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Two knights versus pawn(s)

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editor Derek Roebuck

derek_roebuck@hotmail.com

✉ Patzer Chess
P O box 957
Subiaco 6904
Australia

ABN 81 316 037 926

Two knights versus pawn(s)

♘♗ 8/a

In this supplement I will try to show you some interesting aspects of those extraordinary endings where one player has two knights, and the other has only one or more pawns.

This material combination rarely arises in practical play, and if your only goal as a reader is to improve your results in competition chess, then stop now, and go and read something else. If you respect the beauty and mystery of chess, however, you may well enjoy this supplement.

Derek Roebuck

Introduction

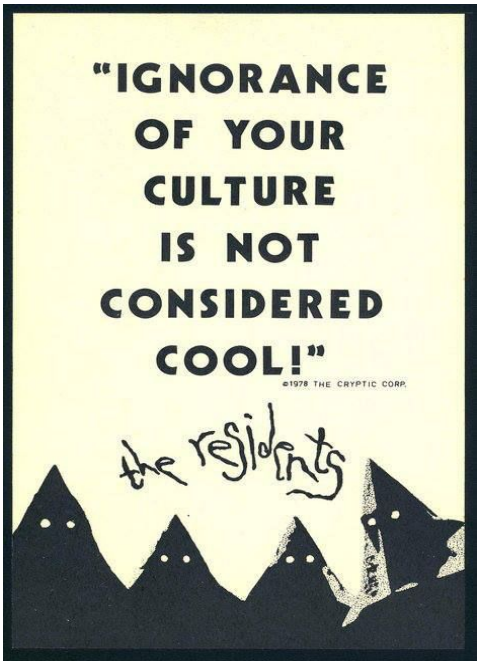
The ending with two knights against one (or occasionally more) pawn(s) has fascinated and infuriated chess players for centuries. I can think of four reasons why you should learn a little about this admittedly very rare combination of forces.

1. It's actually quite interesting.

2. It's not nearly as hard as it looks, although to be fair it does look very hard indeed.

3. It is probably (slightly) more useful than you think. Even if it never comes up in one of your games, it can teach you a lot about how the king can cooperate with a knight.

4. It's an important part of chess culture, and ignorance of your culture is not considered cool.



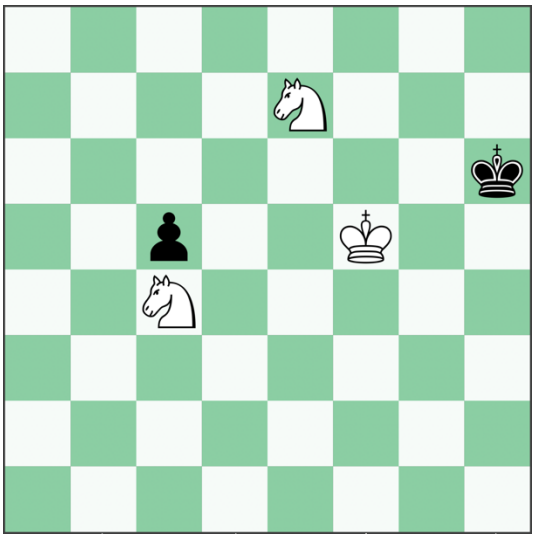
Promotional poster for *Duck Stab* (The Residents, 1978)

My job is to persuade you that the first three reasons are true. We hold the fourth to be self-evident.

In this supplement I will explain the ideas behind this ending, using a step-by-step approach, starting with checkmate and working backwards. We will look at the early stages of the winning method last – they are not exactly intuitive, as you will find out later.

Conventions

In all of the examples white will have the two knights and black will have the pawn(s).



1 ▷1

I have adopted a slightly unusual meaning for the common chess symbol "!?", which in these pages will be used to indicate a move that is sensible for humans, even if it is not the "correct" (tablebase) way in terms of minimizing the number of moves until checkmate. "!" will be used to indicate a move that is either difficult

to spot, or is correct according to the database (and often both).

For example, the tablebase move in diagram 1 is 1. ♘c8!, with mate in another 21 moves. The idea is to redeploy the knight to e4 via d6, but these "wrong way" knight moves are impossible to memorise, and even harder to find at the board. For practical purposes, 1. ♘g6!? would be a better plan. It costs us one move in the race against the 50-move rule clock, but we are human, and we need concepts to understand. The idea behind 1. ♘g6!? is 1…♔h5 2. ♘f4+, and now after either 2…♔h4 3. ♘e2 or 2…♔h6 3. ♔f6 the black king is further restricted.

Organization of this supplement

The best place to start is with some basic rules for the side with the knights (white) and for the defender (black), followed by a look at the final stages of the checkmating process (page A7). This may seem to be the wrong way around, but it turns out that it is impossible to memorize a general winning method that applies to all positions. (As far as I can tell, there are no recent publications on the subject that even attempt to do this. For example, one textbook[1] gives two examples of this ending, in both of which the black king has already been confined to the edge of the board!)

We won't even try to remember a method. Instead, we will learn some tactical ideas to use in the earlier part of the process of confining the black king (page A11). These include a few obvious themes, as well as some that are quite subtle, and difficult to find in an over-the-board game.

We will then move on to practical examples (page A16) that use these ideas to reach the final stages.

Not all starting positions with two knights against a pawn are forced wins, and before simplifying to this ending we should have an idea of our winning chances. This is not a simple matter, as you will see in the section on Troitsky and his lines (page A29).

Next, we will examine some positions where black has two or more pawns (page A31). It is, of course, crucially important to understand when and how to simplify to this ending (page A37).

If you see a term in italics and can't remember its meaning, look it up in the Glossary (page A42). Finally, there is a Summary of the winning process (page A44), and five Test positions for you to try (page A46).

The stalemate problem

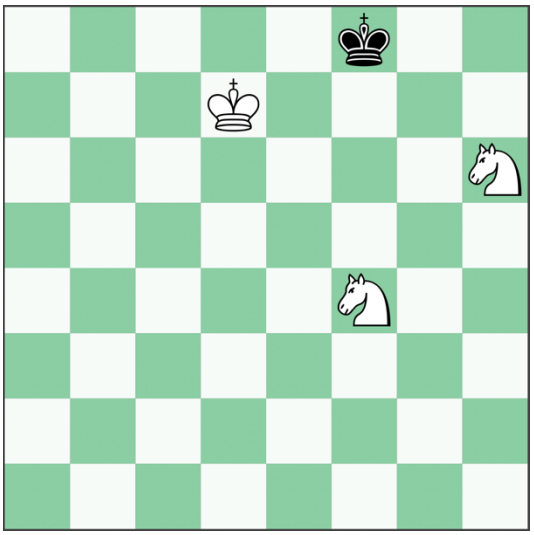
Most club players know that you can't force mate with two knights against a bare king.

[1] Balogh C, Mikhalchisin A. *Mastering minor piece endgames. Part 2.* Chess Evolution, 2016: 44-46

This material combination is not, however, an automatic draw. Article 5.2.b of the FIDE Laws of Chess[2] states that:

> The game is drawn when a position has arisen in which neither player can checkmate the opponent's king with any series of legal moves.

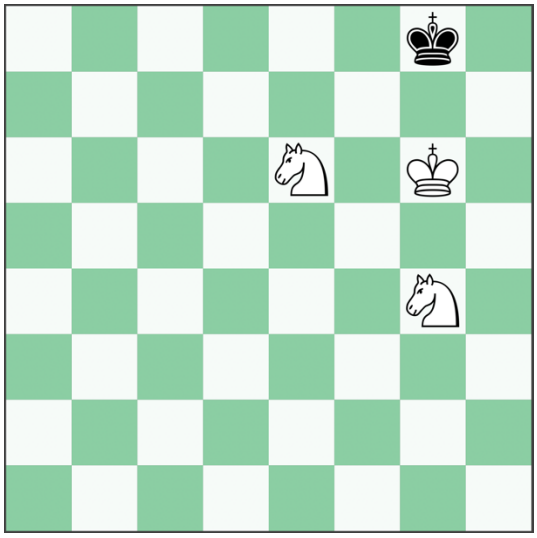
This is not the case here. The white king and knights can drive the enemy king to the edge of the board easily enough, and if black is really dozy he or she can actually be checkmated there (diagram 2).



2 Helpmate ▷1

White can checkmate with **1. ♘e6#**, but the black king's last move was from g7, so unless it was a capture it was an incomprehensible blunder.

A forced mate can only occur if the black king stands on a corner square, but white can only get the black king into a corner by going through a position where it is stalemated.



3 Stalemate in the corner ▷

1. ♘f6+

White can also try 1. ♘h6+ ♔h8, but it's the same problem.

1...♔h8

White has to move the knight from e6 to f7 to deliver mate, but 2. ♘g5 and 2. ♔f7 are both stalemate.

Another way of looking at this is that the definition of its move means that the knight must always alternate between light and dark squares, so there is no place it can stand where it both controls f8 and allows a one-move shift to f7 to checkmate. It would, therefore, make no difference if in diagram 3 the knight stood on d7 rather than e6.

The basic winning plan

White can only avoid the stalemate problem by using black's pawn. The pawn must not be allowed to move

[2] www.fide.com/FIDE/handbook/LawsOfChess.pdf

until the stalemate position has been achieved, or just before, and then white must deliver mate before black promotes, or at the latest on the next move (providing the new queen does not give check or pin the knight that was supposed to give mate).

All of the winning sequences in this ending involve the following steps.

1. *Blockade* the black pawn with one of the knights.

2. Force the black king into a corner, and restrict it to one or two squares.

3. Bring the *blockading knight* over and deliver checkmate.

Basic rules for white

This logic provides us with a few general principles:

1. Never capture a solitary pawn.

2. Prevent its advance (*blockade* it) with a knight as soon as possible.

3. If there are two or more pawns, then *blockade* the most favourable one (see page A31) and capture all the rest.

4. Sometimes, allowing the pawn to advance slightly (resetting the timer on the 50-move rule) may be advantageous.

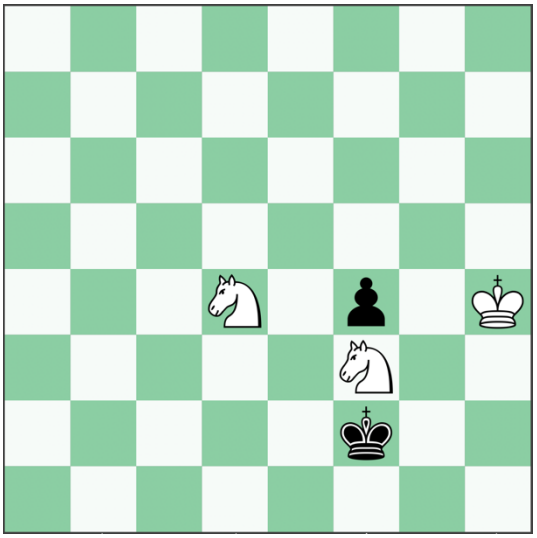
5. It may be easier to mate in one of the corners in your own half of the board, because as the pawn advances the blockading knight gets closer to the corner, and is therefore better placed to help restrict the mobility of the black king.

Basic rules for black

1. Advancing the pawn (particularly if you can push it two squares) is rarely a bad idea, but if you have almost made it to 50 moves, you should not give up your best chance of a draw unless you absolutely have to.

2. The black king should try to stay in the centre, of course, but when it is forced back it should, in general, head for the corner furthest from the blockading knight.

Diagram 4 is an exception.



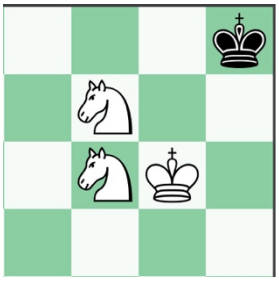
4 Sanctuary in the corner ▶1

Here black should play 1…♔g2!, and stay in the corner. The pawn on f4 deprives white of the use of the g3 square, and because of this mate cannot be forced (see diagrams 5a to 5d). 1…♔e3 is a draw too, but only because of the 50-move rule.

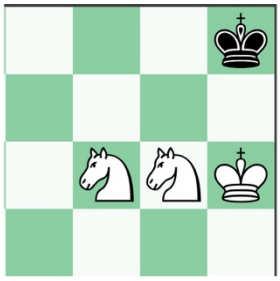
3. If you have more than one pawn, try to force white into the least favourable capture(s), leaving you with the most advanced pawn.

The final stages

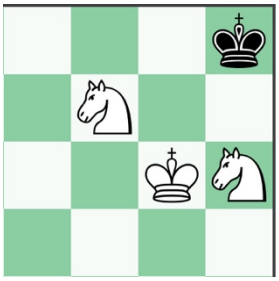
Various mating configurations exist (see diagrams 5a to 5d), but remember that, in the absence of nearby pawns, any reflection or rotation of these positions is equally valid.



