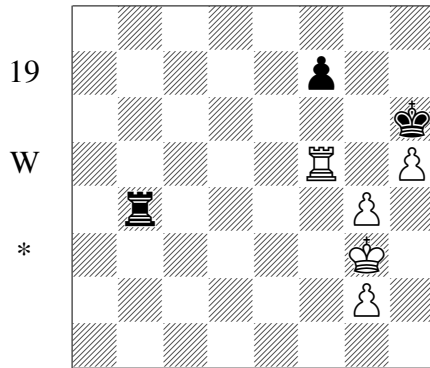
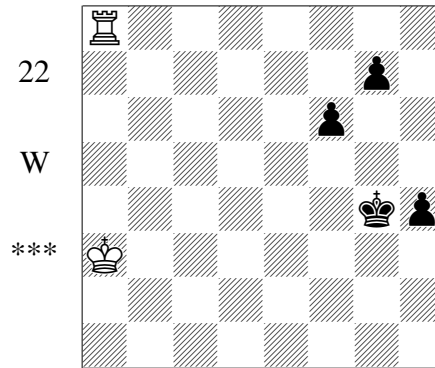


Contents

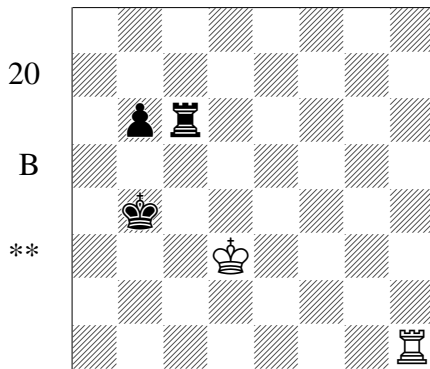
Symbols	4
Introduction	5
1 Pawn Endings	7
2 Knight Endings	35
3 Bishop Endings	45
4 Bishop vs Knight Endings	61
5 Rook Endings	71
6 Rook and Minor Piece Endings	101
7 Queen Endings	119
8 Endings with Queens and Other Pieces	137
9 Endgame Tactics	147
10 Test Papers	167
Score-Table	187
Index of Players and Composers	188



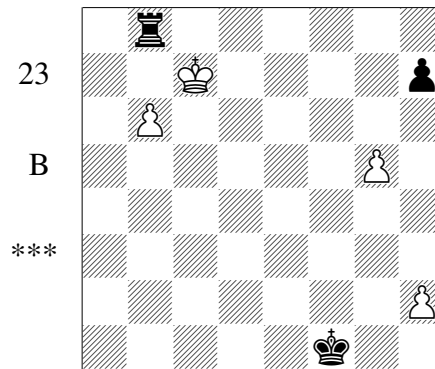
How did Black draw after White's incorrect move 1 Rxf7 ?



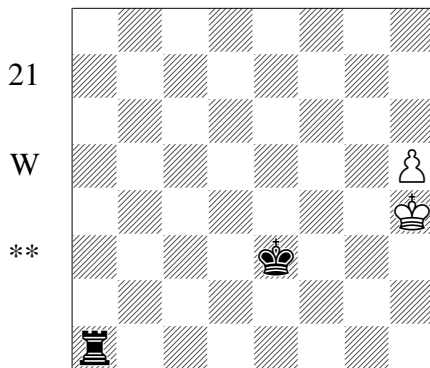
Find the only drawing move for White.



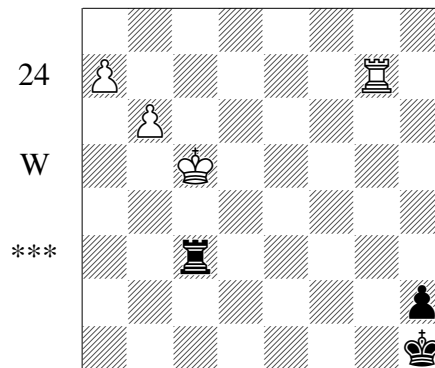
Only one move wins for Black. Which one?



Which square should Black move his rook to?



Black intends to meet 1 h6 by 1... Kf4 and 1 Kg5 with 1... Ra5+ . How does White draw?



Black's king is stalemated. Is it possible for White to evade Black's 'rampant rook'?

