry of the chessboard to shoulder the black king away:

1...d6! c3 2 d5!

Maizelis indicated this move. The game itself continued 2...d5? c4! 3 c6 e5! 4 b7 c7! 5 a4 a7 c5! =

2...d6
3...d3
2...d6 3 c6! e5 4 b7 c7! +–
3...d5 5 a4 a7! c6 6 b8! +–

If the black king starts on h2 instead of b2, it can’t be shoulder away, and so the position is drawn.

E12.02
Zo. Varga – F. Bellini
Budapest 1999

1...d6!

Distant opposition! 1...e4? 2 d2! c5 3 e3! d5 4 d3! c6! 5 c4! +–
2 d2 d6! 3 c2 c6 4 d3 d5 5 c4+

1/2–1/2

Compare 2.27.

E12.03
S. Reshevsky – S. Tatali
Netanya 1973

1..c6+!

Black utilizes the fact that White’s bishop doesn’t control the queening square of Black’s h-pawn. 1...g1 is also playble: 2 c3 g5 3 fxg5 (3 f2 h3+ 4 g2 xf4+ =) 3 h3 4 d3 g6 5 g4 xf4 6 gxf4 h4 + g4 8 f6 d5+ =. Not 1...c1 + 2 c2 a2 3 b3! c1+ 4 b2 +–

2 gxf4 g5 3 fxg6 h5 h5

In view of 4 gxe6+ (4 h4 h5 g5 g6 =) 4...xh6 =.

E12.04
A. Burn – H. Dillenbuyn
Vienna 1898

Black played 1...d6? and the game was drawn after some further moves. Remember that 2 f6 is answered by 2...d6 3 g6 g1+ and White’s king lacks shelter.

After 1 g6 in the White-to-move case, the easiest defence is 1...f1! 2 f6 g! 3 b8+ h7 4 h8 a1 5 e8 f1 =.

E12.05
White’s king enters the winning zone with the help of a discovered check:

1 e4+!
1...d1 =
2...d2 2 d1 3 d3 a1
3...c3 +–
4 d2#

E12.06
H. von Gottschall – J. Mises
Hanover 1902

Of course he can! Black wins by building a bridge: 1...d6! 2 h7 d5 3 h2 4 d7 5 g3 6 a1 (6 b7 + g4 7 g5 +–) 6...e4 0–1.

E12.07
J. Jackova – Z. Chen
Istanbul wom OL 2000

1 e7?

This allows Black to reach Philidor’s win:

1 c2 2 f1 b1 (1...b8 2 a2 and White has a second-rank defence; 1...e2?! is stalemate) 2 e1! b3 g2 (3 d1 e3 4 e1 + f3 5 c2 is also possible, as it reaches a second-rank defence) 3 c3 d1 a1 g8 + f3 f8 + 6 g4 e4 7 a4 d8 8 b4 g8 + 9 h4 and White has a Cochrane defence. 1 f8 also draws.

1...f2+! 2 c1 f8 3 d7?!

After 3 d1 Black has to apply Philidor’s winning technique.
3...\text{e}8+?! \\
3...\text{a}8 \text{f}1 \text{g}8! -- is much easier. \\
4 \text{d}1 \text{a}8 5 \text{c}7 \text{a}1+6 \text{e}1 \text{c}2 7 \text{e}8?? \\
7 \text{c}7 is tougher. \\
7...\text{b}6?! \\
7...\text{d}2 8 \text{e}8 \text{f}6 is the correct method (see \\
8.10).

8 \text{c}1 \text{g}2?? \\
This slip sets the clock back by 24 moves. \\
8...\text{d}4?? 9 \text{d}1 \text{f}2 reaches Philidor's win.

9 \text{b}1?!

After 9 \text{f}8!? Black would have to play extremely accurately in order to win. The tablebase gives 9...\text{e}1+ 10 \text{b}2 \text{d}4+ 11 \text{b}3 \text{b}1+! 12 \text{a}2 \text{b}2+! 13 \text{a}3 \text{b}5! 14 \text{g}8 \text{c}3! 15 \text{a}2 \text{h}2+ 16 \text{a}1 \text{h}2 17 \text{g}3+ \text{c}2+! 18 \text{a}2 \text{c}5! 19 \text{g}4 \text{c}3+! 20 \text{b}1 \text{h}1+ 21 \text{a}2 \text{d}4 22 \text{g}8 \text{h}2+ 23 \text{b}1 \text{e}5 24 \text{c}8+ \text{d}3! 25 \text{c}2+ \text{h}8 26 \text{e}1 \text{a}8 27 \text{a}1+ \text{c}3! 28 \text{d}7 \text{a}8+ 29 \text{c}1 \text{d}4! 30 \text{d}1 \text{d}3 reaching Philidor's win (8.10).

9...\text{d}4! 10 \text{c}7 \text{b}2+ 11 \text{c}1 \text{a}2 12 \text{d}7?!

This makes it easy. After 12 \text{d}1 Black has to apply Philidor's method (see 8.10).

12...\text{g}2 0-1

\text{E}12.08

K. Volke – A. Kovalio\v
\textit{Minsk 1994}

1...\text{d}4!!

A brilliant move. Black transfers his rook behind the pawn, but makes sure that when he plays ...\text{c}3, the rook's influence along the d-file is not blocked. Other moves only lead to a
draw:

a) 1...\text{a}7! 2 \text{e}5 \text{e}3+! 3 \text{d}2 \text{e}4+ 4 \text{e}6 \text{e}6+ 5 \text{d}7! \text{d}5 6 \text{e}7! \text{e}7+ 7 \text{d}8! \text{h}6 8 \text{g}6+! \\

b) After 1...\text{d}1? 2 \text{e}5!, 2...\text{d}3 (D) unfortunately blocks the rook.

Now:

b1) 3 \text{f}7?? \text{f}1+! (winning a tempo) 4 \text{g}6 \text{e}1! 5 \text{f}6 \text{d}4+! \\

b2) Only the fearless bodycheck 3 \text{d}5!!, allowing a discovered check, saves the draw: \\
3...\text{e}3+ 4 \text{c}6! \text{f}4 5 \text{e}6! \text{e}1+! 6 \text{d}7! =

2 \text{d}5

2...\text{f}4+ 3 \text{d}3 3 \text{e}5 \text{e}4+ 4 \text{e}6 \text{d}5! 5 \text{e}7 \text{e}4! \\

2...\text{d}3! 3 \text{f}7

3...\text{e}6 \text{f}4+! is similar.

3...\text{f}4+!
6...a4?

After 6...Whd4+ 7 g3 a4 → White’s king is confined to the losing zone.

7 ℄c4 Whd6 8 ℄xb7+ ℄c4 9 ℄f7+ ℄c3 10 ℄xb7??

10 ℄g7+, 10 ℄a2 and even 10 ℄e5 are playable.

10... ℄e2?

It was probably time-trouble or the notation is wrong. Otherwise Kovačević certainly would have seen 10... ℄e2 11 ℄e3 ℄a2+! ℄e3 14 ℄xf5 ℄b4 15 ℄g6 ℄wb2 16 ℄d5 a2 17 ℄e5+ =.