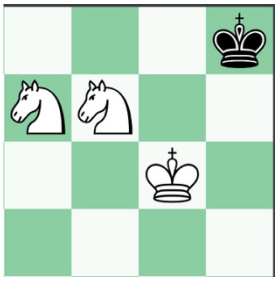
5a



5b



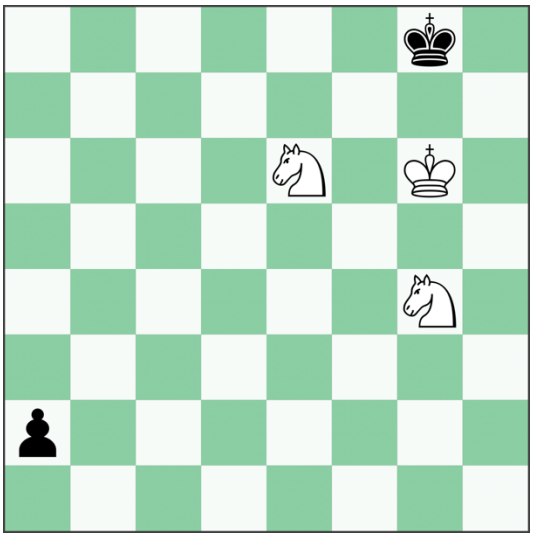
5c



5d

The positions of the two knights are constrained by the need to control both g8 and h8. Note that the mate in diagram 5b can only be forced if the blockading knight is close enough to control f7 or f8, or the black king can escape. As previously noted, if black's pawn promotes on the move before checkmate it is crucially important that the new queen does not check white, or pin the knight that is going to give mate.

Let's modify diagram 3 very slightly.



6 Checkmate in the corner ▷1

1. ♘f6+

1. ♘h6+ also wins.

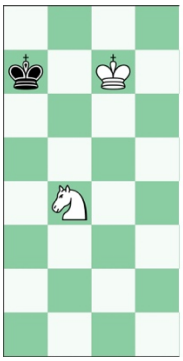
1...♔h8 2. ♘d8

Or 2. ♘g5, of course.

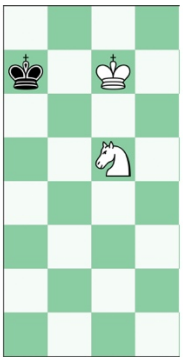
2...a1♕ 3. ♘f7#

The 2-square cages

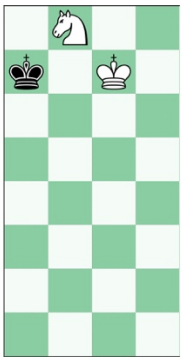
If the black king can be confined to two squares (a corner square and one of the orthogonally adjacent squares) then any available mating sequence will be easy to calculate.



7a



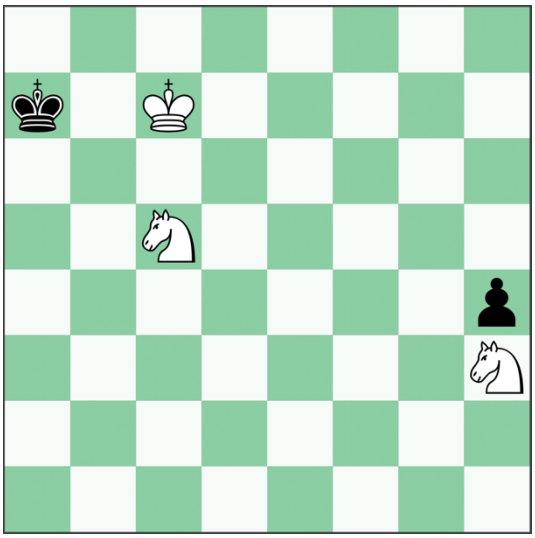
7b



7c

One winning method would be to bring the *blockading knight* to c6 with check, which traps the black king on a8. White then mates with the *free knight* on the b6 square, which it will reach in two moves, via d5 or d7, as appropriate.

Plan B is to bring the *blockading knight* to b6 with check, trap the king in the corner with ♘c8+, and mate with the *free knight*:



8 The 2-square checkmate ▷▶1

This position occurred (with colours reversed) in the game A. Bisguier – A. Matanović, Bled 1961.

The problem with white to move is that the knight needs to arrive on b6 with check. No manoeuvring with the knights can "lose" a move, so white *triangulates* with his king to transfer the move to black:

1. ♔c6!

If black is to move, white wins using plan B: 1…♔a8 2. ♘f4 h3 3. ♘d5 h2 4. ♘b6+ ♔a7 5. ♘c8+ ♔a8 6. ♘d7 h1♕ 7. ♘db6#.

1…♔a8

1…♔b8 2. ♔d7 wins after either 2…♔a7 3. ♔c7 or 2…♔a8 3. ♔c8.

2. ♔d6! ♔b8

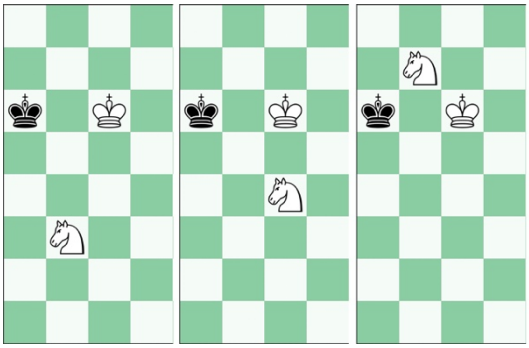
2…♔a7 3. ♔c7

3. ♔d7 ♔a8 4. ♔c8 ♔a7 5. ♔c7

White gets back to diagram 8, but now it is black to move.

The 3-square cages

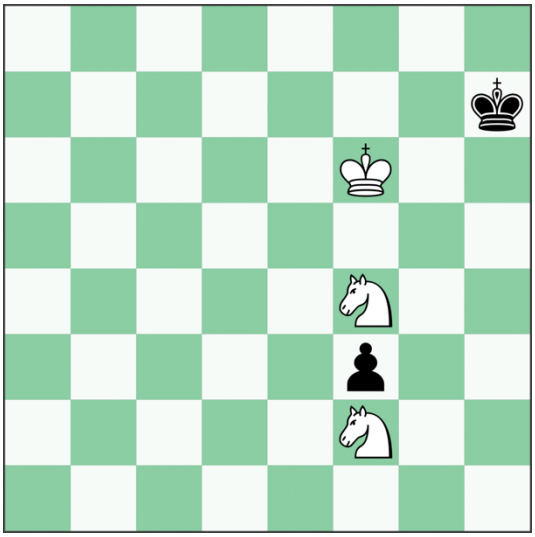
Strictly speaking, of course, there are no configurations of the white king and one knight that completely confine the black king to exactly three squares, so these are not (yet) true cages.



9a 9b 9c

In each of the parts of diagram 9 black's king can still move to b8 and escape. The challenge for white is to prevent this potential escape and convert it into a *2-square cage*. The method you need to use is probably the single most important tactical trick in this ending.

Converting three squares to two



10 The 3-square cage ▷94

S.J. Solomon – M. Steadman, Canberra (Doeberl Cup) 2011

The winning method is as follows:

94. ♘e6!

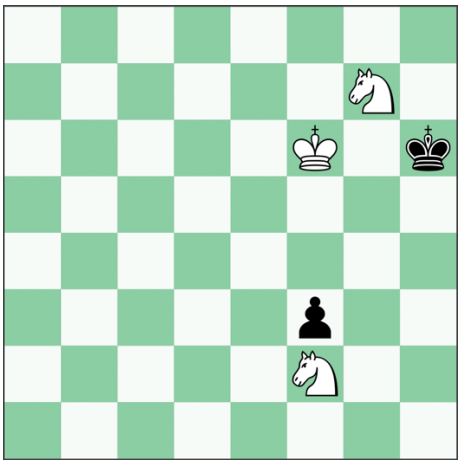
One of the *magic squares* (see diagram 11). White actually played 94. ♘h5?, when black could have drawn after 94…♔g8 95. ♔e7 ♔h7 96. ♔f7 ♔h6, because his king escapes. Instead, black blundered with 94…♔h6? and was losing again after 95. ♘g3 ♔h7 96. ♘f5 (the other *magic square*).

94…♔h6

94…♔g8?! or 94…♔h8?! would allow 95. ♔g6, which gives white a direct path to a *2-square cage*, and an easy win, as we saw above.

95. ♘g7!

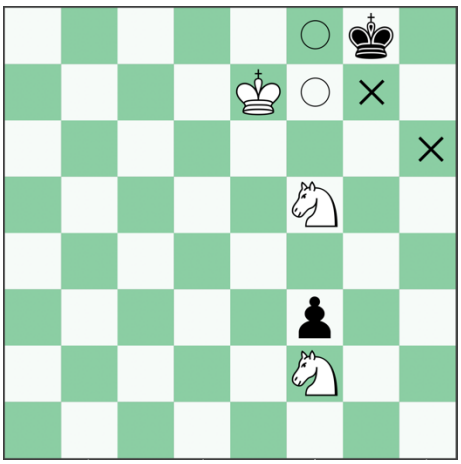
This is the 3-square cage we saw in diagram 9c.



10a ▶95

95…♔h7 96. ♘f5 ♔g8 97. ♔e7!

This is the key to converting the 3-square cage to a 2-square cage.

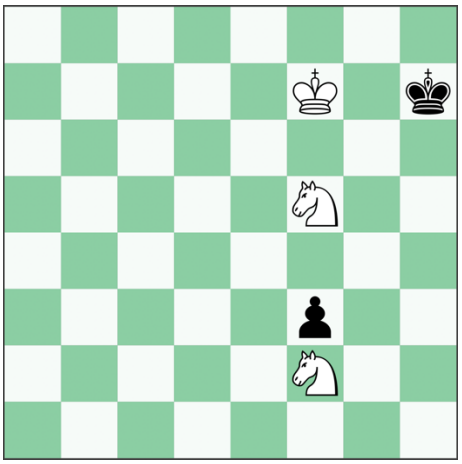


10b ▶97

In diagram 10b, white cuts off the black king's escape from the corner by controlling squares with the *free knight* ("×") and the king ("○"). The next step requires the use of the *opposition*.

97…♔h7 98. ♔f7

By controlling g6, white successfully reduces the cage to two squares.



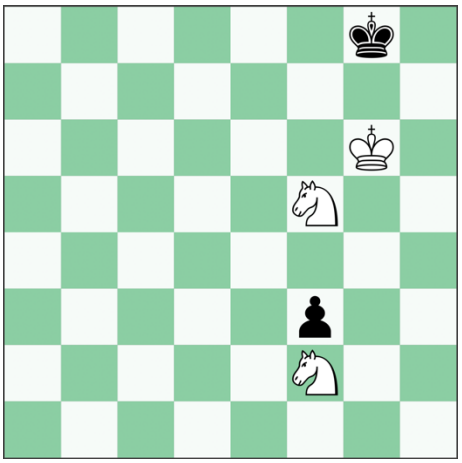
10c ▶98

White to move in this position could play ♘e4-f6+ and ♘e7-g6#.

98...♔h8

White is a tempo short of plan B (diagram 8). Instead, he or she must put the free knight on e6, cover h6 by moving the blockading knight to g4, and finish with ♘f8+, ♘f6 (covering the queen check as well as h7) and ♘g6#. This requires care.

99. ♔g6! ♔g8



10d ▷100

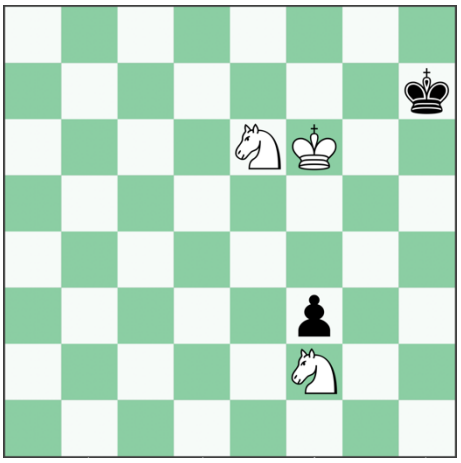
The next two moves reach the same configuration we saw in diagram 10a (or 9c), rotated by 90 degrees.

100. ♘g7! ♔f8

100...♔h8 101. ♘e6 is the *2-square cage* that white is looking for: 101...♔g8 102. ♘e4 f2 103. ♘f6+ ♔h8 104. ♘d8 f1♕ 105. ♘f7#.

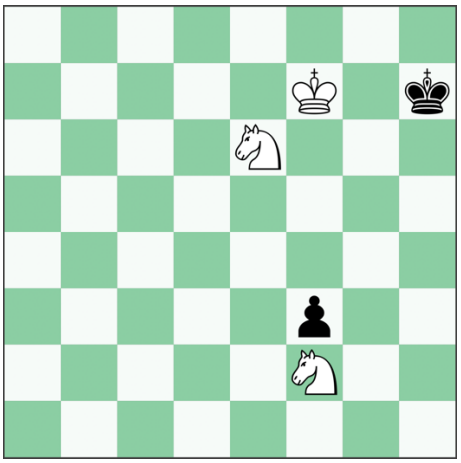
101. ♔f6 ♔g8 102. ♘e6 ♔h7

102...♔h8 103. ♔g6 is the same.



10e ▷103

103. ♔g5! ♔g8 104. ♔g6 ♔h8 105. ♔f7 ♔h7



10f ▷106

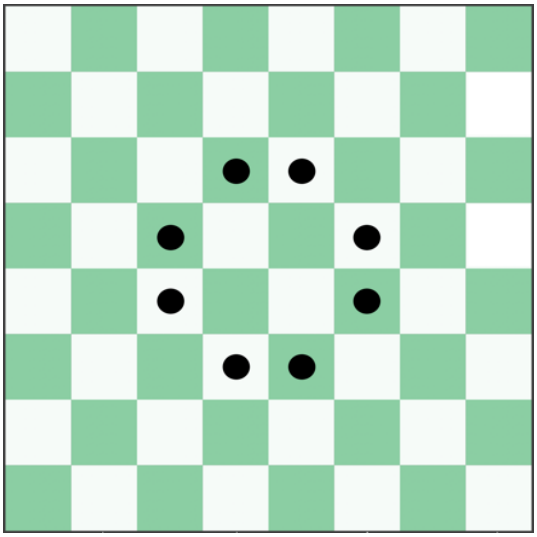
106. ♘g4 f2 107. ♘f8+ ♔h8 108. ♘f6! f1♕ 109. ♘g6#

Tactical ideas

When you are sure that you know how to convert the *3-square cage* to a win, it's time to learn some useful tactical themes that crop up over and over again in this ending.

