

Contents

Foreword by John Nunn	8
Preface	9
Statistics	11
Nunn Convention	13
Other Signs, Symbols and Abbreviations	14
1 The Basic Mates	16
1.1 King and Queen vs King	16
1.2 King and Rook vs King	16
1.3 King and Two Bishops vs King	17
1.4 King, Bishop and Knight vs King	17
1.5 King and Two Knights vs King and Pawn	19
2 Pawn Endings	21
2.1 King + Pawn(s) vs King	21
2.2 Small Number of Pawns	27
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
2.3 Pawns on One Wing	37
2.4 Passed Pawns	40
A) King vs Passed Pawns	40
B) Protected Passed Pawn vs Two Passed Pawns	42
C) Protected Passed Pawn vs Passed Pawn	43
D) Outside Passed Pawn	44
E) Breakthroughs	45
2.5 Pawns on Both Wings	46
2.6 Corresponding Squares	51
3 Knight Endings	58
3.1 Knight vs Pawns	58
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
D1) No Passed Pawns	65

D2)	Both Sides Have Passed Pawns	66
D3)	Both Sides Have Several Pawns	67
3.2	Knight vs Knight	76
A)	Knight + Pawn(s) vs Knight	76
B)	Knight + Pawns vs Knight + Pawn(s)	79
B1)	Pawns on One Wing	79
B2)	Pawn Races	83
B3)	Outside Passed Pawn	85
B4)	Positional Advantages	86

4 Bishop Endings 93

4.1	Bishop vs Pawns	93
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
4.2	Same-Coloured Bishop Endings	107
A)	Bishop + Pawn(s) vs Bishop	107
B)	Pawns on One Wing	110
C)	Pawns on Both Wings	111
D)	Important Motifs and Resources	114
4.3	Opposite-Coloured Bishop Endings	118
A)	Bishop + Pawns vs Bishop	118
B)	Fortresses	121
C)	Siege Techniques	123

5 Bishop vs Knight 132

5.1	The Side with the Bishop has the Advantage	132
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
5.2	The Side with the Knight has the Advantage	144
A)	Knight + Pawn(s) vs Bishop	144
B)	Extra Pawn for the Knight	147
C)	Closed Positions	149
5.3	The Bishop-Pair	156
A)	Two Bishops vs Two Knights	156
B)	Two Bishops vs Bishop and Knight	159

6 Rook Endings 161

6.1	Rook vs Pawns	161
A)	Rook vs One Pawn	161
B)	Rook vs Two Pawns	164

B1)	Connected Pawns	164
B2)	Isolated Pawns	168
C)	Rook vs Three Pawns	169
D)	Rook and Pawns vs Pawns	172
6.2	Rook vs Rook	177
A)	Rook and Pawn(s) vs Rook	177
A1)	Rook and Pawn vs Rook	177
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
A1d1)	King in Front of its Pawn	187
A1d2)	Rook in Front of its Pawn	188
A1d3)	Other Situations	189
A2)	Rook and Two Pawns vs Rook	192
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
B)	Pawns on One Wing (no Passed Pawns)	205
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
C)	Pawn Races	216
D)	One Side has a Passed Pawn	223
D1)	Rook's Pawn	223
D2)	Knight's Pawn	228
D3)	Bishop's or Centre Pawn	231
E)	Pawns on Both Wings	233
E1)	Positional Advantage	233
E1a)	Outside Passed Pawn	233
E1b)	Seventh Rank	234
E1c)	Active King	234
E1d)	Space Advantage	236
E1e)	Better Pawn-Structure	238
E2)	Material Advantage	241
F)	Principles of Rook Endings	245
6.3	Double-Rook Endings	249
A)	Positional Advantage / Seventh Heaven	249
B)	Material Advantage	251
C)	Defensive Resources	253
7	Rook vs Minor Piece(s)	256
7.1	Rook vs Knight	256
A)	Rook (+ Pawns) vs Knight	256
B)	Knight + Pawns vs Rook	259
C)	Rook + Pawn vs Knight + Pawn	260
C1)	Pawns on the Same File	260
C2)	Pawns on Adjacent Files	262