E12.11

J. Šefc – Y. Averbakh

Dresden 1956

There is only one way to keep the blockade:

1 ℄d7! (Averbakh)

Not:

a) 1 ℄g3? ℄c8 2 ℄e3 g5 3 ℄d4 (3 ℄d2 g4 4 ℄f4 g3 5 ℄f3 g6 6 ℄g1 ℄g4 ++) 3...g4 4 ℄f4 g3 5 ℄e2 g2 6 ℄f3 ℄g4+ --.

b) 1 ℄f7? ℄e6 2 ℄e5 (2 ℄g5 h3 3 ℄f3 ℄d5 4 ℄e2 ℄h4 5 ℄f1 g5+ ++) 2...g5+ 3 ℄f3 ℄d5+ 4 ℄e2 g4 5 ℄g1 g3 6 ℄d7 ℄g5 +. 1... ℄h3 2 ℄g3 1/2 - 1/2

Black can’t break through; e.g., 2...g5 3 ℄f6+ ℄g6 4 ℄d5 ℄f7 5 ℄e3 ℄e6 6 ℄h2 (6 ℄xf5? ℄xf5 7 ℄xh3 ℄f4! ++) 6... ℄e5 7 ℄f1 ℄f4 8 ℄g3 +.

E12.12

S. Clausen

Arbeter (end of a study), 1925

If White were to move, he would draw by simply advancing his king to h6, but White can use a mating threat to win:

1 ℄d3! ℄h3 2 ℄e4! ℄h4 3 ℄f5! ℄h5 4 ℄f8!?

4 ℄h8?? ℄f7+ =.

4... ℄xa7 5 ℄h8+ ℄h7 6 ℄xh7!

E12.13

W. Browne – H. Mecking

Mar del Plata 1971

1 ℄e1!

After this Black is in zugzwang and is forced to make a concession. 1 ℄d7? gives Black too much counterplay: 1... ℄d3 2 ℄h6 ℄h4 3 ℄c6 ℄c2 4 ℄f7 ℄f2 5 g4 ℄g3 6 ℄xg6 hxg4 7 ℄xg4 ℄xg4 =.

1... ℄h4

Or 1... ℄d3 2 ℄h5 --; 1...g5 2 ℄g4 h4 (2...hxg4 3 ℄hxg4 ℄d3 4 ℄b5 +++) 3 ℄d7 ℄b6 4 ℄d2 ℄b5 5 ℄c6 ℄d8 6 ℄b5 +--.

2 ℄d7 ℄b6 3 ℄xh4 ℄b4 4 ℄e6 ℄xa4 5 ℄f7 ℄b3 6 ℄xg6 a4

6... ℄d4 7 ℄c7 a4 8 ℄h4 a3 9 ℄xa3 ℄xa3 10 ℄f2! ℄d4 11 ℄a1 ℄d5 12 ℄e7 ℄d5 13 ℄e8 =.

7 ℄e7 a3 8 ℄xa3 ℄xa3 9 g4 ℄b4 10 g5 ℄c4

11 ℄f7 ℄d5 12 ℄g6 ℄d4 13 ℄g7 ℄xg7 14 ℄xg7 ℄e6 15 ℄h4 ℄f5 16 ℄h5 1-0

E12.14

F. Levin – H. Hector

Berlin 1995

1 f4?

Surprisingly, this immediate advance is wrong. White should first disrupt the coordination of Black’s forces by 1 ℄b5+!:

a) 1... ℄c3 2 f4 a3 3 ℄e5 ℄b3 4 ℄f5 a2 5 ℄f6 ℄e6 6 ℄f7 ℄f6 (6... ℄c8 7 ℄e7 ℄f8 8 ℄b7 +++) 7 ℄b5+ ℄e4 8 ℄b7 =.

b) 1... ℄f4 2 ℄e5 a3 3 ℄e3+ ℄b2 (3... ℄h4 4 ℄e2 ℄c4 5 ℄f4 ℄b3 6 ℄g4 a2 7 ℄xa2 ℄xa2 8 ℄f5 ℄b3 9 ℄e5 =) 4 ℄e2+ ℄a1 5 ℄f4 a2 6 ℄g4 ℄b1 7 ℄e1+ ℄b2 8 ℄g5 =.

1... ℄a3 2 ℄g4

2 ℄b5+ ℄b4 3 ℄e5 a2 4 ℄e3+ (4 ℄e1 ℄a4++) 4... ℄a4 5 ℄a3 ℄a3 ++.

2...a2 3 ℄e3+ 3 ℄e1 ℄a4 4 ℄a1 ℄b2 5 ℄h1 a1= 6 ℄xa1 ℄xa1 +.

3... ℄b2 4 ℄e1 ℄c1 5 ℄e2+ ℄b3 6 ℄xa2 ℄xa2!? (NC) 7 ℄f5

7 ℄f5 ℄b3 (7... ℄f1? 8 ℄g5! ℄b3 9 ℄f6! ℄c4 10 ℄e6! =) 8 ℄f6 ℄c4 9 ℄f5 ℄d5! 10 ℄f7 ℄f1 + 11 ℄g6 ℄e6 ++.

7... ℄b3 8 ℄e6 ℄e1+ 0-1

Due to 9 ℄f6 ℄f1! 10 ℄e5 ℄c4 11 ℄f5 ℄c5 12 ℄e6 ℄c6 13 ℄f6 ℄e1 + --.
E12.16

J. Corzo – J. Capablanca

Havana (4) 1901

Capablanca found a way to storm White’s position: 1...\*g3 2 \*c1 (2 \*xd4?! exd4 3 e5 f3+ 4 \*f1 d3 –> 2...\*a3 3 \*f3 \*e3! 4 \*g5 f3+!! (Black has to sacrifice his protected passed pawn to open a path for king) 5 \*xf3 \*f4 6 \*f2 (6 \*d3 \*xf3 7 \*xc3 \*xe4 –>) 6...\*xe4 7 \*xc5+ (7 \*e2 \*d5 8 \*xd3 \*e4+ –>) 7...\*d3 8 \*f3 \*e4 9 \*h2 \*a4 10 \*d6+ \*e5 11 \*e8 \*xb5 12 \*e4 a5 13 \*d6+ \*b4 0-1.

E12.17

R. Kempinski – V. Epishin

Bundesliga 2000/1

1...\*h5 2 \*a7 \*e6 3 \*a6 \*b8 4 \*a5 \*d5 5 \*a6

So far so good, but now Epishin strays from the right track.

5...\*c7?!

5...\*b4+ 6 \*a5 \*e5 7 \*a4 \*e4 8 \*a5 \*c7+ 9 \*a4 \*d3 10 \*a3 \*a8 11 \*a4 \*b2+ 12 \*a3 \*c3 13 \*a2 \*a2 14 \*a3 \*e7+ 15 \*a2 \*d3 16 \*a1 \*b4 17 \*a2 \*c1+ 18 \*a1 \*c3# was the right method.

6 \*a7 \*b6+ 7 \*b8 \*e5 8 \*a8 \*c7+ 9 \*b8 \*b5?!

9...\*d4 10 \*c8 \*a7 11 \*d8 \*d5 and so on was the way to proceed.

10 \*a8 \*b6 11 \*b8 \*a7?!

The game was drawn 17 moves later. Fortunately for Epishin, a draw was enough for his team to win the match.

E12.18

C. Ward – K. Müller

Hamburg 1992

1 \*a4!

1...\*xb4? \*xa2 is of course drawn.

1...\*g5 2 \*d4

2 \*xb4? \*xa3+ 3 \*a4 \*f5=.

2...\*xb3+ 3 \*e2 3 \*b4+ \*h5 4 \*xb4 \*e3+ 5 \*a4 \*e2 6 \*a3 \*e3 7 \*c4+ –.

3...\*c4 6 \*a4? 4 \*a4 also wins: 4...\*h7 5 \*b5 \*h5+ 6 \*e6 \*h6 7 \*a4 \*f5+ 8 \*d5 \*a6 9 \*b4 \*f6 10 \*e5 \*a8 11 \*e6+ –.