The magic squares

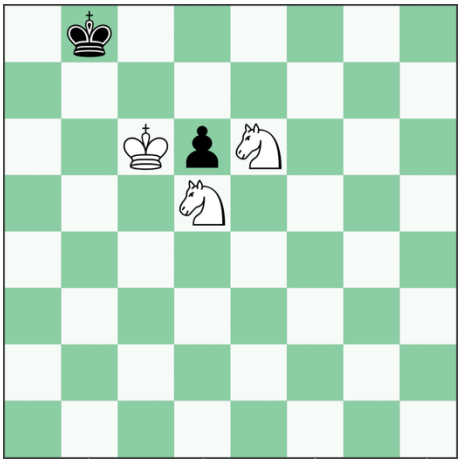
Each corner has two magic squares that the free knight can use to corral the black king (diagram 11). These lie a knight's move towards the centre from what Jesús de la Villa calls the "knight's dumb square"[3], meaning b7, h7, b2 or g2.



11 The magic squares ("●")

The reason that the magic squares are so important is that the *free knight* stands on one in our method for reducing a *3-square cage* to two squares (diagram 10b).

Now you know about the magic squares, you might deduce that in diagram 11a white has herded the black king into the wrong corner. The *free knight* can't go to either magic square, because the black pawn stands on one, and controls the other.



11a ▷1

White lets the pawn advance, in order to be able to use the c5 square:

1. ♘d8! ♔c8

1…♔a7 is met by 2. ♘b4!

2. ♘b7 ♔b8 3. ♘b4! ♔c8

3…d5 4. ♘d6 d4 5. ♔b6 d3 6. ♘a6+ ♔a8 7. ♘e8 d2 8. ♘ec7# allows a quicker mate.

4. ♘a6 d5 5. ♘ac5 d4 6. ♘d3!

This is an example of *changing the blockader* (see page A14).

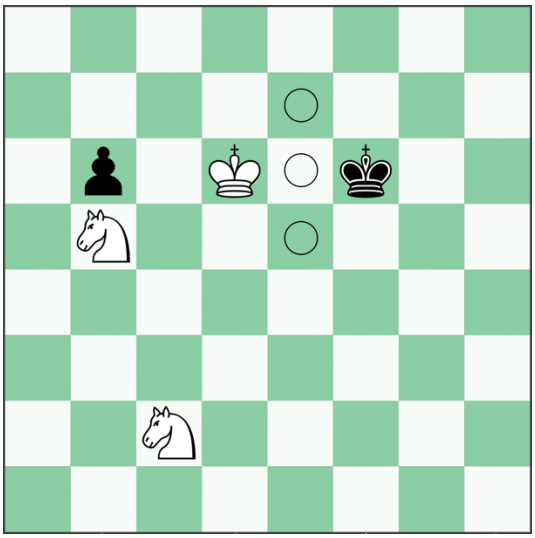
6…♔b8 7. ♘d6

The knight reaches the magic square, and white forces a conversion to the *2-square cage*.

[3] de la Villa J. *100 endgames you must know*, 5th edition. New in Chess, 2018: 58

Blocking the corridor

In diagram 12 white is set up to push black across to the h-file, and then into one of its corners. To do this, he or she must prevent black from escaping in a perpendicular direction to this push, in this case up or down the f-file. This can be done by blocking the corridor with the free knight.



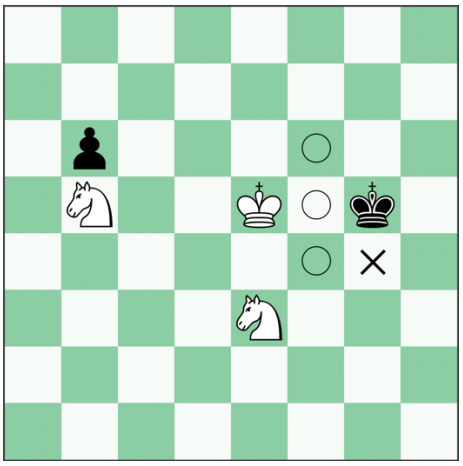
12 Blocking the corridor ▷1

This position is mate in 36 moves, which means white doesn't have a lot of room for mistakes. So which of 1. ♘e3 and 1. ♘d4 does the job better?

1. ♘e3! ♔g6 2. ♔e6

White has already gained one file.

2...♔g5 3. ♔e5

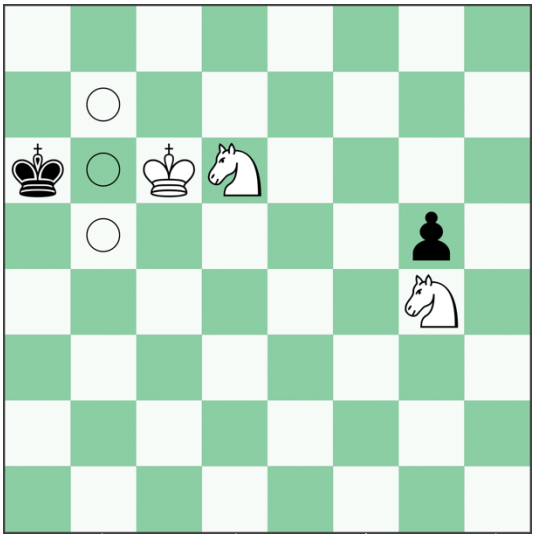


12a ▶3

So 1. ♘e3! was better, because it also covers g4, allowing white to block the corridor a second time.

The rake

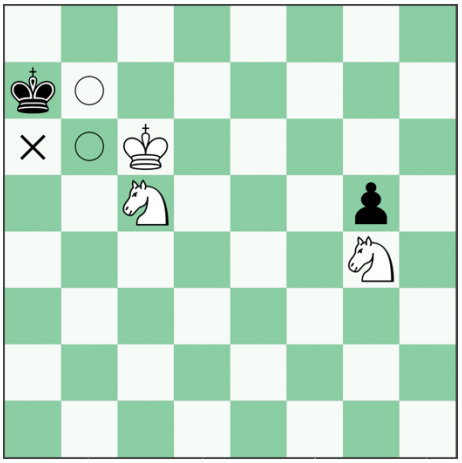
When black's king is trapped on the edge of the board, white can use this manoeuvre of the free knight to scrape it towards a corner (diagram 13).



13 The rake ▷1

Now, *blocking the corridor* by 1. ♘c4 ♔a7 just repeats after 2. ♘d6. Instead, white prevents the king's escape via a5 in a different way.

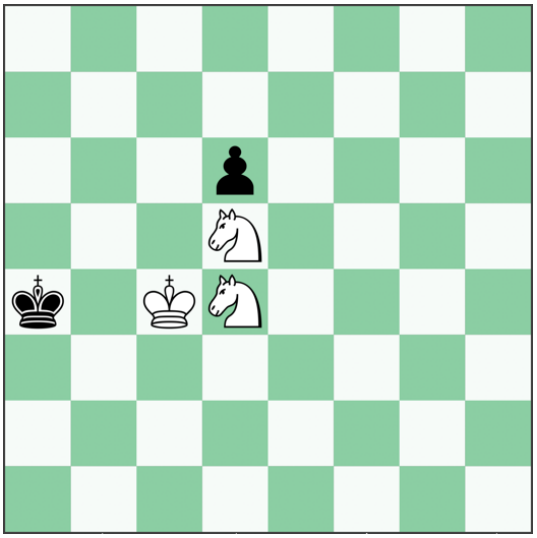
1. ♘b7! ♔a7 2. ♘c5



13a ▶2

With this second step, the knight moves to the *magic square*, the *2-square cage* is obtained, as we saw in diagram 10b, and mate follows:

2...♔b8 3. ♔d7! ♔a8 4. ♘e5! g4 5. ♘c6 g3 6. ♔c8 g2 7. ♘e6 g1♕ 8. ♘c7#

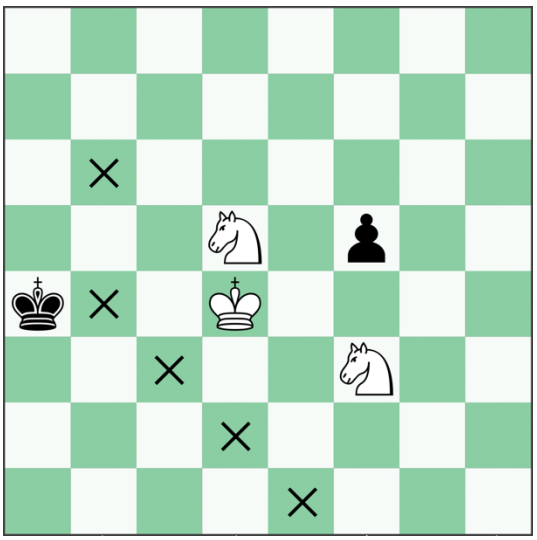


14 ▷1

Here white needs to play 1. ♔c3! or 1. ♘b5!?, because after 1. ♘b3?! ♔a3 the second step of the *rake* would be 2. ♘c5??, which is an obvious blunder.

Plugging the holes in the wall

The foundations of the wall are laid by the free knight but, depending on the configuration of the pieces, the blockading knight may also be able to contribute. This wall will almost always be incomplete, and at times will be only rudimentary, but this is how you should look at the process of rounding up the black king (diagram 15). In the early stages, it is vital to remember that the white king's role is to plug the holes in the wall.



15 Plugging the holes ▷1

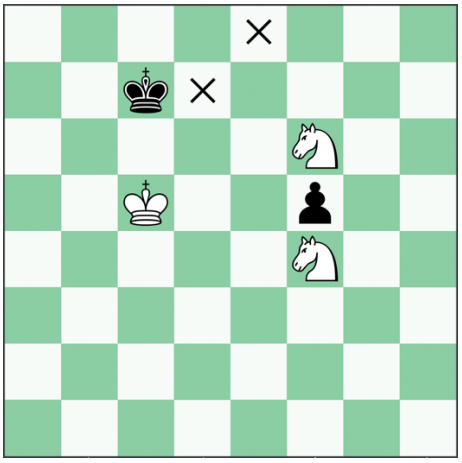
1. ♔c5! ♔b3

1...f4 2. ♘c7 ♔a5 3. ♘b5 ♔a6 4. ♘d6 ♔a5 5. ♘b7+ is a rapid route to the 3-square cage, and 1...♔a5 2. ♘f4 ♔a6 3. ♘e5 transposes to the main line after 7. ♔c5.

2. ♘d4+

Easy to find if you remember the wall.

2... ♔a3 3. ♘f4 ♔a4 4. ♔c4 ♔a5 5. ♘c6+ ♔b6 6. ♘e5 ♔a6 7. ♔c5 ♔b7 8. ♘d7! ♔c7 9. ♘f6!



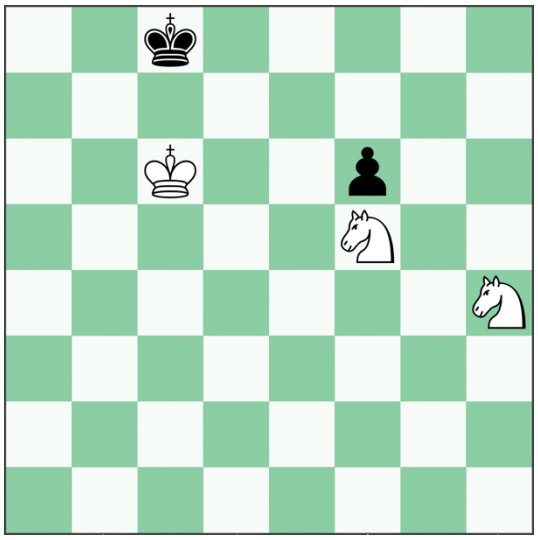
15a ▶9

If black tries to escape with 9...♔d8 white will simply plug the hole again with 10. ♔d6.

Changing the blockader

White can sometimes give a check with the *blockading knight* and then immediately replace it with the *free knight* (as with 2. ♘d4+ and 3. ♘f4 in the previous example), but this is rarely necessary.

It is much more common for the change to concede one or more squares of advancement to the black pawn (see diagram 11a). In diagram 16 the opportunity to achieve the *3-square cage* is just too good for white to pass up.

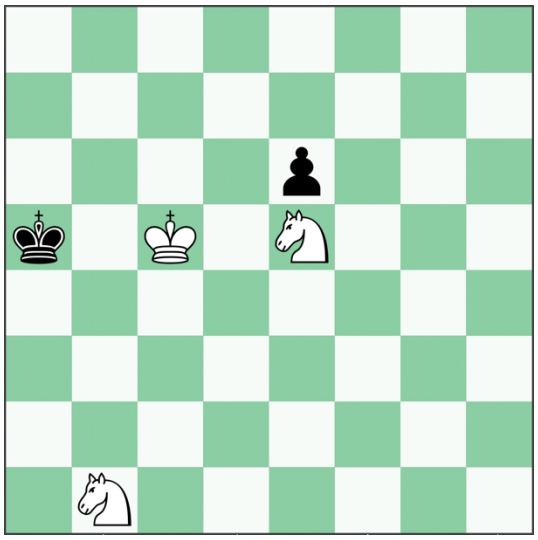


16 ▷1

1. ♘g7! f5 2. ♘e6 f4 3. ♘f3 ♔b8 4. ♘c5 ♔c8 5. ♘b7 ♔b8 6. ♘d6 ♔a7 7. ♔b5 ♔a8 8. ♔b6 ♔b8 9. ♘e5! f3 10. ♘d7+ ♔a8 11. ♘e8 f2 12. ♘c7#

The staggering knight manoeuvre

This three-step manoeuvre uses the fact that the free knight can block the corridor from two different squares to push the black king along the edge and closer to a corner.