19) Mihajlov – Tari, Norwegian Team Ch 2018/19: It's easy to overlook tactical possibilities at the end of a long game. White's careless capture allowed a surprise stalemate draw after **1 ♖xf7?** (there are several winning lines, such as **1 ♖f4 ♖b3+ 2 ♔h4) 1...♗xg4+! 2 ♕f3 ♗g5!** (2...♗a4? **3 ♖f5** lets White win after all) **3 g4** (allowing a repeat of the earlier trick, but by now it is a draw in any case) **3...♗xg4! 1/2-1/2.**

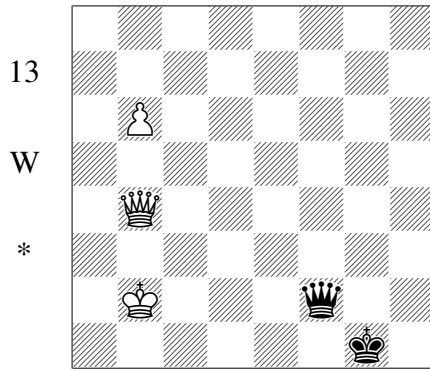
20) Alfaya Marcelo – M. Fernandez Garcia, Madrid Team Ch 2018/19: The game concluded **1...b5? 2 ♖b1+ ♕a5** (2...♕a4 leads nowhere after **3 ♖a1+ ♕b3 4 ♖b1+**, so the king has to go back) **3 ♖a1+ ♕b6** (Black has to retreat his king as there is no other escape from the checks) **4 ♖b1** (the white king is too close for Black to win) **4...♗c4 5 ♖b3 ♕c5 6 ♖c3 ♕d5 7 ♖xc4 bxc4+ 8 ♕c3 ♕c5 9 ♕c2 ♕d4 10 ♕d2 c3+ 11 ♕c2 ♕c4 12 ♕c1 1/2-1/2.** **1...♗c3+!** would have won after **2 ♕d2** (2 ♕d4 b5 leaves the white king cut off along a rank) **2...b5** (the rook on c3 can be used as a shield against white rook checks from the first rank) **3 ♖b1+** (3 ♖h5 ♖c8 leaves the white rook badly placed and after **4 ♖h1 ♕a3** the pawn will advance) **3...♖b3 4 ♖h1 ♕a3 5 ♕c2** (Black also wins after **5 ♕c1 b4) 5...♖b2+! 6 ♕c1 b4 7 ♖h8 ♗g2 8 ♖a8+ ♕b3 9 ♖b8 ♗g1+ 10 ♕d2 ♖b1!** (a typical manoeuvre to help the pawn advance) **11 ♖b7 ♕a2** and White cannot avoid the Lucena position.

21) After **1 ♕g5!** (1 h6? ♕f4 2 ♕h5 ♕f5 really is lost for White) **1...♖a5+** White loses if he plays **2 ♕g6? ♕f4 3 h6 ♖a6+ 4 ♕g7** (4 ♕h5 ♕f5 5 h7 ♖a8 is a win for Black) **4...♕g5 5 h7 ♖a7+ 6 ♕g8 ♕g6 7 h8♭+ ♕f6** since Black mates in a few moves. The correct line is **2 ♕g4!** (an easy move to overlook; shouldering away the enemy king is more important than immediately supporting the pawn) **2...♕e4** (2...♖a6 **3 ♕g5 ♕e4 4 h6 ♕e5 5 h7 ♖a8 6 ♕g6** is also a draw) **3 h6 ♖a1 4 ♕g5 ♗g1+ 5 ♕f6 ♖h1 6 ♕g6** with a draw.

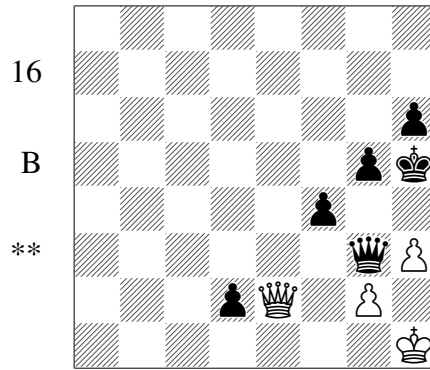
22) **1 ♕b3? h3** is winning for Black after **2 ♖a4+ ♕g3, 2 ♕c4 h2 3 ♖h8 ♕g3 4 ♕d5 ♕g2** or **2 ♖h8 ♕g3 3 ♕c4 h2.** Alternatively, **1 ♖a4+?** loses to **1...♕g3 2 ♕b4 h3 3 ♖a3+ ♕h4!** (Black wins because the fourth rank is blocked by the white king) **4 ♕c5 g5 5 ♖f3 g4 6 ♖xf6 g3 7 ♕d4 ♕g5 8 ♖f8 h2 9 ♕e5 ♕g4 10 ♖g8+ ♕f3 11 ♖h8 g2 12 ♖h3+ ♕g4.** **1 ♕b4!** is better than other king moves because White's main defence against the advancing h-pawn is to bombard Black's king with checks from the a-file. Therefore, White must move his king to the kingside as quickly as possible without blocking any of the ranks in the lower part of the board. Playing the king to c5 is the fastest way to clear the first four ranks for rook checks. It is a draw after **1...h3 2 ♕c5! h2 3 ♖a4+ ♕g5** (the king must retreat or White just keeps checking) **4 ♖a1** (threatening ♖h1) **4...♕f4 5 ♖a4+** and Black cannot make progress.