4...\*e5 5 \*d2? 5 \*d8! \*h1 6 \*a5! \*a1 7 \*b5! \*b1+ 8 \*c6 \*c2 9 \*c6! \*c4 10 \*c3 \*c5 11 \*c2 \*d7+ 12 \*b1+ 13 \*a8 \*c7 14 \*b8! \*c1 15 \*a7 \*d6 16 \*b7! –.

5...\*h1 6 \*a5 \*a1 7 \*b5 \*b1+ 8 \*c6 \*a1? – This is the wrong moment to stop checking as White’s king is very active. 8...\*c1+! = was correct.

9 \*b6? 9 \*b6 \*d5+ 10 \*c6 \*a1 11 \*c7 \*c7 12 \*c5+ \*f6 13 \*b5 \*e7 14 \*b7+ –.

9...\*b1+! 10 \*a7 \*e6! 11 \*d8

11 \*a6 \*c7! 12 \*h2 \*d7 13 \*b7+ \*c8 14 \*b7 \*h1 15 \*b6 \*c1=.

11...\*c7 12 \*b8 \*c1 13 \*a6 13 \*b5 \*d7 14 \*b7 \*c7+= –.

13...\*d7 14 \*h8

14 \*h7 \*b1+! 15 \*a8 \*a1 16 \*a7 \*c7=.

14...\*c7 15 \*b7+ \*c8 \*a7-\*b7.

E12.19

P. Leko – V. Kramnik

Budapest rpd (2) 2001

1...\*d6

This was Kramnik’s choice in the game. Otherwise:

a) 1...\*d7?! is weaker, as it practically forces White to find the hidden win: 2 \*d2+ \*e6 3 \*d1!++ –.

b) After 1...\*e4?! 2 \*c8 \*xc8 3 \*xg8 \*d6 White can cut off Black’s king horizontally along the 5th rank with 4 \*b5+! –.

c) 1...\*e6?? 2 \*b5! \*f5 (after 2...\*d6 3 \*c8 \*xc8 4 \*xc8 \*e4 Black’s king is cut off: 5 \*b7 \*e3 6 \*b3++; for 2...\*d7 3 \*d5+ \*e6 4 \*d1!++ see below) and then:

1) 3 \*c8?? \*xc8 4 \*xc8 \*f4! is only a draw.

2) 3 \*xb6?! \*xe6! 4 \*b7+! (4 \*b2? \*xc7 5 \*xc7 \*d5! =, 4 \*c5? \*xc5 5 \*xc5 \*d7! 6 \*b6 \*c8! =).

3) 3 \*b6! \*e4 (3...\*xc7+ 4 \*xc7 \*e4 5 \*d6 \*e3 6 \*d5++) 4 \*e6! –.
2 c8\#?

In time-trouble, Leko misses the correct continuation. With the beautiful strike 2 \#d2+! \#e6 3 \#d1!! (Yusupov) White wins the decisive tempo for the battle between rook and pawn that is shortly to arise. Then:

a) 3...\#xd1 4 c8\#+ \#f6 (4...\#e7 5 \#f5 \#d7+ 6 \#xc6 \#d6+ 7 \#c5 \#e5 8 \#x5+ 9 \#h8+ \#c6 10 \#h4+ and White wins the rook).

b) 3...\#c4 4 \#c8+ \#xc4 5 \#xc6 e4 (1...\#e7 \#f6 7 \#c6 \#e8 8 \#c5 \#e4 9 \#e4! e2 10 \#x1 \#c3 11 \#c3! --).

2...\#xc8 3 \#xc8 \#d5! (NC) 4 \#d7 e4! 5 \#h5+ \#d4 6 \#e6 e3! 7 \#f5 e2 8 \#e5 \#d3! 9 \#f4 \#d2! ½-½

E12.20

R.Rey Ardid (dedicated to H.Rinck), 1938

Astonishingly, White’s active king is worth more than Black’s outside passed pawn.

1 \#d4:

Not: 1...\#e6 2 \#d4 \#d7 3 \#d5 a4 4 \#c4 \#e6--; 1...\#d5? a4 2 \#d4! \#e6! 3 \#c3! \#e5! 4 \#b4! \#e4 =.

1...\#e6

1...a4 2 \#c3! \#e6 3 \#b4! \#e5 4 \#xa4! \#f4 5 c5 = .

2 \#c5! \#e5 3 \#b5! \#d4

3...\#d6 4 c5+! \#d5 5 c6 \#d6 6 \#b6 + .

4 \#g5

4 c5? a4 5 g5?! a3 6 gxf6! a2 7 f7! \#a1 \#f8 \#xf8 also wins according to the endgame tablebase.

4...\#xf5

4...\#f5 5 g6 f4 6 g7 f3 7 g8\# + .

5 \#c5! \#g4

5...a4 6 c6! a3 7 c7! a2 8 c8\#! a1 \#f8 \#xf8+ + .

6 \#c6! g3 7 c7! g2 8 c8\#! g1 \#f8 \#e5+! + .

E12.21

M.Hebden – J.Speelman

Southend 2000

Even simple-looking rook endings can be very tricky:

1...\#e7?

Black should have played 1...\#a5! 2 \#d4 (2 \#h6 \#g7 3 \#b6 \#f7 =) 2...\#e7 3 \#c4 \#d7 4 \#b4 \#a1 =.

2 a7! \#a5 3 \#h6! 1-0

Speelman resigned due to 3...\#d7 4 \#h8! \#xa7 5 \#h7+! + .

E12.22

L.Psakhis – D.Sermek

 Groningen open 1993

Black’s king must come around to c5 and he has to choose the right way:

1...\#b4!

1...\#a7? 2 \#c7! \#b6 3 \#c6 + .

The game itself concluded 1...\#b6? 2 \#c4+ \#a7 (2...\#c5 3 \#a3! \#xa3 4 \#c7! \#c4 5 \#c8\# + ! +) 3 \#d6! \#c3 4 \#c7 \#d5 5 \#b5+! 1-0.

2 \#c7 \#c5 3 \#g5 \#d3 =

E12.23

E.Solozhenkin – V.Anceschi

Reggio Emilia 1998/9

1 \#xb6!

1...\#xb6?

Did you see this beautiful strike?

1...\#xb6

2 \#xb6 \#xb6 3 \#f2 \#e4 4 \#e3 \#d5

4...\#f5 5 g4+ \#e6 6 \#xe4 + .

5 \#c4+ \#c5 6 \#g4

6...\#b4 7 f5 \#xf5 8 \#xf5 + .

7 f5 \#xf5 8 \#xf5 \#d6 9 \#xe4 \#xc4 10 \#xc4 \#e7 11 \#e5 h5 12 \#c5 1-0

E12.24

I.Radulov – D.Delithanasis

Xanthi 1990

The position is drawn, but Black has to defend very precisely.

1...\#b2

1...\#c4 2 \#c3+ \#c3 3 h4 \#b2 4 \#d1+ \#c2 5 \#xb2 \#xh2 6 \#h5 \#c3 = .

2 \#c3 \#c4 3 \#h1 \#c5 4 h4 \#h5 5 \#d2 \#b5

6 \#d5 \#b4 7 \#d4 \#a3?

7...\#b5! 8 \#b1 (8 \#c3 \#c5 9 \#xb2 \#d4 10 \#c2 \#e3 11 \#e1 \#f2 12 \#e4+ \#f3 13 \#f6 \#g3 =) 8...\#c6 9 \#e4 \#d6 10 \#f5 \#d5 11 \#g5 \#c4 = .

8 \#c3?