17 ▷1

White must have the *opposition* for this idea to work.

1. ♘c3!?

The only way to keep the king out of a4, but how can white's *free knight* deprive the black king of a5, without letting it escape via a4?

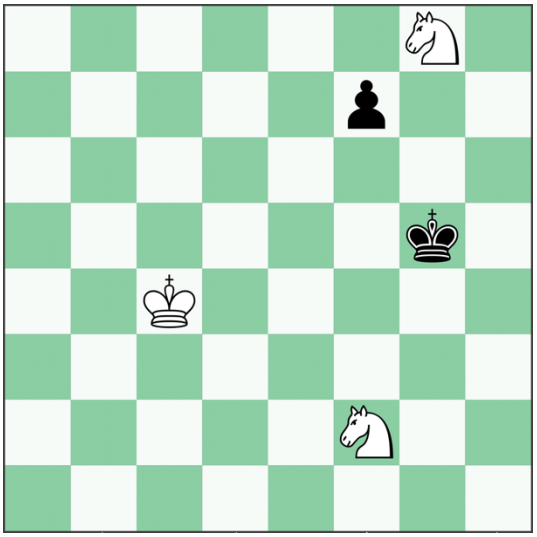
1...♔a6 2. ♘d1 ♔a5 3. ♘b2!

From this square the knight again controls a4, but additionally it can now move directly to a square that controls a5:

3...♔a6 4. ♘c4

Achieving the blockade

Sometimes it is obvious how best to achieve the blockade in the first place, but in some positions it can be very difficult to find the correct approach. Because of the *50-move rule*, it can be extremely important to get this right (diagram 18).



18 ▷1

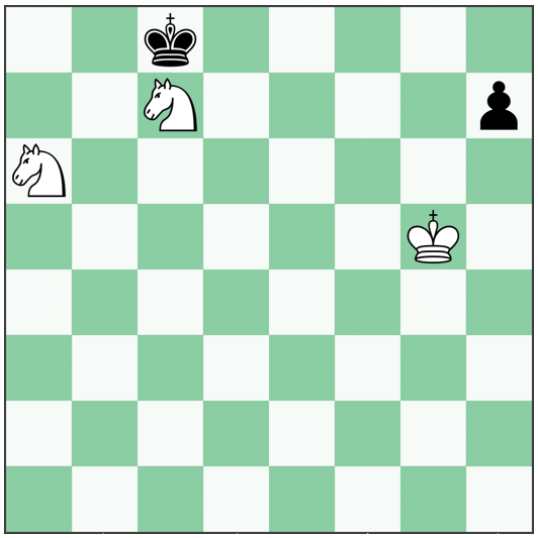
This is a particularly difficult example because of the position of the black king, and because the pawn has a choice of first moves.

1. ♘e4+

Here it is useful for the knight to give a check on its way to the blockading square.

1...♔f4 2. ♘ef6!!

This makes the difference between mate in 38 and mate in 40, which might be crucial in a real game. The point is that 2. ♘gf6?! allows black to paralyse the knights by playing 2...♔e5, forcing white to waste time using *triangulation* to push the king away from its ideal position, for example 3. ♔c5 ♔e6 4. ♔d4 ♔f5 5. ♔d5 ♔f4 6. ♘d6.

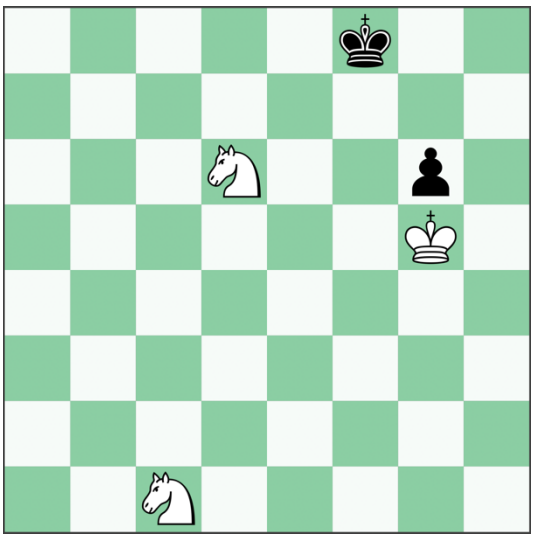


19 ▷1

With best play 1. ♘e6!? leads to a *50-move rule* draw. Note that white can't use the king as a temporary blockader, because 1. ♔h6? ♔b7! is an immediate draw.

Practical examples

Now we know how to convert the *3-square cage* to a win, let's look at a couple of real games to see how white can mate from an easy position, where the black king is already confined to a relatively small zone near a corner.



20 ▷54

J.N. Sugden – E. Green
Hastings 1971/72

The pawn is well back, and in any case we know that the king can't continue to blockade it, so the winning idea has to be...

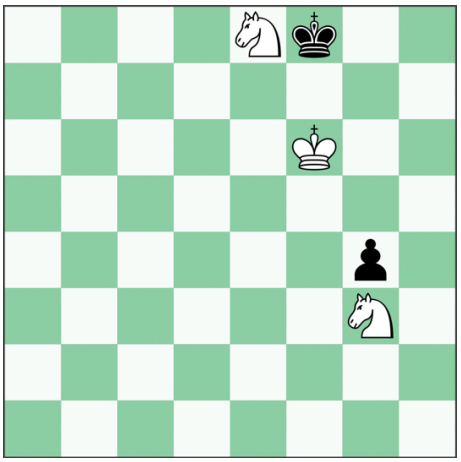
54. ♔f6!

The priority is to constrain the black king.

54...g5 55. ♘e2 g4

Black doesn't have to play this immediately, because white can't prevent it, but if he or she plays 55...♔g8 white has an important trick: 56. ♘e8! ♔f8 57. ♘g7 ♔g8 58. ♘e6! (as in the main line).

56. ♘g3 ♔g8 57. ♘e8 ♔f8



20a ▷58

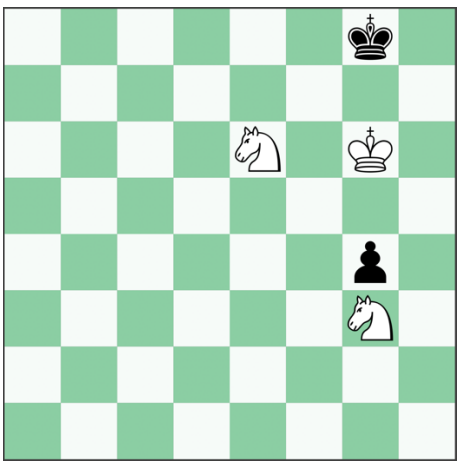
58. ♘g7

The *3-square cage*.

58...♔g8 59. ♘e6

The *magic square*.

59...♔h8 60. ♔g6 ♔g8



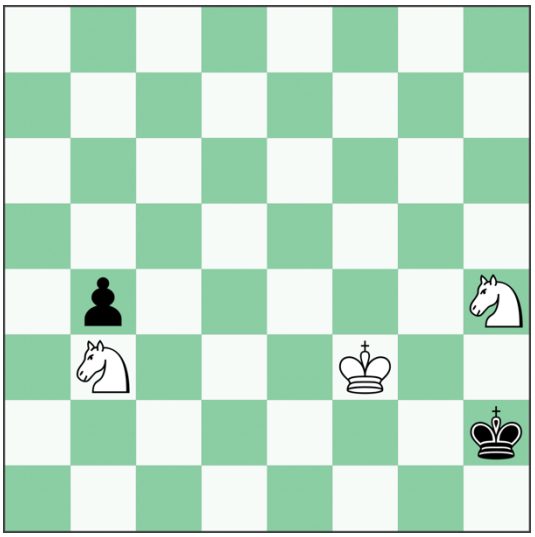
20b ▷61

The *2-square cage*.

61. ♘h5

61. ♘f5 g3 62. ♘e7+ ♔h8 63. ♘d8 g2 64. ♘f7# is also winning.

61...g3 62. ♘f6+ ♔h8 63. ♘g5 1:0



21 ▶121

Chaves – C. Rotta
Brazil 1992

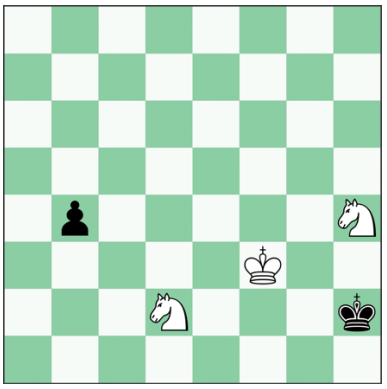
Here it is necessary to transfer the *free knight* from h4 to the *magic square* f4 (effectively analogous to e6 or f5 in diagram 10).

121...♔g1

(1) The alternative 121...♔h3 is very instructive. White wins with 122. ♘g6! The knight needs to go to f4 to trap the black king in the corner, and after 122...♔h2 123. ♘f4 we have returned to the main line.
(2) 121...♔h1 loses to 122. ♔g3 ♔g1 123. ♘d2 b3 124. ♘hf3+.

122. ♘g2

The other method is harder to find, perhaps because the white king has to move away from the corner after 122. ♘d2!? ♔h2.



analysis

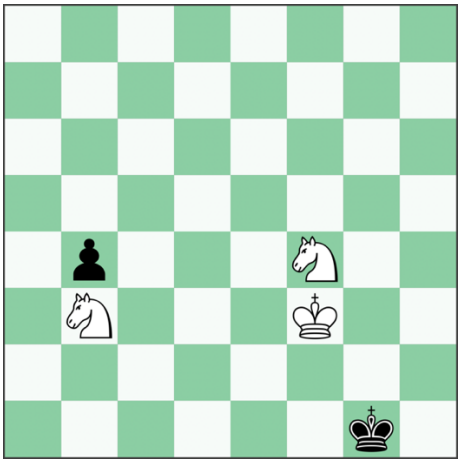
123. ♔g4 b3 [123...♔g1 124. ♔g3 b3 125. ♘hf3+ ♔h1 3. ♘e4 b2 4. ♘f2#] 124. ♘df3+ ♔h1 125. ♔h3 b2 126. ♘f5 b1♕ 127. ♘g3#.

122...♔h2

122...♔f1 123. ♘d2+ ♔g1 124. ♘f4 b3 125. ♔g3 b2 126. ♘h3+ ♔h1 127. ♘e4 b1♕ 128. ♘ef2#.

123. ♘f4 ♔g1

123...♔h1 124. ♔g3 ♔g1 125. ♘d2 is the same idea.



21a ▷124

124. ♔e2

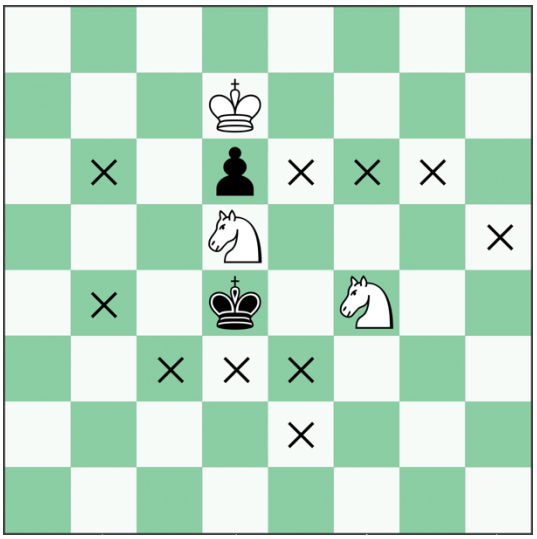
White could have simply played 124. ♘d2! (this is effectively a *2-square cage*, because there is no escape after 124...♔h2 125. ♔f2) b3 125. ♔g3! b2 126. ♘h3+ ♔h1 127. ♘e4

b1♕ 128. ♘ef2#, just as in the note above.

124...♔h1 125. ♔f2 ♔h2 126. ♘d2 ♔h1 127. ♘f1 1:0

Forcing the king to the edge

A few minutes playing an engine will convince you that a king and knight struggle to force a lone king to the edge, to put it mildly. White has two feeble factors in his or her favour: the black pawn may, at least initially, deprive its king of an escape route, and the blockading knight, although immobile, may control some useful squares (diagram 22).



22 ▷1

In this position the knights protect each other, which means the black king cannot gain time by attacking them. The "×" symbols indicate the most important squares controlled by the knights. Note that the pair of mutually-protected[4] knights creates two useful 3-square barriers that we can use to channel the black king to the side of the board. In this position, there is an obvious "hole" in the wall at b5 that needs to be filled to prevent the black king's escape.

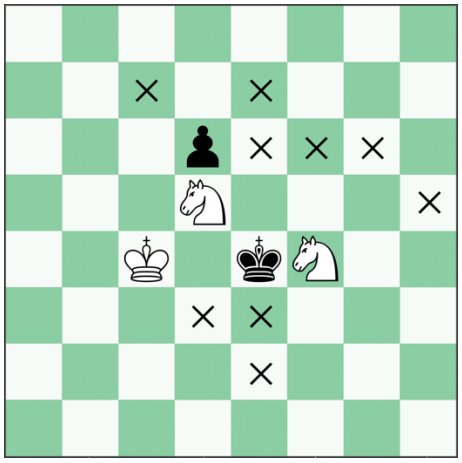
1. ♔c6!?