C3)	Passed Pawns	263
D)	Several Pawns on One Wing	264
E)	Pawns on Both Wings	268
7.2	Rook vs Bishop	269
A)	Rook (+ Pawns) vs Bishop	269
B)	Bishop + Pawns vs Rook	273
C)	Rook + Pawn vs Bishop + Pawn	274
C1)	Pawns on the Same File	274
C2)	Pawns on Adjacent Files	278
C3)	Passed Pawns	279
D)	Several Pawns on One Wing	281
E)	Pawns on Both Wings	286
7.3	Rook vs Knight and Bishop	292
8	Rook and Minor Piece vs Rook (and Minor Piece)	295
8.1	Rook and Knight vs Rook	295
8.2	Rook and Bishop vs Rook	299
8.3	Rook and Minor Piece vs Rook and Minor Piece	304
A)	Rook and Knight vs Rook and Knight	304
B)	Same-Coloured Bishops with One Pair of Rooks	307
C)	Opposite-Coloured Bishops with One Pair of Rooks	308
D)	Rook and Bishop vs Rook and Knight	309
9	Queen Endings	313
9.1	Queen vs Pawns	313
9.2	Queen vs Queen	315
A)	Queen vs Queen (no pawns)	315
B)	Queen + Pawn(s) vs Queen	316
B1)	Drawing Zones	316
B2)	Exchange of Queens, Stalemate and Underpromotion	320
C)	Queen + Pawn(s) vs Queen + Pawn(s)	321
C1)	Perpetual Check	321
C2)	Far-Advanced Passed Pawn / Active King	323
C3)	Extra Pawn	324
C4)	Pawn Races	327
10	Further Queen Endings	330
10.1	Queen vs One Minor Piece	330
10.2	Queen vs Rook	331
A)	Queen vs Rook (no pawns)	331
B)	Queen vs Rook + Pawn(s)	333
C)	Queen + Pawn(s) vs Rook + Pawn(s)	337
10.3	Queen vs Two Minor Pieces	339
A)	Queen vs Two Knights	339
B)	Queen vs Bishop and Knight	340
C)	Queen vs Two Bishops	340
10.4	Queen vs Rook and Minor Piece	341

10.5	Queen vs Two Rooks	343
10.6	Queen vs Three Minor Pieces	346
10.7	Queen and Minor Piece vs Queen	347
A)	Queen and Knight vs Queen	347
B)	Queen and Bishop vs Queen	349
10.8	Queen and Minor Piece vs Queen and Minor Piece	349
11	Endgame Strategy	353
A)	Do Not Rush	353
B)	Passed Pawns Must Be Pushed	354
C)	King Activity	354
D)	Mismatches	355
E)	The Principle of Two Weaknesses	356
F)	Fight to the End	356
G)	Space Advantage	357
H)	General Endgame Principles	358
12	Further Exercises	359
Solutions to Exercises		366
Chapter 1		366
Chapter 2		366
Chapter 3		368
Chapter 4		371
Chapter 5		375
Chapter 6		376
Chapter 7		386
Chapter 8		388
Chapter 9		390
Chapter 10		391
Chapter 12		392
Table of Computer Database Results		400
Bibliography		407
Indexes		409
Index of Players		409
Index of Composers		416

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.

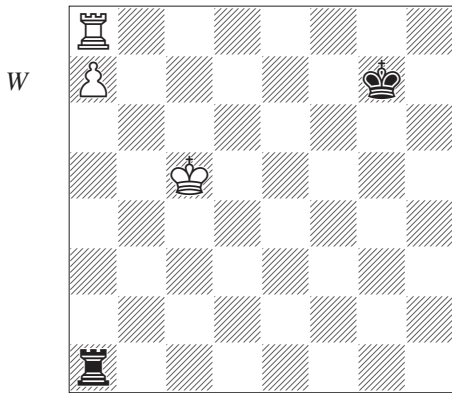
3 ♜c2 ♔e7 4 ♜c8! ♔d6 5 ♜b8! ♜a3 6 ♔b7! ♜b3+ 7 ♔c8! ♜c3+ 8 ♔d8! ♜h3 9 ♜b6+! ♔c5 10 ♜c6+ ♔xc6 11 a8♖+! ♔d6!?