8...\#d3!! is winning:

a) 8...\#a2 9 \#e4 \#a3 (9...\#b1+ 10 \#xb1 \#xb1 11 \#f5 +--) 10 \#c4+ + .

b) 8...\#b4 9 \#c2 \#c5 10 \#e4+ \#d5 11 \#f6+ \#e5 12 \#xh5 \#f5 13 \#g3+ \#g4 14 \#h5 + .

8...\#a2 9 \#c2 \#a1 10 \#b1 \#a2 11 \#c3+ \#a1 ½-½

E12.25

W.Steinitz – J.Gunsberg

New York Wch (9) 1890
E12.26

L.Gurevich – Socrates Exp
Boston Harvard Cup 1993

1 d6?

1-2 c5? is also bad: 1...f4 2 d7 e6 3 d6
E1 E1 E2 =.

The correct line is 1...d7! b8! (1...d4? 2
d6 c5 c7 c2 c5 d3 d6 (3 c6 c6 c6) 4
b7 e5 c6 c6 =) 3.d5 4 e7 c5 5 d6 =

1...e6 2 c5
d7 e7 3 d5 g3 =.

2...f4 3 h7
c7 c5 =.

3...xd6 cxd6 c6 e5 c5
f4 c4 4 c3 c4 9 f5 g4 9 d4
t2 11 f4 g4 0-1

E12.27

C.Gabriel – N.Michaelsen
Bundesliga 1998/9

1 f6

1...g8!? also comes into consideration:

a) 1...a1 2 e8 c3 c4 and now:

1...c4 2 e8 c3 3 c4 and now:

1...c4 2 e8 c3 3 c4 and now:

1...c4 2 e8 c3 3 c4 and now:

1...c4 2 e8 c3 3 c4 and now:

1...c4 2 e8 c3 3 c4 and now:

1...c4 2 e8 c3 3 c4 and now:

1...c4 2 e8 c3 3 c4 and now:

1...c4 2 e8 c3 3 c4 and now:

1...c4 2 e8 c3 3 c4 and now:

1...c4 2 e8 c3 3 c4 and now:

1...c4 2 e8 c3 3 c4 and now:

1...c4 2 e8 c3 3 c4 and now:

1...c4 2 e8 c3 3 c4 and now:

1...c4 2 e8 c3 3 c4 and now:

1...c4 2 e8 c3 3 c4 and now:

1...c4 2 e8 c3 3 c4 and now:

1...c4 2 e8 c3 3 c4 and now:

1...c4 2 e8 c3 3 c4 and now:

1...c4 2 e8 c3 3 c4 and now:

1...c4 2 e8 c3 3 c4 and now:

1...c4 2 e8 c3 3 c4 and now:

1...c4 2 e8 c3 3 c4 and now:

1...c4 2 e8 c3 3 c4 and now:

1...c4 2 e8 c3 3 c4 and now:

1...c4 2 e8 c3 3 c4 and now:

1...c4 2 e8 c3 3 c4 and now:

1...c4 2 e8 c3 3 c4 and now:

1...c4 2 e8 c3 3 c4 and now:

1...c4 2 e8 c3 3 c4 and now:

1...c4 2 e8 c3 3 c4 and now:

1...c4 2 e8 c3 3 c4 and now:

1...c4 2 e8 c3 3 c4 and now:

1...c4 2 e8 c3 3 c4 and now:

1...c4 2 e8 c3 3 c4 and now:
\( \text{d6 d3 11 e5 h4 12 xf5} \) -- 10 d6 f3 11 e5 f2 12 f8 g2 13 xf2 +xf2 14 f4

\( 3 c5 f5 4 b4 bx4! 5 xb4 f4 6 b7 f3 7 b8=\)

This is not check thanks to Black choosing 2...h3!!

7...f2 =

White can't win as Black controls g4. The queen ending with the rook's pawn is theoretically drawn.

E12.30
A. Mikhalechishin - S. Krivosheij
Bled 1999
1 \( \text{h4?!} \) 1-0

Black resigned due to 1...f2 (after 1...e2
2 e4+? 1...d1 2...h5+ White picks up the rook) 2 d3 f1 3 h1#.

E12.31
C. Daly - S. Siebrecht
Cardiff 1997
With precise play White is winning:
1 d4!
1...h? \( 4 \) f4+! 2 e4 g6=.
1...c3+ 4 f6+ 2 f5! h7 (2...g8 3 h7! ++) 3 g6! f8 4 h7! =.
2 d4! b5+? 3 e5!
Not 3 c4? when Black draws by 3...d6+!
4 d5 f7! 5 h7 h8=.
3...d6 4 h7 e4+
4...g7 5 g6! f6 6 gx7! ++,
5 b6 xg5 6 h8=+ e6 7 e5 d7 8 h2 e7 9 c6 d8+ 10 d5 f7 11 h4+ h7 12 w6 e8 13 f1 1-0

E12.32
V. Topalov - C. Hansen
Istanbul 2000
1ex7!
Not 1...e8? e5+ 2 e5 g5=, 1 d7?
3 xg5+ 2 e6 xh6 3 f4 d3 h4=.
1...xc7 2 f8 h6
2...a7 3 g6 a6+ 4 f7 a7+ 5 f6 a1
6 g7+ h6 7 e6+--!
3 f6 e6+ 4 f7 xex5 5 f6 1-0

E12.33
J. Borges - R. Cifuentes
Matanzas Capablanca mem 1995

The well-known stalemate defence saves Black immediately:
1...f2+ 1/2-1/2
1...e6+ is the only other move to draw: 2 a7 e3 3 a8=. All other moves lose:
1...f4 2 h8+ g1 3 b8++ 1...f8?
2 c1+ g2 3 c6+ g3 4 c7+--;
1...f6+ 2 a5 g5+ 3 a4 f4+ 4 b4!
b8 5 b3 g8+ 6 b2 g8+ 7 a2 g8+ 8 b3 b8 9 b1 g1 10 b2 f1 11 c1+ f2--

E12.34
R. Hegde - V. Anand
New Delhi 1987
Anand managed to hold on as follows:
1...f3!!
Not 1...g2? 2 xg7+ 1...h2? 2 xg7+ f3 3 xh2 d2+ 4 d1 xe3 5 f4+ xf4 6 c2+-.
2 a8 w h2 3 b8 h2 4 d d2
After 4...d4+ 5 f2 6 xh1 6 w xh1 7 x h7 f2 8 f4 e9 9 e3 d1+10
b2 f2 (but not 10...e4 or 11...e3 12 c5 f4 13 d1! ++) White can't break the defence either.
4...e2 g5 a5 c5 6 g7+ 1/2-1/2
Due to 6...e4 7 xa4+ 8 x a4 8 c7+ f3 (8...g2? 9 x h2 9 x h2 10 f2 ++) 9 x h2
a3=.