This is actually not the tablebase move, but we are humans, and we need to understand patterns.

1...♔c4 2. ♔b6 ♔d4

If black plays 2...♔b3, hoping to evacuate the king via e1, white has 3. ♔b5. See Line 3 (page A26).

3. ♔b5 ♔e4 4. ♔c4



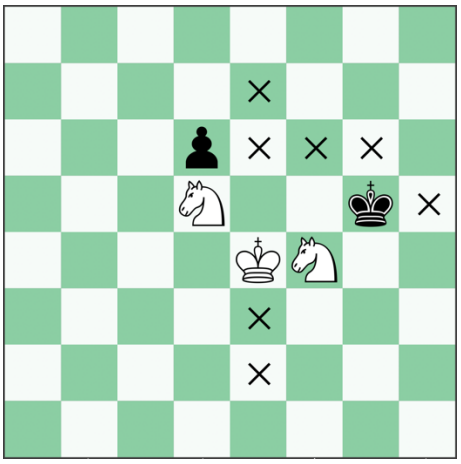
22a ▶4

4...♔e5

4...♔f3 4. ♔d4 ♔g3 5. ♔e4 ♔g4 is Line 2 (see below).

5. ♔d3 ♔f5 6. ♔d4 ♔g5 7. ♔e4

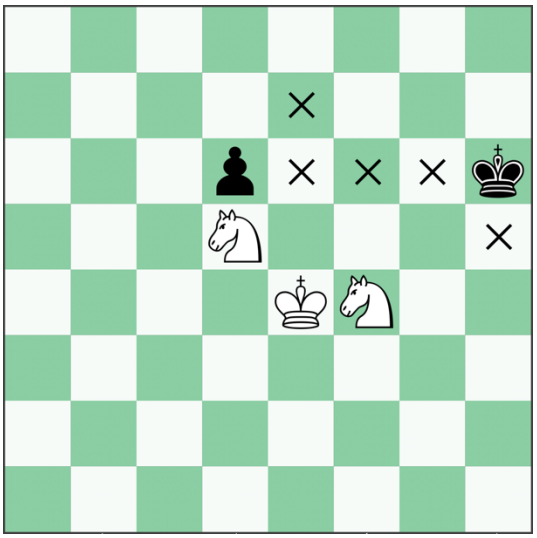
[4] "Hoof holding", as Rich Wiltshir would say.



22b ▶7

Now black has a choice of directions to send the king – 7…♔h6 (Line 1), or 7…♔g4 (Line 2).

Line 1: black plays 7…♔h6



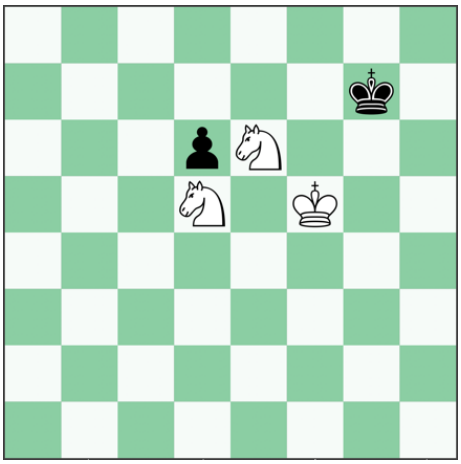
23 ▷8

This option looks unappealing for black, but still requires some skill from white.

8. ♔f5

Plugging the hole.

8…♔g7 9. ♘e6+!



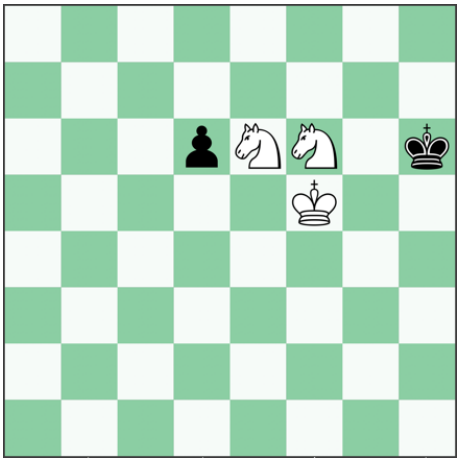
23a ▶9

9…♔h6

If 9…♔f7 white can construct an impenetrable wall from e6 to e8 with 10. ♘ec7! 10…♔g7 (anything else gives white the 3-square cage on a platter) 11. ♔g5 ♔f7 12. ♔h6! ♔g8 13. ♔g6, and the rest is easy.

10. ♘f6!

With black having voluntarily put the king on the edge, behind a 4-square wall (h4 to h7) built by the king and the free knight, and because the black pawn is so far back, white can win by temporarily releasing the blockade.



23b ▶10

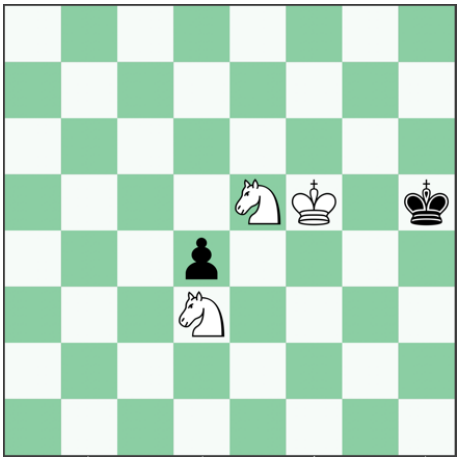
10...d5 11. ♘g4+ ♔h5

The king can't go the other way, because of 11...♔h7 12. ♔f6 d4 13. ♔f7 d3 14. ♘f8+ ♔h8 15. ♘e5 d2 16. ♘eg6#.

12. ♘f4+ ♔h4 13. ♘e5! d4

12...♔g3 13. ♘fd3 builds another wall, as well as limiting the pawn's advance.

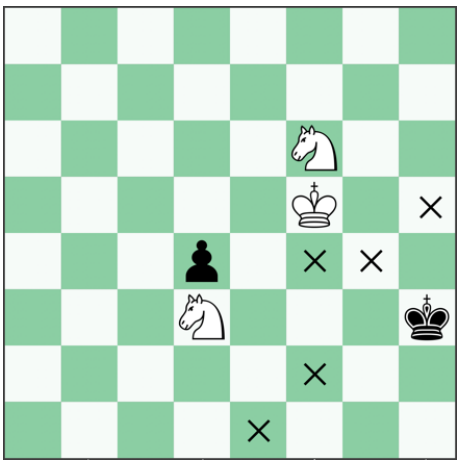
14. ♘fd3 ♔h5



23c ▷15

Now white uses *the rake* to deprive the black king of the h5 square:

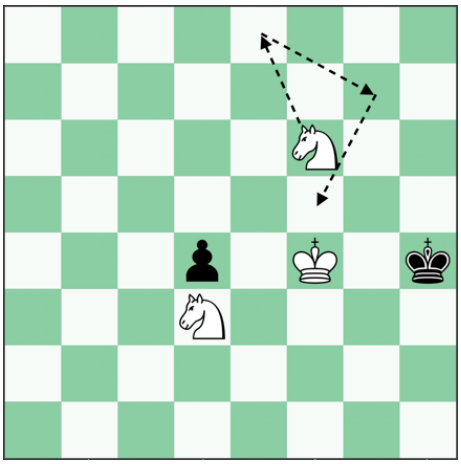
15. ♘g4! ♔h4 16. ♘f6 ♔h3



23d ▷17

The next step is critical. White wants to manoeuvre the black king into the corner, and to do this will need to set up a position with his king on f4 and black's on h4, with black to move. This requires *triangulation*. If you didn't know this you would never find white's next move:

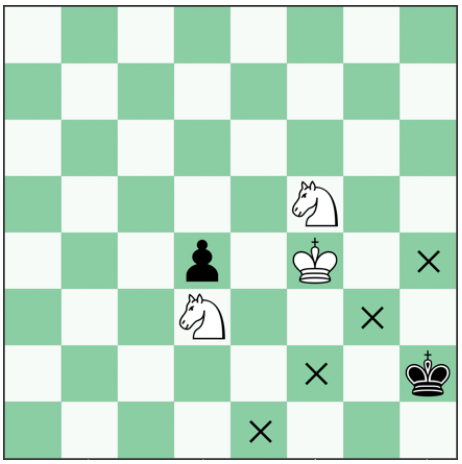
17. ♔e5! ♔g3 18. ♔e4 ♔h3 19. ♔f3 ♔h4 20. ♔f4



23e ▶21

The next step is to take h4 from the black king, using the *staggering knight manoeuvre*. This only works because on the second of the knight's three steps it stands on a square (g7) that controls h5, preventing the king's escape, and when the king is forced back to h3 it moves to a square (f5) from which it covers h4.

20...♔h3 21. ♘e8! ♔h4 22. ♘g7! ♔h3 23. ♘f5 ♔h2

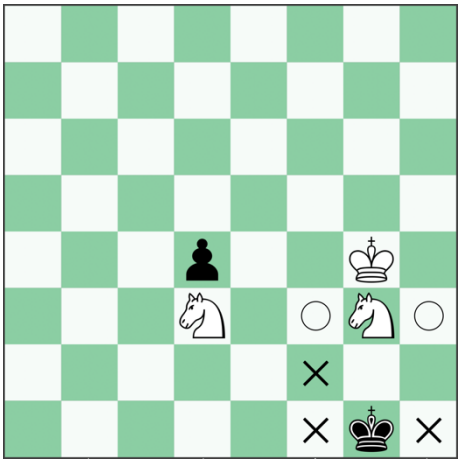


23f ▷24

Take a look at white's "wall". It looks a bit draughty, doesn't it? Still, with the king on g4 and the free knight on g3, it would be impervious, so:

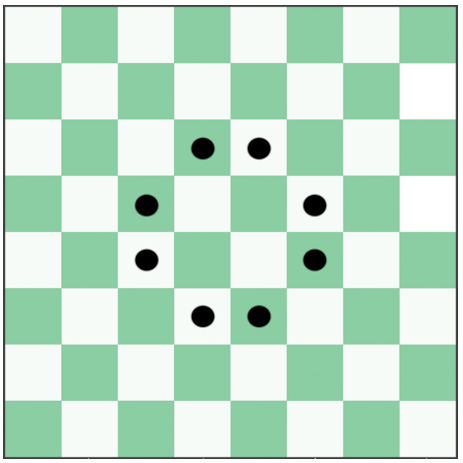
24. ♔g4 ♔g2 25. ♘g3 ♔g1

Now black's king has been limited to three squares (diagram 23g). White has to convert this corner trap into the *2-square cage*, and must of course avoid the catastrophic blunder 26. ♔h3?? stalemate.



23g ▷26

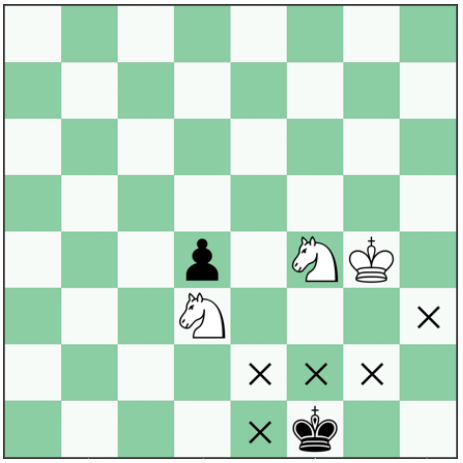
Remember the *magic squares* (diagrams 11 and 23h).



23h

One of the knights (not always the free knight) must go to one of the two appropriate critical squares in order to attain the 2-square cage. In this example, the knight obviously can't go to e3, where it could be captured by the black pawn, so it has to be f4.[5]

26. ♘e2+!? ♔f1 27. ♘ef4

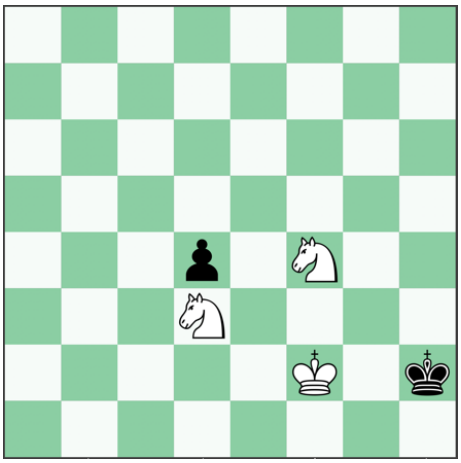


23i ▶27

[5] Actually, in this case the blockading knight could also go to f4.

We have reached the *3-square cage*.

27…♔g1 28. ♔g3 ♔f1 29. ♔f3 ♔g1 30. ♔e2 ♔h2 31. ♔f2



23j ▶31

Now it's the *2-square cage*.

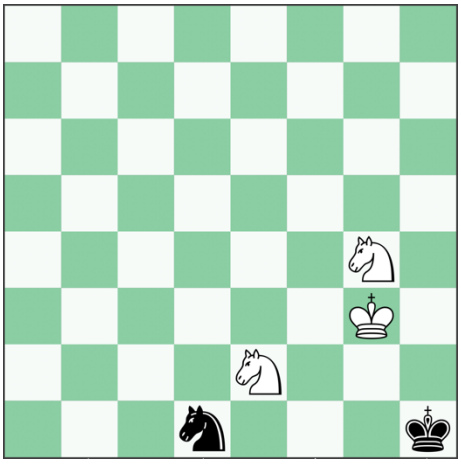
31…♔h1 32. ♘e5 d3 33. ♘g4

Immobilising the black king on h1, and forcing…

33…d2 34. ♘e2 d1♘+!?