23) R. Velasquez – Mejia, Nicaraguan Ch, Managua 2019: The game continued **1...♗g8?** (this loses because White gains a vital tempo when his pawn arrives on h7) **2 b7 ♕g2 3 h4 ♕h3 4 h5 ♕h4 5 g6 hxg6 6 h6!** (6 hxg6? ♕g5 draws) **6...♕h5 7 h7** (here's the tempo) **7...♗g7+ 8 ♕d6** and now both **8...♖xh7 9 b8♗ ♖f7 10 ♖h8+ ♕g5 11 ♕e6** and **8...♖xb7 9 h8♗+ ♕g5** are winning for White. Such positions are generally drawn only if Black can both cut White's king off along the f-file and get his king to g7 (see also Exercise 76). In the game White allowed this to happen and only drew. **1...♖f8?** also fails (**1...♖h8?** loses the same way) after **2 b7 ♕g2 3 h4 ♕g3 4 h5 ♕g4 5 g6 hxg6 6 hxg6 ♕g5 7 g7** and the extra tempo is again decisive. It follows that only **1...♖e8!** is correct and after **2 b7 ♕g2 3 h4 ♕g3 4 h5 ♕g4 5 g6 hxg6** there is no way for White to gain a tempo by attacking the rook so **6 hxg6 ♕g5 7 g7 ♕f6** leads to a draw.

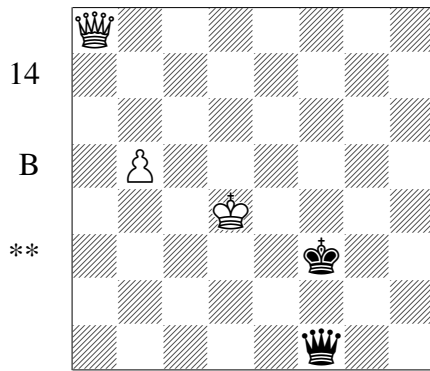
24) Cabanillas Roca – Domene Mulyukov, Riudoms 2019: It is possible to escape from the rook checks. The game ended in a draw after **1 ♕b4? ♖b3+?** (**1...♖c4+!** draws; for example, **2 ♕b5 ♖c5+ 3 ♕a6 ♖a5+ 4 ♕b7 ♖xa7+)** **2 ♕c4 ♖b4+ 3 ♕d3 ♖b3+ 4 ♕e2?** (playing the king to the fourth rank still wins) **4...♖e3+! 5 ♕d1 ♖d3+ 6 ♕c2 ♖c3+ 7 ♕xc3 1/2-1/2.** The winning line is **1 ♕d5 ♖d3+ (1...♖c5+ 2 ♕e4** is much the same; the winning idea is to play the king to the h-file and then to the seventh rank) **2 ♕e6 ♖d6+ 3 ♕f5** (3 ♕e7 ♖d7+ does not make progress) **3...♖f6+ 4 ♕g4 ♖f4+ 5 ♕h5 ♖h4+ (5...♖f5+ 6 ♖g5) 6 ♕g5 ♖h5+ 7 ♕f6 ♖f5+ (7...♖h6+ 8 ♖g6) 8 ♕e7** (with the rook to the right of the king, Black only has one check each move) **8...♖e5+ 9 ♕d7 ♖d5+ 10 ♕c7 ♖c5+ 11 ♕b7 ♖g5 12 ♖h7 ♖g7+ 13 ♕a6 ♖xh7 14 a8♗+ ♕g1 15 ♖g8+** and ♖xh7 wins.



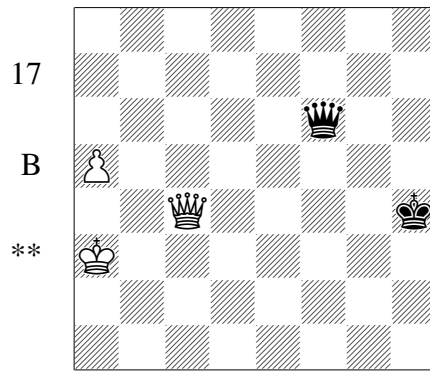
Only one king move wins. Which one?