E12.35
V. Anand - G. Kasparov
Linares 1999
1...d5!
1...exf7? and 1...h6? are both met by 2 a7=.
0-1

The position has a study-like character: 2 xa4 2 a7 2 3 x a4 4 c6+ 5 b6+
3 a5 c4+ 4 a6 (4 a4 c2#) 4...c8+ 5 a7 b5 b8 a6 a6

E12.36
J. Polgar - J. Stohl
Bruen 1993
1 d4?
This obvious move is wrong. Instead:
1...exd4
a) 1...g5? also loses: 1...e4 2 d7 d7 (2...exf5? 3 f6! =) 3 f6 d6--

b) 1...e3! (or 1...f3) was called for: 1...d4 1...e3 2 f4 b5 3 e3? = 2...d4 d3 1/2-1/2
E12.37
D. Dahlmann – J. Glek
Zurich 1995

White is winning as Black’s king plays a very unfortunate role and the passed d-pawn becomes a powerful force:

1...\texttt{Qd1!} \texttt{Cc4+}

Or:

a) After 1...\texttt{Qxd1}?! 2 \texttt{Qxd1} the d-pawn is unstoppable.

b) 1...\texttt{Qb4} 2 \texttt{d6} \texttt{Qb8} 3 \texttt{d7} \texttt{Qd8} 4 \texttt{Qb2} h5 5 \texttt{Qa3} \texttt{Qh3} (5...\texttt{Qh4} 6 \texttt{Qd3} \texttt{Qxe4} 6 \texttt{Qd2} h4 7 \texttt{Qd3} \texttt{Qxg3} 8 \texttt{Qxg3} \texttt{Qxg2} 9 \texttt{Qxe4} \texttt{Qf2} 10 \texttt{Qb5} \texttt{Qe2} 11 \texttt{Qd5} \texttt{Qf3} 12 \texttt{Qc6} \texttt{Qxg3} 13 \texttt{Qd4} ++.

2 \texttt{Qd3}

2 \texttt{Qb2}? \texttt{Qc8} 3 \texttt{d6} \texttt{Qh3} 4 \texttt{Qd2} h5 5 \texttt{Qa3} h4 6 \texttt{Qd3} ++.

2...\texttt{Qb4} 3 \texttt{d6}?

3 \texttt{Qc3} \texttt{Qb8} 4 \texttt{Qc4} a3 5 \texttt{Qa1} \texttt{Qf3} 6 \texttt{Qxa3}+ \texttt{Qc4} 7 \texttt{d6} \texttt{Qd8} 8 \texttt{Qc5} \texttt{Qe8}+ 9 \texttt{Qb5} \texttt{Qd5} 10 \texttt{Qd3}+ \texttt{Qe6} 11 \texttt{d7} \texttt{Qd8} 12 \texttt{Qc6} ++.

3...\texttt{a3} 4 \texttt{Qc3}

After 4...\texttt{Qf7} 5 \texttt{Qd4} \texttt{Qh3}?

5...\texttt{a2}! 6 \texttt{Qa1} \texttt{Qb2} 7 \texttt{Qd5} \texttt{Qd2}+ 8 \texttt{Qc6} \texttt{Qc2}+ 9 \texttt{Qh7} \texttt{Qd2} =.

6 \texttt{Qa1} \texttt{Qxh2} 7 \texttt{Qxa3} a5 8 \texttt{Qd5} a4 9 \texttt{d7} h5 10 \texttt{Qd6} \texttt{Qa8} 11 \texttt{Qe7} 1-0

Khalifman couldn’t break Leko’s defence:

1 g7 (NC)

1...\texttt{Qb7} \texttt{Qh4} 2 \texttt{Qf5} \texttt{Qg5} 3 \texttt{g7} \texttt{Qh7}+ 4 \texttt{Qg8}++ \texttt{Qxg8} 5 \texttt{Qg6} \texttt{Qf8} !=

1...\texttt{Qh5} !

1...\texttt{Qh4}? 2 \texttt{Qxh6} \texttt{Qe1} 3 \texttt{Qf6} \texttt{Qc3}+ 4 \texttt{g6}! \texttt{Qxg7} 5 \texttt{Qh7} \texttt{Qd4} 6 \texttt{Qd7} ++.

2 \texttt{Qxh5} \texttt{Qf6}!! 3 \texttt{Qh3}

3 \texttt{Qxf6} stalemate.

3...\texttt{Qg7}! 4 \texttt{Qe7} \texttt{Qb2} 5 \texttt{Qb3} \texttt{Qd4} 6 \texttt{Qd3}

7 \texttt{Qg3}+ \texttt{Qh7} 8 \texttt{Qg6} 8 \texttt{Qf7} (threatening \texttt{Qg6}) can only be parried by 8...\texttt{Qh6} !=

8...\texttt{Qh6} 9 \texttt{Qf5} \texttt{Qh7} 10 \texttt{Qg6} \texttt{Qc3} 11 \texttt{Qg5}

\texttt{b2} 12 \texttt{Qh5} \texttt{Qc3} 13 \texttt{Qg2} \texttt{Qd4} 14 \texttt{Qd2} \texttt{Qc3} 15 \texttt{Qc2} \texttt{Qa1} 16 \texttt{Qc7}+ \texttt{Qg8} 17 \texttt{Qd7} \texttt{h5} \texttt{h5}.

E12.39
S. Garcia Martinez – H. Westerinen
Buenos Aires OL 1978

Westerinen won as follows:

1...\texttt{Qxd7}+! (NC)

1...\texttt{Qe3}+? 2 \texttt{Qf6} \texttt{Qxd3} 3 \texttt{Qc6}! \texttt{Qxd7} 4 \texttt{Qf6}+! \texttt{Qg7} 5 \texttt{Qxd7}! \texttt{h4} 6 \texttt{Qc5} (6 \texttt{Qe5}? \texttt{h3}! →) 6...\texttt{h3}

7 \texttt{Qe4} h2 8 \texttt{Qf2} =.

2 \texttt{Qxd7} \texttt{Qf7}!

2...\texttt{h4}? 3 \texttt{Qc6} h3 4 \texttt{Qf6}+! \texttt{Qg7} 5 \texttt{Qg4} !=

3 \texttt{Qd6}+ \texttt{Qf6}! 4 \texttt{Qc6} \texttt{Qe5} 5 \texttt{Qe4}+ \texttt{Qf4} 6

\texttt{Qd5} \texttt{h4} 7 \texttt{Qd2} h3 8 \texttt{Qf1} g5! 9 \texttt{Qd4} g4 10 \texttt{Qd3}

\texttt{g3} 11 \texttt{Qc2} h2! Not 11...\texttt{g2}? 12 \texttt{Qf2}! \texttt{Qxf1}+ 13 \texttt{Qxf1} \texttt{Qg3}

14 \texttt{Qg1} !=. 0-1

E12.40
J. Berkvens – L. van Beek
Dieren 2000

False! Van Beek found a way to win:

1...\texttt{Qg3}++!

1...\texttt{Qf5}?! 2 \texttt{Qc1} =.

2 \texttt{Qh6}

Or:

a) 2 \texttt{Qf8} \texttt{Qf3} 3 \texttt{h8}+ \texttt{Qxf4}+ 4 \texttt{Qe8} c1\texttt{Q}++.

b) 2 \texttt{Qxg3} c1\texttt{Q} 3 \texttt{h8}+ \texttt{Qg5}+ 4 \texttt{Qh7} (4 \texttt{Qf8}

\texttt{Qc7}+ 5 \texttt{Qg8} \texttt{Qf7#}) 4...\texttt{Qf7} →.

2...\texttt{f7}

2...\texttt{Qf5} 3 \texttt{Qc1} \texttt{Qg6}+! 4 \texttt{Qh5} \texttt{Qg1} →.

3 \texttt{Qc1}

3 \texttt{h8}+ \texttt{Qf6} 4 \texttt{Qxg3} c1\texttt{Q}+ →.