Worth a try, because 34…d1♕ 35. ♘g3 is mate.

35. ♔g3

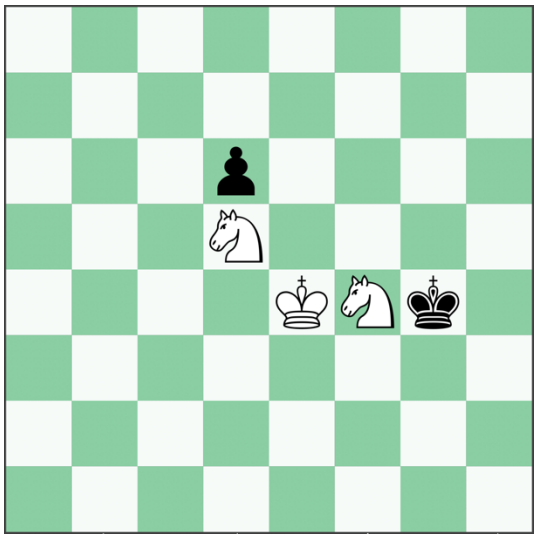


23k ▶35

Zugzwang! Black has covered the checkmate square, but the king is stalemated, so the knight has to move.

35…♘c3 36. ♘f2#

Line 2: black plays 7…♔g4



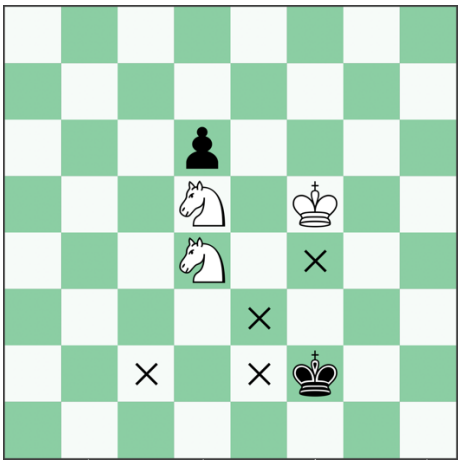
24 ▷8

In response to the 7…♔g4 attempt, white should immediately reorganise the wall by *blocking the corridor*.

8. ♘e6! ♔g3

8…♔h5 9. ♔f5 ♔h4 10. ♘d4 ♔h5 11. ♘f6+ ♔h6 12. ♘e6 reaches Line 1 (diagram 23b).

9. ♔f5 ♔f2 10. ♘d4



24a ▶10

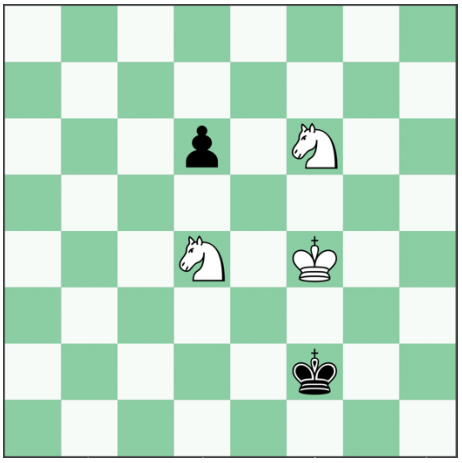
10...♔e1

10...♔f1 allows 11. ♘b4! ♔e1 12. ♔e4 ♔d2 13. ♘d5!, when the black king is permanently restricted to the edge.

11. ♔f4 ♔f2

11...♔d2 12. ♔e4.

12. ♘f6!



24b ▶12

A luxury white can afford because the d-pawn is so far up the board.

12...d5

A good practical choice, but in any case there is no way to improve the position of the black king, because 12...♔e1 13. ♔e3 ♔d1 14. ♘e4 d5 15. ♘c3+ traps it in the a1 corner.

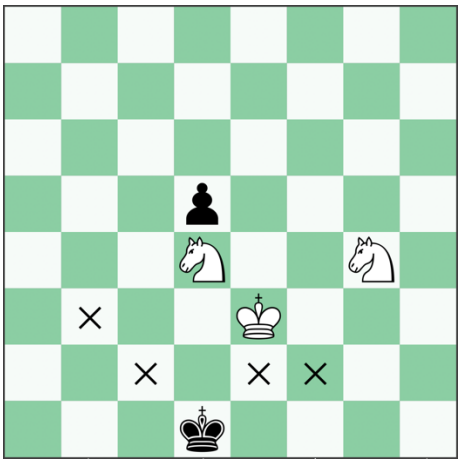
13. ♘g4+!?

The human move, although 13. ♘d7! is faster.

13...♔e1

13...♔f1 14. ♔e3 ♔e1 15. ♘f2 ♔f1 16. ♘d3! leads to the *3-square cage* in the h1 corner.

14. ♔e3 ♔d1

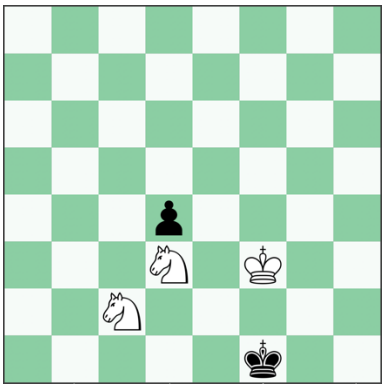


24c ▷15

Looking at the state of white's wall it is clear that the free knight needs to get to d3 to control b2 (and b4).

15. ♘f2+ ♔c1

If black tries 15...♔e1 white has time to *change the blockader* with 16. ♘c2+! ♔f1 17. ♔f3 d4 18. ♘d3.

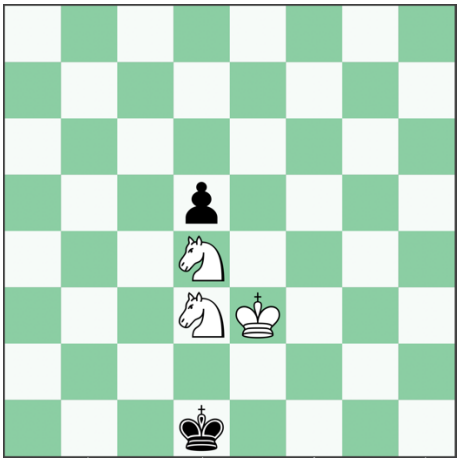


variation

This is not the usual 3-square cage, because white is using the *blockading* knight to control e1: 18…♔g1 19. ♘ce1!? ♔f1 20. ♘g2 ♔g1 21. ♘gf4, and the end is near.

16. ♘d3+ ♔d1

The alternative does not look very promising, and indeed leads to a 3-square cage after 16…♔b1 17. ♔d2 ♔a2 18. ♔c3 ♔a3 19. ♘c5!



24d ▷17

Note that if it were black to move this position would be stalemate.

17. ♘c5!

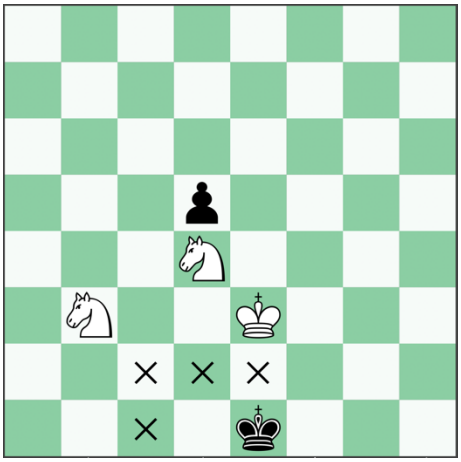
White is planning to force the king to go towards h1, reaching the finale we saw in the last section. Black will now have to choose to go one way or the other.

17…♔e1

The problem for black with 17…♔c1 18. ♔e2! is the same as we saw with 16…♔b1 – white will use simply use *the opposition* to create a 3-square cage on the a-file, for example 18…♔b2 19. ♔d2, and now 19…♔a3 20. ♔c3 or 19…♔b1 20. ♘d3.

18. ♘cb3!

White establishes a wall to force the black king towards the h1 corner.



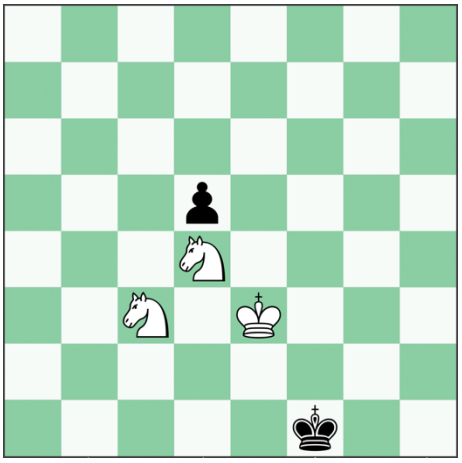
24e ▶18

If it was white to move here, he or she could use the *staggering knight manoeuvre* (♘c1-a2-c3) to shunt the black king towards h1. So let's just *triangulate* to lose a move:

18…♔d1

18…♔f1 19. ♔f3 ♔e1 20. ♔f4! ♔d1 [20…♔f2 21. ♘c1 ♔e1 22. ♔e3 transposes] 21. ♔e3 comes to exactly the same thing.

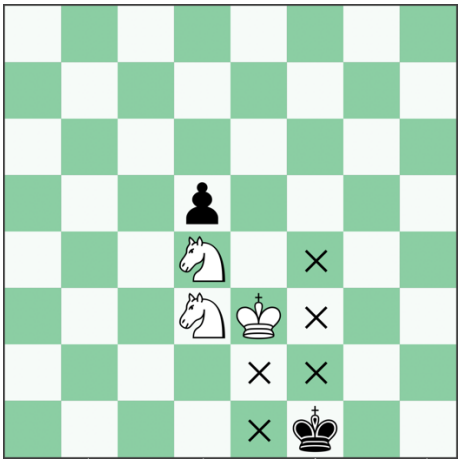
19. ♔f4 ♔e1 20. ♔f3 ♔d1 21. ♔e3 ♔e1 22. ♘c1 ♔d1 23. ♘a2 ♔e1 24. ♘c3 ♔f1



24f ▷25

Now white uses *the rake* to gain another square:

25. ♘d1 ♔e1 26. ♘f2 ♔f1 27. ♘d3

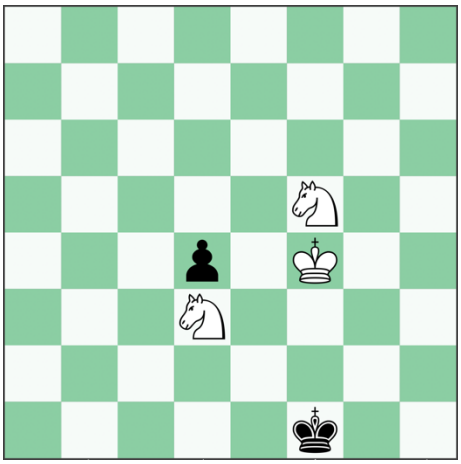


24g ▶27

This is diagram 24d, but with the black king (to move) now on f1. White should ensure that it is always possible to play ♔f3 whenever the black king goes to f1. This means keeping the knight on d3 and *changing the blockader*:

27...♔g2 28. ♘f5! d4+ 29. ♔f4 ♔f1

In the event of 29...♔h2, white wins with 30. ♔g4!, as we saw in diagram 23f.



24h ▷30

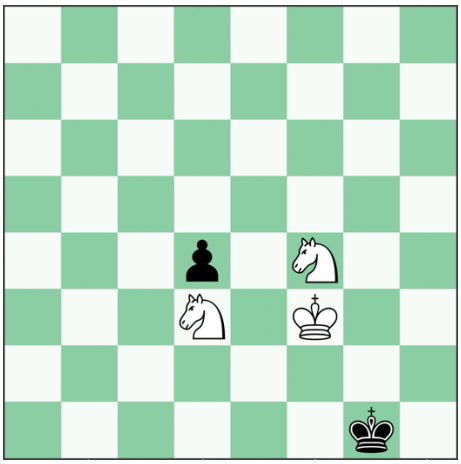
30. ♔f3!?

Not the fastest method, but easy to remember.

30...♔g1 31. ♘h4!? ♔h2

31...♔f1 32. ♘g2 ♔g1 33. ♘gf4 transposes.

32. ♘g2 ♔g1 33. ♘gf4



24i ▶33

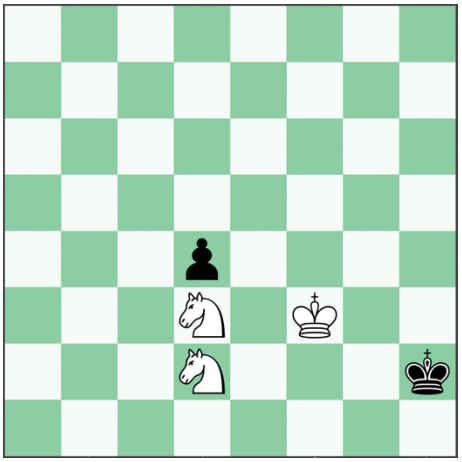
33...♔f1

33…♔h2?! 34. ♔f2 is a short cut.

34. ♘e6

White puts the free knight on d2, and sends the blockading knight to f4.