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:



6.55 =/=

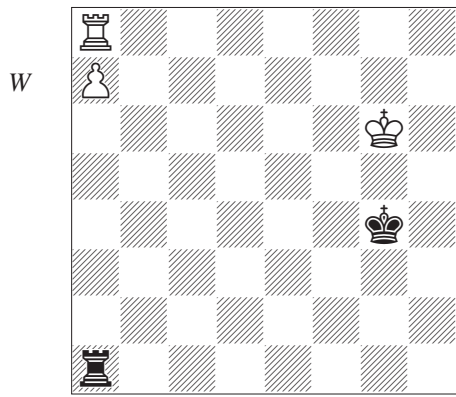
Black only needs to give a check when White threatens to free his rook:

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:



6.56 +/=

1 ♔f6! ♔f4 2 ♔e6! ♔e4 3 ♔d6! ♔d4 4 ♔c6!

But not 4 ♔c7? ♔c5! 5 ♜c8 ♜xa7+! 6 ♔b8+ ♔b6! =.

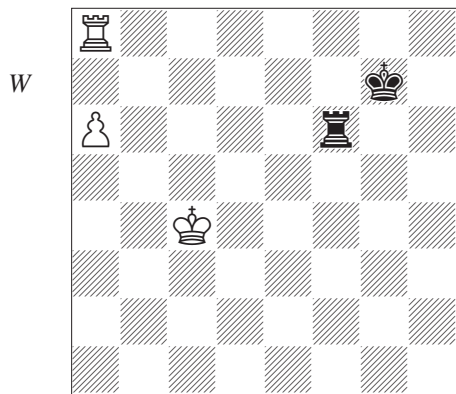
4...♔c4

4...♜c1+ 5 ♔b5 ♜b1+ 6 ♔a4 ♜a1+ 7 ♔b3 ♔c5 8 ♜c8+ +-.

5 ♜c8 ♜xa7 6 ♔b6+! +-

If Black is to move, he draws with **1...♜a6+! 2 ♔f7 ♔f5 3 ♔e7 ♔e5 4 ♔d7 ♔d5 5 ♔c7 ♔c5! 6 ♔b7 ♜b6+! =.**

The situation is more complex when the pawn is further back. The next position is of great practical and theoretical importance:



6.57 =/=

J. Vančura
28 Rijen, 1924

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 ♖b5-b6-b7 and ♜c8. 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 ♜h8 tricks). Note that a set-up with the black king on h7 and the rook on g6 is equally successful.

1 ♖b5

White protects the pawn and threatens to win by ♜c8.

1...♜f5+! 2 ♖b6 ♜f6+! 3 ♖c5

3 ♖b7 ♜f7+! =.

3...♜f5+

3...♖h7 = and 3...♜e6 = also hold the draw.

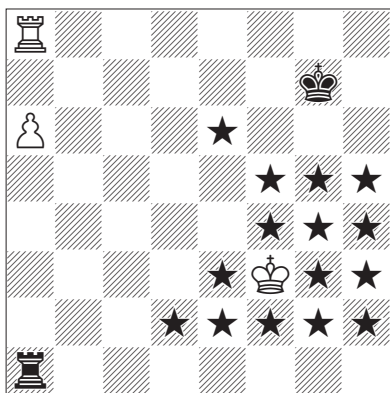
However, Black must avoid 3...♜g6? 4 ♖b5! ♜g5+ 5 ♖b6 ♜g6+ 6 ♖b7 (Black's king is in the way of his own rook, so the white king is now able to support the pawn) 6...♖h7 7 ♜c8 +--.

4 ♖d4 ♜f6!!

4...♜f4+? 5 ♖e5! ♜a4 (5...♜f6 6 ♜g8+ +--) 6 ♖d5 +-- is analysed in 6.58.

5 ♜a7+ ♖g6 6 ♖e5 ♜b6 7 ♜a8 ♖g7 8 ♖d5 ♜f6 9 a7 ♜a6 =

If the defender's rook is behind the pawn, he should immediately try to reach the Vančura set-up (6.57):



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...♜f1+ 2 ♖e4 ♜f6!** is sufficient to reach the Vančura draw.