3...\texttt{Qh3} 0-1
### Table of Computer Database Results for Pawnless Endings

<table>
<thead>
<tr>
<th>Material</th>
<th>General result</th>
<th>Longest win</th>
<th>Longest reciprocal zugzwang</th>
<th>Comments</th>
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</thead>
<tbody>
<tr>
<td>🟧 vs 🟧</td>
<td>Win</td>
<td>w♖a1, ♘b2 beterminate5</td>
<td>None</td>
<td>See 1.01.</td>
</tr>
<tr>
<td>🟨 vs 🟧</td>
<td>Win</td>
<td>w♖a1, ♘b2 bterminate4 ♙c3</td>
<td>None</td>
<td>See 1.02 and 1.03.</td>
</tr>
<tr>
<td>🟧 vs 🟧</td>
<td>Draw</td>
<td>w♗e8, ♘g8 b♗b8, ♘a8</td>
<td>None</td>
<td>See 9.08.</td>
</tr>
<tr>
<td>🟧 vs 🟨</td>
<td>Win</td>
<td>w♖c8, ♘d8 b♖c4, ♘h2</td>
<td>None</td>
<td>See 10.03-10.06.</td>
</tr>
<tr>
<td>🟨 vs 🟧</td>
<td>Draw</td>
<td>w♖c4, ♘c3 b♖a7, ♘a6</td>
<td>w♖d3, ♘f5 b♖c1, ♘b6</td>
<td>See 7.26, 7.27.</td>
</tr>
<tr>
<td>🟨 vs 🟨</td>
<td>Draw</td>
<td>w♖d1, ♘h1 b♖b1, ♘g4</td>
<td>w♖d4, ♘c3 b♖d2, ♘g5</td>
<td>See 7.01-0.03.</td>
</tr>
<tr>
<td>🟨 vs 🟧</td>
<td>Win</td>
<td>w♖h8, ♘d2, d7 b♖d3</td>
<td>None</td>
<td>See 1.04.</td>
</tr>
<tr>
<td>🟨 vs 🟧</td>
<td>Win</td>
<td>w♖a8, ♘e8, ♘h2 b♖c8</td>
<td>None</td>
<td>See 1.05, 1.06.</td>
</tr>
<tr>
<td>🟨🟦 vs 🟧</td>
<td>Win</td>
<td>w♖c8, ♘g7, h7 b♖e6, ♘a7</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>♣♣ vs ♣♣</td>
<td>Win</td>
<td>♣h8, ♣h8, ♣b8 ♣b6, ♣d8 Black to play 60 moves</td>
<td>♣b1, ♣e1, ♣b4 ♣a3, ♣f3 11 moves</td>
<td>The reciprocal zugzwang is unique.</td>
</tr>
<tr>
<td>♣♥ vs ♣♥</td>
<td>Draw</td>
<td>♣d6, ♣a6, ♣a7 ♣c8, ♣h3 Black to play 30 moves</td>
<td>♣d7, ♣d3, ♣d6 ♣a4, ♣c1 9 moves</td>
<td>See 10.36 and 10.37.</td>
</tr>
<tr>
<td>♣♣ vs ♣♣</td>
<td>Draw</td>
<td>♣d6, ♣a4, ♣c6 ♣d8, ♣g1 Black to play 35 moves</td>
<td>♣d7, ♣b3, ♣d3 ♣a5, ♣d2 24 moves</td>
<td>See 10.32-10.35.</td>
</tr>
<tr>
<td>♣♣ vs ♣♣</td>
<td>Win, but one fortress exists (see 10.20)</td>
<td>♣a8, ♣a1 ♣d7, ♣c5, ♣d5 White to play 71 moves</td>
<td>♣d8, ♣a5 ♣b7, ♣c6, ♣d6 5 moves</td>
<td>This overturned pre-database theory. The 50-move rule has a profound influence on the play.</td>
</tr>
<tr>
<td>♣♥ vs ♣♥</td>
<td>Win, but one fortress exists (see 10.19)</td>
<td>♣a8, ♣b6 ♣d7, ♣d5, ♣c7 White to play 42 moves</td>
<td>♣a8, ♣h1 ♣c1 ♣a4, ♣h3, ♣f3 33 moves</td>
<td>There is only one reciprocal zugzwang.</td>
</tr>
<tr>
<td>♣♣ vs ♣♣</td>
<td>Draw, although there are a lot of won positions</td>
<td>♣d8, ♣h1 ♣d6, ♣c5, ♣h8 White to play 63 moves</td>
<td>♣e1, ♣b6 ♣d3, ♣c4, ♣g3 53 moves</td>
<td>This overturned pre-database theory.</td>
</tr>
<tr>
<td>♣♣ vs ♣♣</td>
<td>Draw</td>
<td>♣d6, ♣c2, ♣c8 ♣a8, ♣h7 White to play 59 moves</td>
<td>♣c4, ♣h6, ♣b6 ♣a3, ♣b7 49 moves</td>
<td>See 8.08-8.14.</td>
</tr>
<tr>
<td>♣♣ vs ♣♣</td>
<td>Draw</td>
<td>♣d5, ♣a6, ♣a5 ♣c8, ♣e8 White to play 33 moves</td>
<td>♣d6, ♣d7, ♣e6 ♣c8, ♣e8 22 moves</td>
<td>See 8.01-8.03.</td>
</tr>
<tr>
<td>♣♣ vs ♣♣</td>
<td>Win</td>
<td>♣a8, ♣h1, ♣h6 ♣b1, ♣g2 White to play 66 moves</td>
<td>♣c2, ♣b1, ♣h2 ♣a1, ♣g3 2 moves</td>
<td>In 1983 the computer overturned pre-database theory, which held this ending to be a draw.</td>
</tr>
<tr>
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</tr>
<tr>
<td>♗ ♗ vs ♗ ♗</td>
<td><strong>Draw</strong></td>
<td>witez1, 6e5, d7 b2a1, 6e1 Black to play 6 moves</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>♗ ♗ vs ♗ ♗</td>
<td><strong>Draw</strong></td>
<td>witez1, 6h2, 6e1 b2a1, 6b2 White to play 77 moves</td>
<td>witzd2, 6c6, 6a4 b2b1, 6f6 67 moves</td>
<td></td>
</tr>
<tr>
<td>♗ ♗ vs ♗ ♗</td>
<td><strong>Draw</strong></td>
<td>witzf1, 6a7, 6b1 b2h8, 6e8 White to play 15 moves</td>
<td>witzb2, 6g4, 6g8 b2h2, 6h3 7 moves</td>
<td></td>
</tr>
<tr>
<td>♗ ♗ vs ♗ ♗</td>
<td><strong>Draw</strong></td>
<td>witzd2, 6h6 b2d6, 6g1, 6a7 Black to play 20 moves</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>♗ ♗ vs ♗ ♗</td>
<td><strong>Draw</strong></td>
<td>witez1, 6g1 b2h3, 6e4, 6a5 White to play 42 moves</td>
<td>witza4, 6b8 b2b1, 6b6, 6f6 38 moves</td>
<td></td>
</tr>
<tr>
<td>♗ ♗ vs ♗ ♗</td>
<td><strong>Draw</strong></td>
<td>witezc1, 6e8 b2e3, 6h2, 6b8 Black to play 46 moves</td>
<td>witzc1, 6g7 b2c8, 6b6, 6h1 42 moves</td>
<td></td>
</tr>
<tr>
<td>♗ ♗ vs ♗ ♗</td>
<td><strong>Win</strong></td>
<td>witezc8, 6b5, 6f2, 6h8 b2g8, 6g5 Black to play 13 moves</td>
<td>None with the two white bishops on opposite-coloured squares</td>
<td></td>
</tr>
<tr>
<td>♗ ♗ vs ♗ ♗</td>
<td><strong>Draw</strong></td>
<td>witzb8, 6f3 b2e5, 6a2, 6b2, 6d8 Black to play 51 moves</td>
<td>There are 455 reciprocal zugzwangs.</td>
<td></td>
</tr>
<tr>
<td>♗ ♗ vs ♗ ♗</td>
<td><strong>Win</strong></td>
<td>witzc8, 6g6 b2b6, 6g8, 6g7, 6e6 45 moves</td>
<td>There are longer wins when the two black bishops are of the same colour.</td>
<td></td>