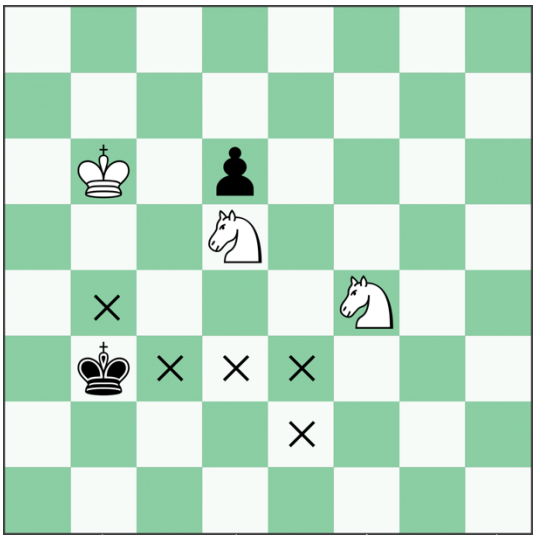
34…♔g1 35. ♘g5 ♔f1 36. ♘e4 ♔g1 37. ♘d2 ♔h2



24j ▷38

38. ♘f4! d3 39. ♔f2 ♔h1 40. ♔g3 ♔g1 41. ♘h3+ ♔h1 42. ♘e4 d2 43. ♘ef2#

Line 3: black plays 2…♔b3

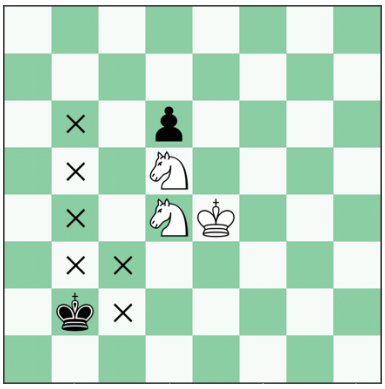


25

This is a poor relatively poor attempt, because black is voluntarily heading for the edge of the board.

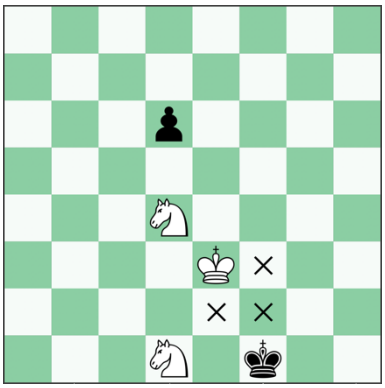
3. ♔b5 ♔c2

3…♔b2 4. ♔c4 ♔c2 5. ♔d4 ♔d2 6. ♔e4 ♔c2 [6…♔e1 7. ♔e3 is the position in diagram 25a] 7. ♘e6! ♔b2 8. ♘d4.



variation

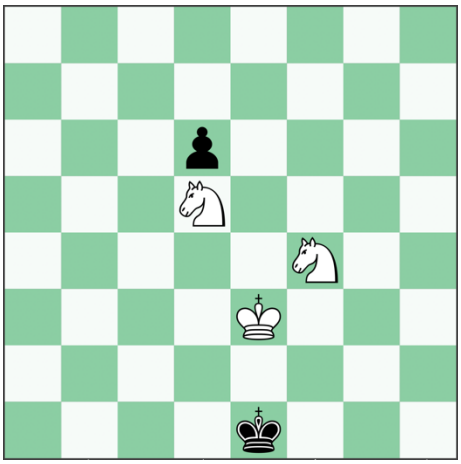
Black has no answer to the white knights' prodigious wall. 8…♔c1 9. ♔d3 ♔d1 10. ♘c3+ ♔e1 11. ♔e3 ♔f1 [11…d5 12. ♘c2+ ♔f1 13. ♔f3 d4 14. ♘e4 d3 15. ♘d2+] 12. ♘d1.



variation

12…♔g2 [12…♔e1 13. ♘f2 is *the rake*] 13. ♔f4 ♔h3 14. ♘f5! ♔g2 15. ♘g3 is winning, for example 15…d5 16. ♘b2! d4 17. ♘d3.

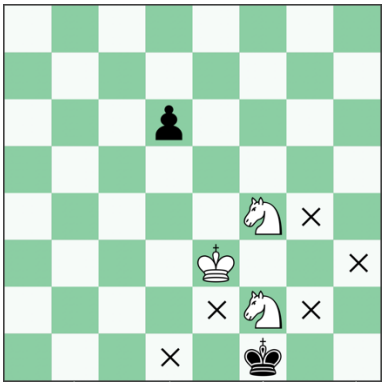
4. ♔c4 ♔d2 5. ♔d4 ♔e1 6. ♔e3



25a ▶6

6...♔d1

6...♔f1 turns out to be an even worse version of Line 2, from black's point of view: 7. ♘e2! ♔e1 [7...♔g2 8. ♘df4+! ♔f1 9. ♘d3! ♔g2 10. ♔f4] 8. ♘ec3 ♔f1 9. ♘e4 ♔e1 10. ♘f2 (you will of course recognise this as *the rake*) ♔f1 11. ♘f4!

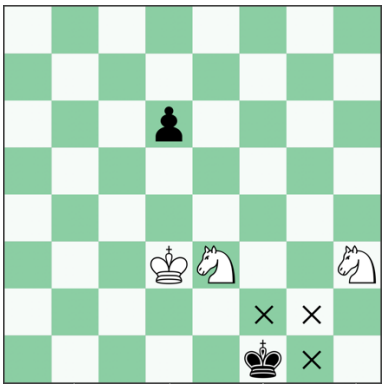


variation

The annotated diagram clearly shows that both 11...♔g1 12. ♘2d3! and 11...♔e1 12. ♘4d3+! ♔f1 13. ♔f3 permanently incarcerate the black king. Black could always try 11...d5 12. ♘2d3 d4+, but after 13. ♔f3 ♔g1 14. ♔e2! the *2-square cage* appears again.

7. ♔d3 ♔c1

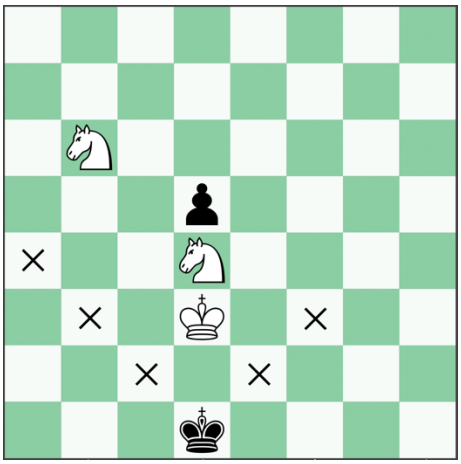
7...♔e1 8. ♘h3! (you will find this move if you remember that you can't let the king get out via f2) ♔f1 9. ♘e3+!



variation

White can let the pawn advance, because the further down the board the blockading knight stands the more effectively it can help constrain the black king. Notice how efficient the current configuration of the knights is in this respect. 9...♔e1 10. ♘f5 d5 [10...♔f1 11. ♔e3] 11. ♘d4 ♔d1 [11...♔f1 12. ♔e3 ♔g2 13. ♘f2! ♔g3 14. ♘f5+!] 12. ♘f2+! ♔e1 13. ♔e3 (*the rake* again) ♔f1 and now 14. ♘d3 wins.

8. ♘b6! d5 9. ♘e2+ ♔d1 10. ♘d4

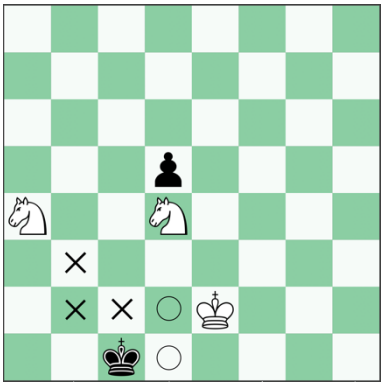


25b ▶10

The annotated diagram is sending black a clear message: go to the kingside.

10...♔e1 11. ♔e3 ♔f1

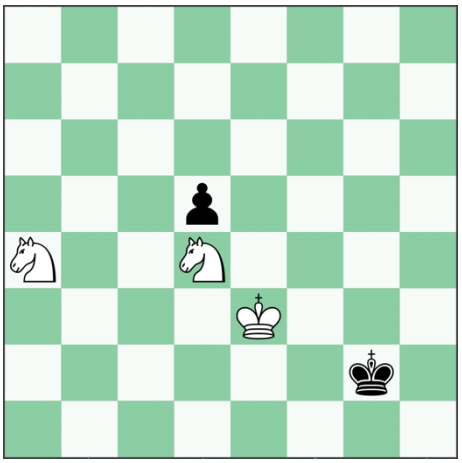
11...♔d1 12. ♘a4 ♔c1 13. ♔e2.



variation

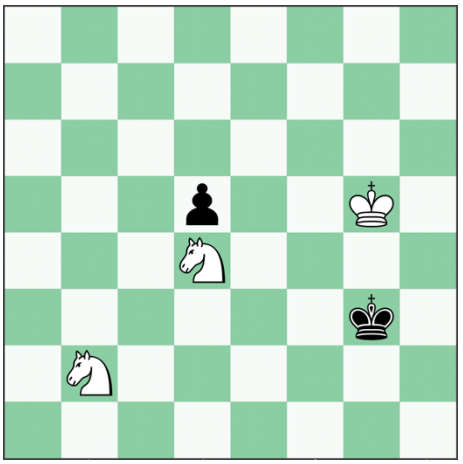
13...♔b1 14. ♔d2 ♔a2 15. ♔c3 ♔b1 [15...♔a3 16. ♘b2 ♔a2 17. ♘d3 ♔a3 18. ♘c5 is the same] 16. ♘c5 ♔a2 19. ♔b4 ♔b2 20. ♘d3+ wins easily.

12. ♘a4 ♔g2



25c ▷13

13. ♔f4 ♔h3 14. ♔g5 ♔g3 15. ♘b2!



25d ▶15

There is no way to prevent the knight from coming to d3.

15...♔f2 16. ♔f4! ♔e1 17. ♔e3 ♔f1 18. ♘d3

White wins as in Line 2 (see diagram 24g).

Test answers

X1
1. ♘f5+ ♔e6 2. ♘e3!

X2
1. ♘c4 (or 1. ♘d5) ♔g2 2. ♘e3+

X3
1...♔b7! 2. ♔d6 ♔a6!

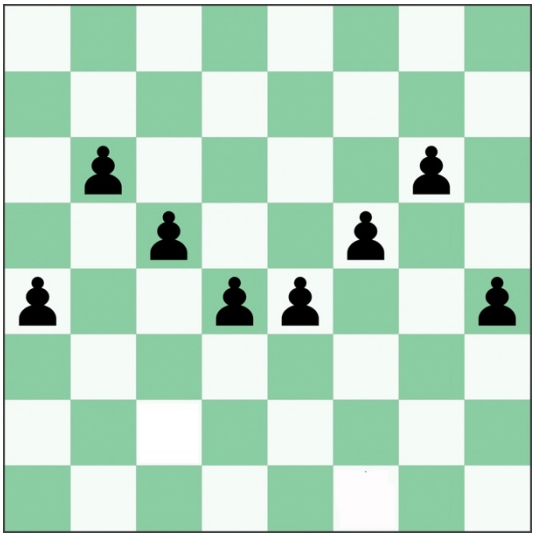
X4
1. ♔e7 ♔g7 2. ♔e8! ♔g8 3. ♘f5!

X5
1. ♘ce5+ ♔g7 2. ♘d7

Troitsky's lines

The (first) Troitsky line

Ignoring the 50-move rule, white can win if he or she can securely blockade the pawn with a knight before it has advanced past a certain square. The square depends on the file the pawn stands on. The points at which white must be able to halt the progress of the pawn were first worked out by A.A. Troitsky[6] (diagram 26).

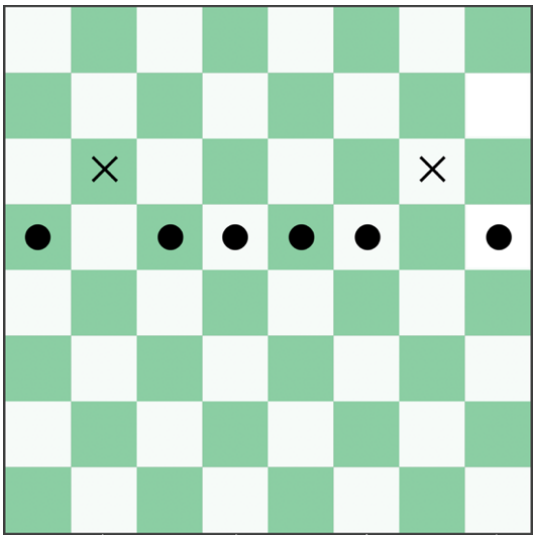


26 The (first) Troitzky line

Unfortunately for white, in over-the-board (OTB) chess, white is not absolutely guaranteed a win if the pawn is blockaded on the Troitsky line, because in some cases the process requires more than 50 moves before the blockade can be released, and the pawn advances.[7]

Conversely, black is not *guaranteed* a draw if the pawn crosses the line – it depends on the position of his or her king. But in general, it's a draw.

The second Troitsky line



27 The second Troitsky line

The problem with the 50-move rule is addressed by the second Troitsky line (diagram 27).

If a pawn standing on or behind one of the dots can be blockaded by a white knight, white can force a win within fifty moves. If the pawn can be blocked on or behind one of the squares marked with an "×", white can force a win within fifty moves more than 99 percent of the time.

[6] The name Троицкий can be transliterated in various ways. You may also see "Troickij" or "Troitzky".