When White is to move, he can leave the drawing zone:

1 ♖e4!

Not:

a) 1 ♖e2? ♜c1 (1...♜a5? 2 ♖d3! ♜d5+ 3 ♖c4! ♜d6 4 ♖b5 ♜d5+ 5 ♖c6 ♜a5 6 ♖b6 +--) 2 ♜a7+ ♖g6! 3 ♜b7 ♜a1 4 a7 ♜a3 5 ♖d2 ♖f6 =.

b) 1 ♖f4? ♜a5 (1...♜f1+? 2 ♖e5! +--) 2 ♖e4 ♜c5 3 ♜a7+ and now Black has to find 3...♖g6!! = as 3...♖g8? 4 ♜b7 +--, 3...♖f6? 4 ♖d4 ♜c6 (4...♜a5 5 ♜a8! +--) 5 ♜h7 +-- and 3...♖h6? 4 ♜b7 ♜a5 5 a7 +-- all fail.

1...♜a5

Or:

a) 1...♜f1 2 ♖e5 ♜a1 3 ♖d5 +--.

b) 1...♜h1 2 ♜a7+! ♖f6 3 ♖d5 ♜d1+ 4 ♖c6 ♜c1+ 5 ♖d7 ♜d1+ 6 ♖c8 ♜a1 (6...♜d6 7 ♜h7 +--) 7 ♜a8 ♖e7 8 ♖b7 ♜b1+ 9 ♖c6 (9 ♖a7? ♖d7 =) 9...♜c1+ 10 ♖d5 ♜d1+ 11 ♖e4 ♜e1+ 12 ♖f3 ♜a1 13 a7! ♖f7 (13...♖f6 14 ♜f8+! +--) 14 ♜h8! +--.

2 ♖d4 ♜b5

2...♜f5 3 ♜a7+ ♖g6 4 ♜b7 ♜a5 5 a7 +--.

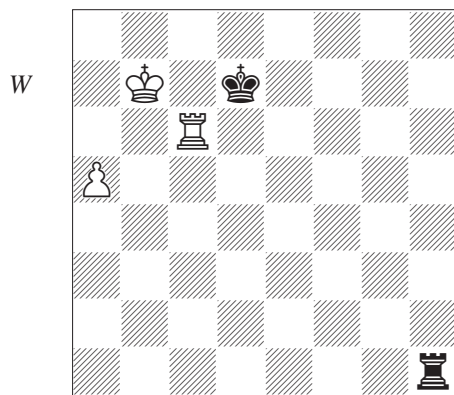
3 ♜a7+ ♖f6 4 ♜h7 ♜a5 5 a7 ♖e6 6 ♜h6+

Or 6 ♖c4 +--.

6...♖d7 7 ♜h8 ♜xa7 8 ♜h7+! +--

A1d3) Other Situations

With the king and rook supporting the pawn, new motifs arise:



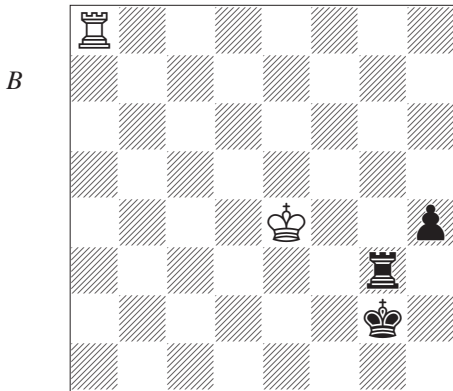
6.59 +/-

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 ♖b8 +–.

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:



6.60

=/+

J.Lautier – V.Salov
Madrid 1993

1...♖f3!!

Now the rook can shield Black's king against checks from the side and from behind. Not 1...h3? 2 ♖a2+! ♔g1 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:

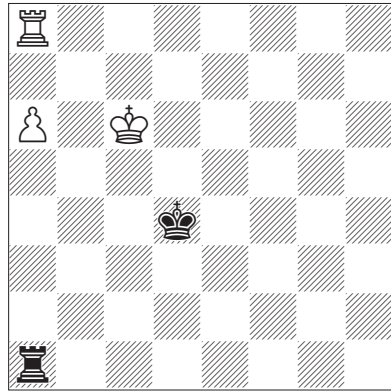
a) 2 ♔b5 ♖b1+! 3 ♔a4 ♔c5 4 ♚c8+ ♔d6 5 ♔a5 ♔d7 6 ♚c4 ♖a1+! =.