</tr>
<tr>
<td>♗ ♗ vs ♗ ♗</td>
<td><strong>Draw</strong></td>
<td>witezc7, 6c4, 6c3, 6g8 b2a8, 6d1 White to play 11 moves</td>
<td>There are longer wins when the two black bishops are of the same colour.</td>
<td></td>
</tr>
<tr>
<td>♗ ♗ vs ♗ ♗</td>
<td><strong>Draw</strong></td>
<td>witzd6, 6c5, 6d5, 6h5 b2f8, 6b5 3 moves</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>♗ ♗ vs ♗ ♗</td>
<td><strong>Draw</strong></td>
<td>witzd7, 6c1 b2c3, 6g7, 6g8, 6h7 Black to play 49 moves</td>
<td>witzd6, 6h4 b2f5, 6a6, 6b8, 6c6 36 moves</td>
<td></td>
</tr>
<tr>
<td>Side</td>
<td>Side</td>
<td>Win</td>
<td>Diagram</td>
<td>Moves</td>
</tr>
<tr>
<td>------</td>
<td>------</td>
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<td>---------</td>
<td>-------</td>
</tr>
<tr>
<td>♗ ♗</td>
<td>♖ ♖</td>
<td>w ♔ a8, ♖ h6, g2, ♕ a1&lt;br&gt; ♖ d7, ♕ b7&lt;br&gt; Black to play</td>
<td>w ♔ a8, ♖ a7, f3, ♕ h4&lt;br&gt; ♖ c7, ♕ b3&lt;br&gt; 68 moves</td>
<td>53 moves</td>
</tr>
<tr>
<td>♖ ♖</td>
<td>♕ ♕</td>
<td>w ♔ a8, ♕ h3, ♕ g4, a1&lt;br&gt; ♖ e4, ♕ h7&lt;br&gt; Black to play</td>
<td>w ♔ a8, ♕ h2, ♕ b8, g3&lt;br&gt; ♖ c7, ♕ d6&lt;br&gt; 38 moves</td>
<td>26 moves</td>
</tr>
<tr>
<td>♕ ♕</td>
<td>♕ ♕</td>
<td>w ♔ b8, ♕ c1, ♕ d3, f1&lt;br&gt; ♕ d6, ♕ e8&lt;br&gt; Black to play</td>
<td>w ♔ b8, ♕ a8, ♕ b7, h1&lt;br&gt; ♖ d7, ♕ b6&lt;br&gt; 32 moves</td>
<td>24 moves</td>
</tr>
<tr>
<td>♕ ♕</td>
<td>♖ ♖</td>
<td>w ♔ a8, ♕ c8, ♕ d6, h1&lt;br&gt; ♖ d8, ♕ b3&lt;br&gt; Black to play</td>
<td>w ♔ a8, ♕ g8, ♕ h8, e6&lt;br&gt; ♖ f6, ♕ c6&lt;br&gt; 27 moves</td>
<td>21 moves</td>
</tr>
<tr>
<td>♖ ♖</td>
<td>♖ ♖</td>
<td>w ♔ d6, ♕ d1, ♕ e6, e5&lt;br&gt; ♕ a8, ♕ c3&lt;br&gt; White to play</td>
<td>w ♔ d6, ♕ d3, ♕ a6, e5&lt;br&gt; ♖ c8, ♕ a7&lt;br&gt; 48 moves</td>
<td>36 moves</td>
</tr>
<tr>
<td>♕ ♕</td>
<td>♕ ♕</td>
<td>w ♔ a8, ♕ h8, b6, h1&lt;br&gt; ♕ c7, ♕ g1&lt;br&gt; White to play</td>
<td>w ♔ a8, ♕ f6, e3, b1&lt;br&gt; ♕ c6, ♕ b4&lt;br&gt; 91 moves</td>
<td>65 moves</td>
</tr>
<tr>
<td>♖ ♖</td>
<td>♖ ♖</td>
<td>w ♔ c7, ♕ b8, a2, h1&lt;br&gt; ♕ b4, ♕ e7&lt;br&gt; Black to play</td>
<td>w ♔ d6, ♕ h8, g3, h1&lt;br&gt; ♕ d4, ♕ e5&lt;br&gt; 86 moves</td>
<td>77 moves</td>
</tr>
<tr>
<td>♕ ♕</td>
<td>♕ ♕</td>
<td>w ♔ a8, ♕ b7, ♕ f8&lt;br&gt; ♕ f4, ♕ f2, ♕ d4&lt;br&gt; Black to play</td>
<td>w ♔ d6, ♕ a3, ♕ a6&lt;br&gt; ♕ b6, ♕ a8, ♕ b7&lt;br&gt; 22 moves</td>
<td>9 moves</td>
</tr>
<tr>
<td>♕ ♕</td>
<td>♕ ♕</td>
<td>w ♔ d7, ♕ c8, ♕ h1&lt;br&gt; ♕ f6, ♕ f7, ♕ e5&lt;br&gt; White to play</td>
<td>w ♔ a8, ♕ e7, ♕ a7&lt;br&gt; ♕ c6, ♕ b5, ♕ g2&lt;br&gt; 41 moves</td>
<td>11 moves</td>
</tr>
<tr>
<td>♕ ♕</td>
<td>♕ ♕</td>
<td>w ♔ b8, ♕ g8, ♕ d4&lt;br&gt; ♕ d6, ♕ a3, ♕ d5&lt;br&gt; Black to play</td>
<td>w ♔ a8, ♕ b7, ♕ c8&lt;br&gt; ♕ d6, ♕ d8, ♕ c6&lt;br&gt; 27 moves</td>
<td>14 moves</td>
</tr>
<tr>
<td>♖ ♖</td>
<td>♖ ♖</td>
<td>w ♔ d7, ♕ g4, ♕ a8&lt;br&gt; ♕ b7, ♕ a2, ♕ d5&lt;br&gt; Black to play</td>
<td>w ♕ c8, ♕ d1, ♕ b1&lt;br&gt; ♕ d6, ♕ b3, ♕ d5&lt;br&gt; 26 moves</td>
<td>17 moves</td>
</tr>
<tr>
<td>Pieces</td>
<td>Status</td>
<td>White Move</td>
<td>Black Move</td>
<td>White Moves</td>
</tr>
<tr>
<td>--------</td>
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<td>-------------</td>
</tr>
<tr>
<td>♜ vs ♜</td>
<td>Win</td>
<td>w postpone d8, g8, c1, f1 b postpone e6, a6</td>
<td>b postpone d5, e5</td>
<td>72 moves</td>
</tr>
<tr>
<td>♜ ♚ vs ♜</td>
<td>Win</td>
<td>w postpone d6, d7 b postpone h1, a7, a6</td>
<td>w postpone d5, f4, c3 b postpone f7, a8, h1</td>
<td>47 moves</td>
</tr>
<tr>
<td>♜ ♚ vs ♜</td>
<td>Draw</td>
<td>w postpone b8, g8, a1 b postpone a4, d5, a8</td>
<td>w postpone b8, b7, c7 b postpone d4, a5, h5</td>
<td>73 moves</td>
</tr>
<tr>
<td>♜ ♚ vs ♜</td>
<td>Draw</td>
<td>w postpone d8, e6, c4 b postpone f2, c2</td>
<td>w postpone d8, c8, d5 b postpone d2, d3, d4</td>
<td>71 moves</td>
</tr>
<tr>
<td>♜ ♚ vs ♜</td>
<td>Win</td>
<td>w postpone c8, g5, g8 b postpone a7, b7, a1</td>
<td>w postpone b8, a8, c8 b postpone b3, d4, c3</td>
<td>34 moves</td>
</tr>
<tr>
<td>♜ ♚ vs ♜</td>
<td>Draw</td>
<td>w postpone d6, e2, h2 b postpone h1, g6, h6</td>
<td>w postpone d8, b2, d4 b postpone h1, d6, a4</td>
<td>74 moves</td>
</tr>
<tr>
<td>♜ ♚ vs ♜ same-colour bishops</td>
<td>Draw</td>
<td>w postpone d5, b7, d3 b postpone d7, f1, e2</td>
<td>w postpone d8, c7, g5 b postpone f8, g7, c5</td>
<td>64 moves</td>
</tr>
<tr>
<td>♜ ♚ vs ♜ opposite-colour bishops</td>
<td>Win</td>
<td>w postpone a8, b6, a1 b postpone a7, b1, c7</td>
<td>w postpone a8, d2, c5 b postpone c7, d3, c5</td>
<td>98 move</td>
</tr>
<tr>
<td>♜ ♚ vs ♜</td>
<td>Win</td>
<td>w postpone b8, g7, f7 b postpone f5, c5, e6</td>
<td>w postpone a8, e7, h8 b postpone c6, b5, e5</td>
<td>222 moves</td>
</tr>
</tbody>
</table>