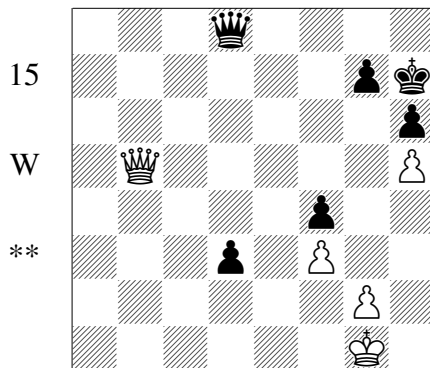
Should Black play 1...f3, 1...g4 or 1...♔h4?



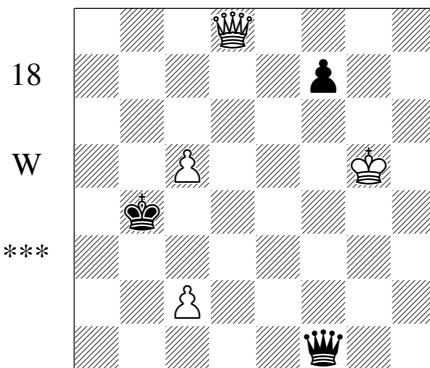
Where should Black move his king?



Should Black move his king up or down the board?



Find the only drawing move for White.



How does White win?

13) After **1 ♔a1!** (playing the king to the same rank as the enemy king and so preparing an interposition on b1; **1 ♔a3? ♖e3+ 2 ♔a4 ♖e8+ 3 ♔a5 ♖a8+ 4 ♔b5 ♖e8+** and **1 ♔b1? ♖f5+ 2 ♔a1 ♖e5+ 3 ♔a2 ♖e2+ 4 ♖b2 ♖a6+** both lead to a draw) **1... ♖f6+ 2 ♖b2** there are no more checks. It's then an easy win; for example, **2... ♗d8 3 ♖b1+ ♔f2 4 b7 ♖b8** (forced as there are no checks) **5 ♖b3 ♔f1 6 ♔b1 ♔g1 7 ♖b2 ♔h1 8 ♖c1+ ♔g2 9 ♖c8** and the pawn promotes.

14) Chernov – Pfatteicher, Germany tt 2018/19: Here White has a b-pawn, his king is near enough to support the pawn and Black's king cannot move in front of the pawn. This means that the only drawing positions have the black king in the h1-corner. Black clearly knew this and the game continued **1... ♔g3!** (**1... ♔g4?** is too slow due to **2 ♖e4+!**, when **2... ♔g3** loses to **3 ♖d3+** while **2... ♔h5 3 b6** is a win as the black king is now cut off from h1) **2 ♖g8+ ♔h2 3 ♖h7+ ♔g1 4 ♖g6+ ♔h2 5 ♖h5+ ♔g2 6 ♖d5+ ♔h2**. Many grandmasters have lost games through not understanding this principle, so full credit to Black for his accurate defence. Although White tried to win for a further 60 moves, Black made no mistake and was rewarded with a well-earned draw.

15) Maslik – Jakab, Slovakian Team Ch 2018/19: White defended accurately and held the draw after **1 ♔f1!** (after **1 ♔f2?**, the surprising **1... ♔h8!** is the only move to win, when both **2 ♖b3 ♖d4+ 3 ♔f1 ♖a1+ 4 ♔f2 d2** and **2 ♖b1 ♖d4+ 3 ♔f1 ♖c4! 4 ♔e1 ♖e6+ 5 ♔d2 ♖e3+ 6 ♔c3 d2+ 7 ♔c2 ♖e2 8 ♖d1 ♖xg2 9 ♖xd2 ♖xd2+ 10 ♔xd2 g5** lead to a decisive advantage for Black) **1... d2** (**1... ♔h8 2 ♖b3 ♖d4 3 ♖e6** draws) **2 ♖b1+ ♔h8 3 ♔e2 ♖d4 4 ♖b8+ ♔h7 5 ♖b1+ ♔h8 1/2-1/2**.