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 a7! ♔d6 (8...♖a1+ 9 ♔b5! ♔d6 10 ♖h7 ♖b1+ 11 ♔a6! ♖a1+ 12

B



6.61

+/=

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 +–.

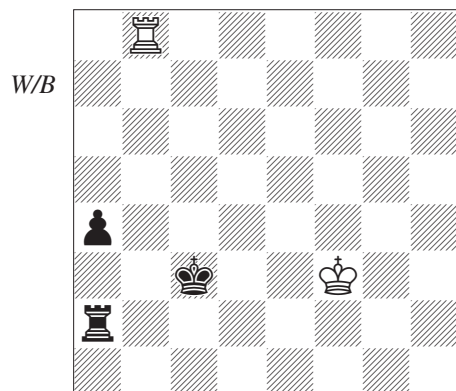
7 ♔a3

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:



6.62

–/+

M.Euwe – A.Alekhine
's Hertogenbosch Wch (16) 1935

If Black were to move, he would win quite easily with 1...♖b2 2 ♙a8 ♜b4 3 ♚e2 ♜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!?

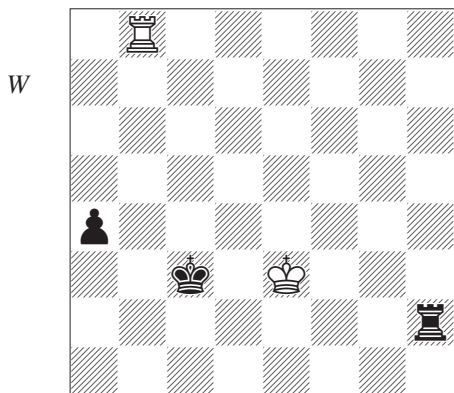
Black's task is easier after other moves: 1 ♙a8 a3 →; 1 ♜c8+ ♚d2 2 ♜d8+ ♚c2 3 ♜c8+ ♚d1 4 ♙a8 a3 5 ♚e3 ♜h2 →.

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 →.



6.62A =/+

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 ♜c3+! ♚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+

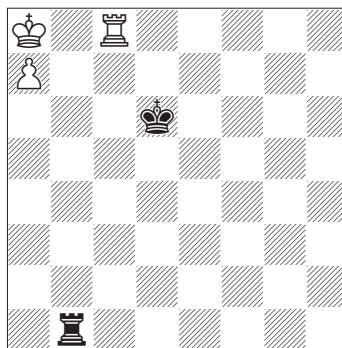
4 ♙a8 a3 →.

4...♚b1 5 ♜b8+ ♜b2 6 ♙a8 ♜b3+ 7 ♚d4 a3 8 ♚c4 ♚b2 9 ♜h8 ♜c3+ 0-1

Reference work

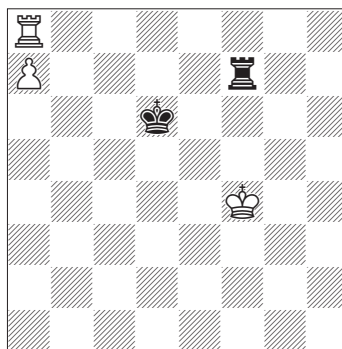
Secrets of Rook Endings, Nunn, Batsford 1992 (second edition, Gambit 1999)

Exercises
(Solutions on pages 379-80)



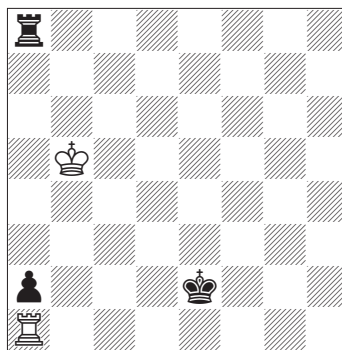
E6.21 /*

Can Black draw?



E6.22 ***/

White to play and win.



E6.23 ***/

White to play and draw.