There are longer wins when the two black bishops are of the same colour.

This result is astonishing, given that ♜ vs ♝ is a draw
<table>
<thead>
<tr>
<th>Side 1</th>
<th>Side 2</th>
<th>Outcome</th>
<th>Moves 1</th>
<th>Moves 2</th>
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<tr>
<td>♖ ♖ ♖</td>
<td>♕ ♕ ♕</td>
<td>Draw</td>
<td>44 moves</td>
<td>35 moves</td>
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<tr>
<td>♖ ♖ ♖</td>
<td>♕ ♕ ♕</td>
<td>Draw</td>
<td>98 moves</td>
<td>91 moves</td>
</tr>
<tr>
<td>♖ ♖ ♖</td>
<td>♕ ♕ ♕</td>
<td>Draw</td>
<td>51 moves</td>
<td>41 moves</td>
</tr>
<tr>
<td>♖ ♖ ♖</td>
<td>♕ ♕ ♕</td>
<td>Draw</td>
<td>189 moves</td>
<td>179 moves</td>
</tr>
<tr>
<td>♖ ♖ ♖</td>
<td>♕ ♕ ♕</td>
<td>Draw</td>
<td>242 moves</td>
<td>225 moves</td>
</tr>
<tr>
<td>♖ ♖ ♖</td>
<td>♕ ♕ ♕</td>
<td>Draw</td>
<td>27 moves</td>
<td>13 moves</td>
</tr>
<tr>
<td>♖ ♖ ♖</td>
<td>♕ ♕ ♕</td>
<td>Win</td>
<td>37 moves</td>
<td>17 moves</td>
</tr>
<tr>
<td>♖ ♖ ♖</td>
<td>♕ ♕ ♕</td>
<td>Win</td>
<td>25 moves</td>
<td>16 moves</td>
</tr>
<tr>
<td>♖ ♖ ♖</td>
<td>♕ ♕ ♕</td>
<td>Win</td>
<td>33 moves</td>
<td>21 moves</td>
</tr>
<tr>
<td>♖ ♖ ♖</td>
<td>♕ ♕ ♕</td>
<td>Draw</td>
<td>54 moves</td>
<td>40 moves</td>
</tr>
<tr>
<td>♖ ♖ ♖</td>
<td>♕ ♕ ♕</td>
<td>Draw</td>
<td>73 moves</td>
<td>49 moves</td>
</tr>
<tr>
<td>Bishop Configuration</td>
<td>Result</td>
<td>Description</td>
<td></td>
<td></td>
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<tr>
<td>----------------------</td>
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<td>-------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>( \text{Kc8, Kc8} )</td>
<td>Win</td>
<td>( \text{w\text{a8, a5, h1, g2, a2, d6, } b2} )</td>
<td>29 moves</td>
<td></td>
</tr>
<tr>
<td>( \text{b2} )</td>
<td>( \text{w\text{a8, a5, h1, g2, a2, d6, } b2} )</td>
<td>29 moves</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>( \text{b2, a2, d6, a5, h1, g2} )</td>
<td>17 moves</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Draw</td>
<td>( \text{w\text{d5, a4, h3, c7, a8, h8}} )</td>
<td>38 moves</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>( \text{w\text{d6, a4, e4, b2, a8, g4, a6, g4}} )</td>
<td>24 moves</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Win</td>
<td>( \text{w\text{a8, a5, h1, g2, a2, d6, } b2} )</td>
<td>29 moves</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>( \text{b2, a2, d6, a5, h1, g2} )</td>
<td>17 moves</td>
<td></td>
</tr>
</tbody>
</table>

In cases where one side possesses two bishops, we have not considered the situation in which the two bishops are of the same colour, since these are of no practical importance. If taking this situation into account affects the results then there is a note to that effect. Only in the examples with three knights or two queens is it necessary that a pawn has promoted.

There are two possible methods for counting the number of moves to a win in a pawnless ending. The first is by number of moves to mate and the second by number of moves to conversion to a simpler ending (as a result of a capture). Depending on which method is chosen, both the number of moves and the maximal position itself can change. The above table uses number of moves to conversion (or mate) throughout. All the entries in the table ignore the 50-move rule.

Many sources of database results quote the ‘percentage of winning positions’. Please note that these figures can be very misleading and the entries under the column ‘general result’ were not derived from these statistics. Instead they were obtained by grandmasters (KM, John Nunn) systematically examining each ending using the Ken Thompson databases.

Many thanks to Ken Thompson for allowing us to include his results for the 6-man endings and to John Nunn for supplying a lot of data.

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5- and 6-man databases by Ken Thompson, formerly of Bell Laboratories
5-man tablebases by Eugene Nalimov
Secrets of Pawnless Endings, Nunn, Batsford 1994
Secrets of Minor-Piece Endings, Nunn, Batsford 1995
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After each chapter a list of reference works for that particular chapter is given.

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- Originally published in Russian under the title *Shakhmatnye Okonchaniya* by Fizkultura i Sport in five volumes:
  - Volume 1: Bishop Endings (Averbakh), Knight Endings (Averbakh and Chekhover); 1980
  - Volume 2: Bishop vs Knight (Averbakh), Rook vs Minor Piece (Averbakh); 1981
  - Volume 3: Queen Endings (Averbakh), Queen vs Rook (Khenkin), Queen vs Minor Piece (Averbakh and Chekhover); 1982
  - Volume 4: Pawn Endings (Averbakh and Maizelis); 1983
  - Volume 5: Rook Endings (Averbakh and Kopaev); 1984
- The English edition was published by Pergamon (1983-7), also in five volumes, under the title *Comprehensive Chess Endings*. The German edition was published in six volumes (with rook endings divided into two volumes) by Sportverlag Berlin (1988-90)
- Occasionally we give a numbered cross-reference to the Averbakh series; these references are based on the German/English editions; in some cases the numbering differs slightly from the Russian edition.

**Euwe** Series *Das Endspiel* with eight volumes. Published by Das Schach-Archiv, Hamburg.

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Instructive Examples
Most of the instructive examples have been known for a long time. They are either elementary or can’t be clearly ascribed to an author.