16) R. Gabriel – Hoenick, Germany tt 2018/19: The game continued **1... f3? 2 ♖xd2** and now **2... ♖xg2+?!** was a poor choice, as the king and pawn ending is an easy draw: **3 ♖xg2 fxg2+ 4 ♔xg2 ♔g6 5 ♔f3 ♔f5 6 ♔g3** (**6 ♔e3** also draws) **6... h5 7 ♔f3 ♔e5 8 ♔e3 ♔d5 9 ♔d3 h4 10 ♔e3 ♔e5 11 ♔f3 ♔f5 12 ♔e3 g4 1/2-1/2**. **2... f2** is a much better practical chance, as White must defend with great accuracy to draw: after **3 ♖e2+ ♔h4 4 ♖e4+ ♖f4 5 g3+! ♔xg3 6 ♖g2+ ♔h4 7 ♖xf2+! ♔xh3** we reach **♖+g♔+h♔ vs ♖**, which is generally drawn if the defending king is in front of the pawns, although the defence requires an exceedingly high level of precision. One possible line runs **8 ♖g2+ ♔h4 9 ♖f2+ ♔g4 10 ♖g2+ ♔f5 11 ♖d5+ ♖e5 12 ♖f7+ ♖f6 13 ♖d5+ ♔g6 14 ♖g8+ ♔h5 15 ♖e8+ ♔h4 16 ♖e1+ ♔g4 17 ♖e4+ ♖f4 18 ♖g2+** and there is no easy way to avoid the checks without losing the h-pawn. **1... g4?** is also wrong and allows **2 ♖e5+ ♔h4 3 ♖f6+ ♔h5 4 ♖f5+ with an immediate draw**. The winning line was not too difficult: **1... ♔h4! 2 ♖xd2 ♖e3! 3 ♖a2 ♔g3 4 ♖b1 h5 5 ♖d1 f3 6 ♖d6+** (after **6 ♖xf3+ ♖xf3 7 gxf3 ♔xh3** Black wins easily) **6... ♔f2** with mate in a few moves.

17) Atabaev – Kholopov, Moscow 2019: To solve this you have to know that in **♖+a♔ vs ♖**, if you cannot get your king in front of the pawn then the safest place is the diagonally opposite corner. The game ended **1... ♔h5? 2 a6 ♖b6 3 ♔a4 ♔g6 4 ♖b5 ♖d4+ 5 ♔a5 ♔f7 6 ♖b7+** (**6 ♖b6** is more accurate) **6... ♔e8** (**6... ♔g8** offers more resistance) **7 ♖c6+ ♔d8??** (a blunder, but after **7... ♔f8 8 ♖c7 ♖d2+ 9 ♔b6 ♖b4+ 10 ♔a7 ♖d4+ 11 ♔b7 ♖b4+ 12 ♖b6 ♖e7+ 13 ♔c8** White stops the checks and wins; it is bad for Black to have his king in the upper half of the board, since it is easier for White to interpose with check or with a pin) **8 ♖b6+ 1-0**. Black should play **1... ♔h3!** (**1... ♔g3!** is just as good). Then **2 a6 ♔h2 3 ♖c7+ ♔g2 4 a7 ♖a1+** is a draw; for example, **5 ♔b4 ♖b2+ 6 ♔c5 ♖c3+ 7 ♔b6 ♖b4+ 8 ♔a6 ♖a4+ 9 ♔b7 ♖b5+ 10 ♖b6 ♖d7+ 11 ♔b8 ♖e8+** and so on.

18) P. Arestov, 2nd Honourable Mention, Ali Tebrizi Shatranji, 2016 (end of study): White wins by **1 ♖b6+!** (not **1 ♖d4+? ♔b5**) **1... ♖b5** (**1... ♔c4 2 ♖a6+**, **1... ♔c3 2 ♖f6+** and **1... ♔a3 2 ♖b3#** are trivial losses, while after **1... ♔a4 2 c6** the c-pawn is too strong; if Black then starts checking, White hides his king on a7) **2 ♔f5!!** (the position with **♔f6 vs ♔c4** is reciprocal zugzwang, so White must reach it with Black to play; **2 ♔f6? ♔c4!** is only a draw since **3 c3 ♖xc5** and **3 ♔xf7 ♖xc5** both lead to nothing) **2... ♔c4** (after **2... ♔a4 3 ♔e5** White wins easily) **3 ♔f6!** (now Black is in zugzwang) **3... ♖xc5** (**3... ♖a4 4 c6** is an easy win, while **3... ♖e8 4 ♖d6! ♔b5 5 c4+! ♔xc4 6 c6** is not much harder) **4 ♖b3+ ♔d4 5 ♖d3#**, the point being that the mate only exists when the white king is on f6.