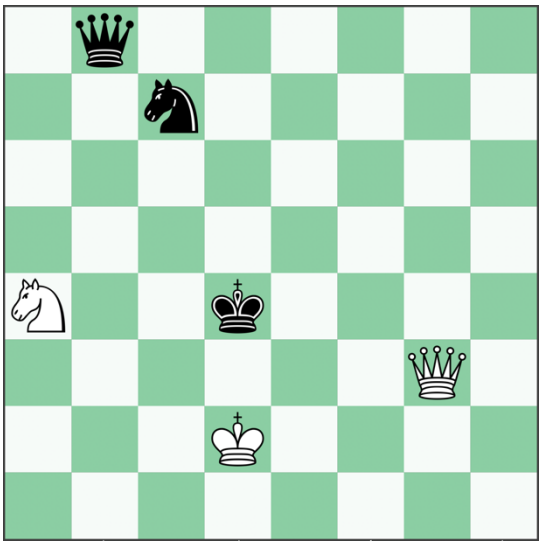
[7] Under the ICCF rules for correspondence chess, the 50-move rule does not apply when there are seven or fewer pieces remaining (the kings and any pawns are included), and white could claim a "tablebase"win.

What is the practical importance of the Troitsky lines?

I think we can conclude that for OTB chess (at any level) there is no point in trying to memorize the Troitsky diagrams. Firstly, figuring out whether or not you can force a win (or save a draw) is unlikely to be crucial to deciding whether or not to simplify to this ending. Secondly, it is memory space that could almost certainly be more advantageously used for something else.[8] Finally, as we have seen, the diagrams don't always give an accurate answer anyway.

Alexey Alexeyevich Troitsky (1866-1942)

Alexey Troitsky was undoubtedly one of the greatest ever composers of endgame studies. Here is a famous example of his art:



28 A.A. Troitsky 1909 ▷1

1. ♘b6!! ♕e8

Black has to prevent 2. ♕e3#, but 1…♕xb6 2. ♕g1+ loses the queen.

2. ♘d7!! ♔c4

The threat was 3. ♕d3#.

3. ♕xc7+ ♔b4 4. ♕c5+!? ♔b3 5. ♕c3+ ♔a4 6. ♕d4+ ♔a3 7. ♘c5 ♕b8 8. ♕a1+ ♔b4 9. ♘a6+

White wins the black queen and the game.

Troitsky died of starvation during the siege of Leningrad in the Second World War. Although many of his letters have been preserved, it seems that none of his unpublished studies survived.

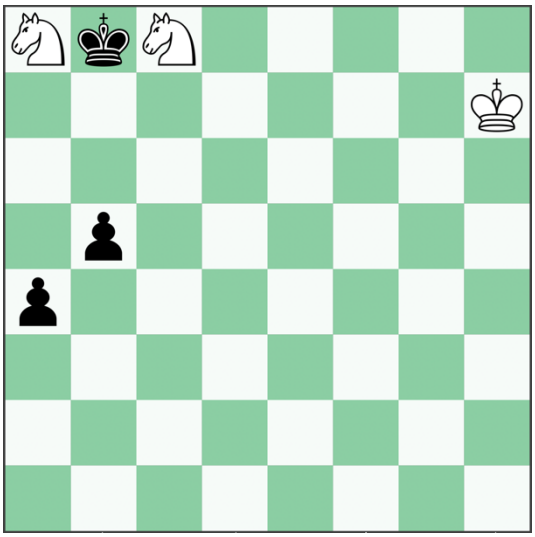
[8] Where *did* I leave the spare batteries for the remote control?

Two or more pawns

If black has two or more pawns, then white has to choose one to *blockade*. The best pawn will be the one that stands the furthest back, irrespective of which file it stands on, because the second Troitsky line is essentially horizontal (diagram 27). The position of the black king may complicate matters, because the blockading knight must always stand on a square that it cannot be driven away from (see diagram 30). Take as long as you want to capture the other pawns – you are unlikely to be troubled by the *50-move rule* during this phase. White should be cautious, however: all three results are possible.

Two connected pawns

Connected pawns give black the best chance of winning.

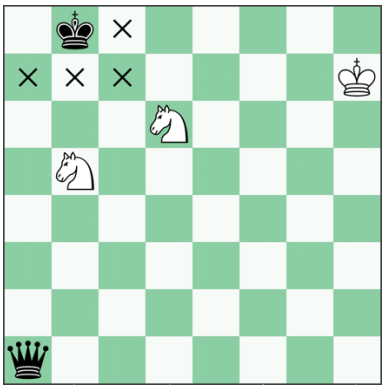


29 B. Duta 1972 ▷1

It should be very obvious that this is a composed study, not a position from a game. White has a very narrow path to a draw:

1. ♘d6 b4

1…a3 2. ♘c7!! a2 [2…♔xc7 3. ♘xb5+ and 2…b4 3. ♘a6+ draw immediately] 3. ♘cxb5 a1♕.



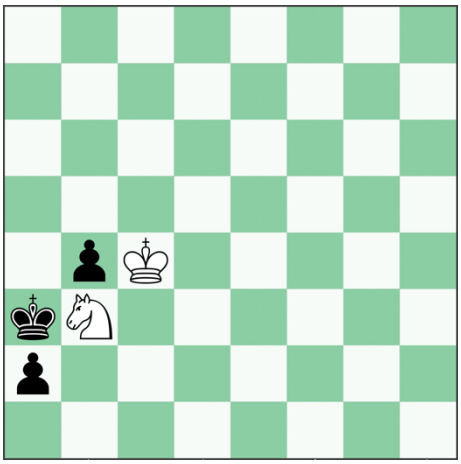
variation

This is a draw, because the only way the black king can escape from its prison (a8 and b8) is if the queen can stalemate the white king, forcing a knight to move. As long as white does not allow his king to be trapped on the h-file (when black can use zugzwang to force it to h8) this will never happen (4. ♔g6!). This is not the standard method of drawing with two knights against queen! (See page A36 for the main idea.)

2. ♘c4 a3

2…b3 3. ♘ab6 and 2…♔xa8 3. ♘b6+ are obvious draws, but 2…♔a7 3. ♘c7! and 2…♔b7 3. ♘ab6 a3 4. ♘d7 require a little thought.

3. ♘d2 a2 4. ♘b3 ♔xa8 5. ♔g7 ♔b7 6. ♔f7 ♔c6 7. ♔e6 ♔b5 8. ♔d5 ♔a4 9. ♔c4 ♔a3



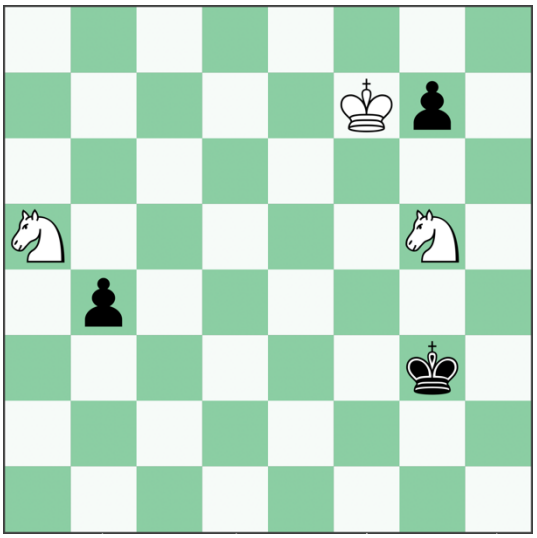
29a ▷10

10. ♘d4!

The threat of 11. ♘c2 forces a draw.

10...♔b2 11. ♘b3

Two isolated pawns



30 B. Soukup-Bardon 1966 ▷1

This study illustrates an extremely important point about the *blockade*. The knight can only do its job if it stands on a square where it is safe from the black king, or can be protected, at least until the king can be forced away.

1. ♔g6!

A temporary blockade with the king rarely works, but it is needed here, because 1. ♘c4? g6 2. ♔f6 ♔f4 is a draw – white can't move his king, and if he moves the knight from g5 black can just run the g-pawn.

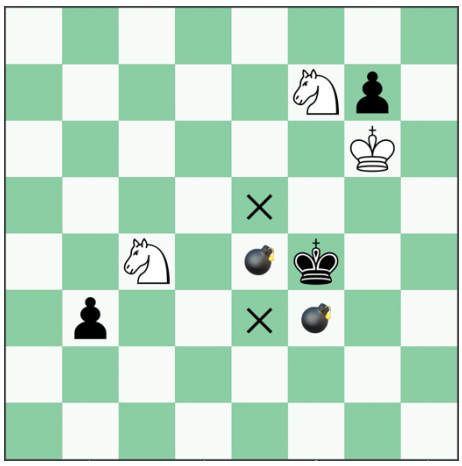
1...♔f4 2. ♘c4

2. ♘e6+? ♔e5 3. ♘c7 ♔d4 and now white will have to give up a knight for the b-pawn.

2...♔g3 3. ♘e5 b3

There is no path to the queenside for the black king: 3...♔g2 4. ♘e4 ♔f1 5. ♘c6 b3 6. ♘d2+ wins the b-pawn.

4. ♘c4 ♔f4 5. ♘f7



30a ▶5

5...♔g4

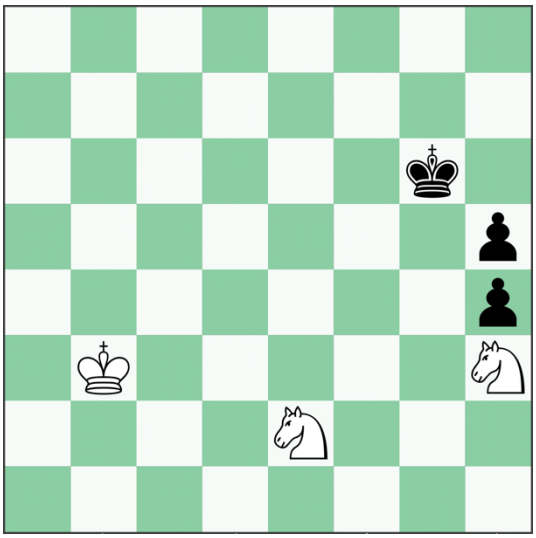
The king can't go to e3 or e5, and e4 and f3 are "mined", because of 6. ♘d2+, winning the b-pawn.

6. ♘d2 b2 7. ♘e5+ ♔f4 8. ♘ec4

White picks up the b-pawn and puts a knight on g5.

Doubled pawns

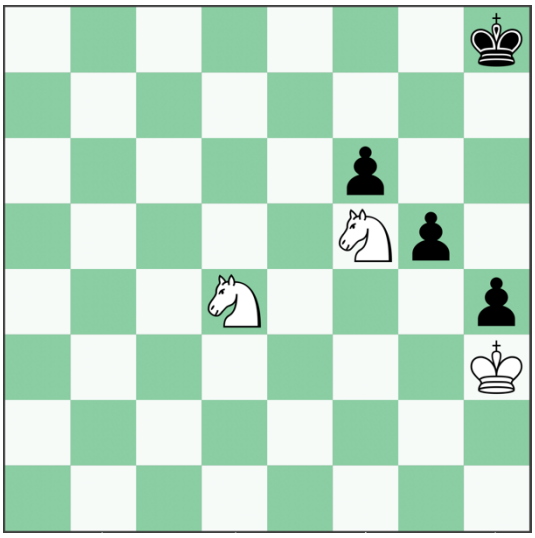
A second, doubled, black pawn may actually help white.



31 ▷1

White is winning in this position, but if you remove the h5 pawn black has a draw by the 50-move rule.

Three pawns



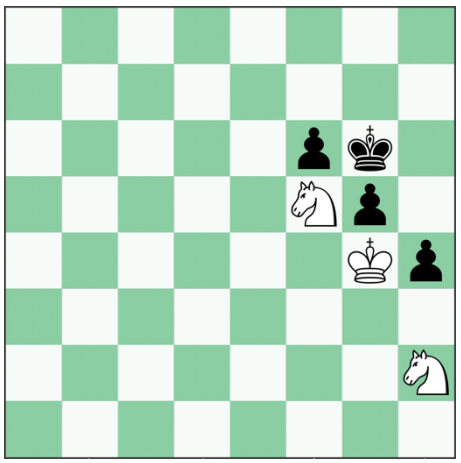
32 A.A. Troitsky 1930 ▷1

As Troitsky points out in a letter dated 9 December 1930,[9] white needs to blockade the h-pawn with the d4-knight, then win the other two pawns. In fact, in this and the next example (diagram 33) white's plans are thwarted (in over-the-board chess) by the 50-move rule, but for practical purposes these positions are still interesting.

1. ♘f3

Why blockade the h-pawn? It's simple really. Black's pawn chain can only be attacked at its base (unless black rashly advances any of the pawns), and when white has captured two pawns only the h-pawn will remain.

1...♔h7 2. ♘h2 ♔g6 3. ♔g4



32a ▶3

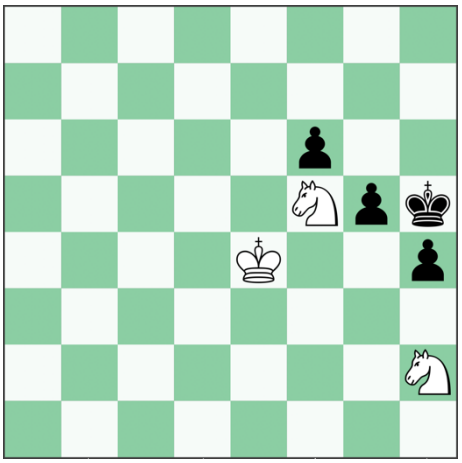
3...♔f7!

3...h3? loses. White plays 4. ♘f1! (this is not the only winning move, but it is the easiest to understand) ♔f7 5.

[9] *Shakhmaty v SSSR* 1980; (2): 27-28

♔xh3 and can now blockade one of the less advanced pawns.

4. ♔f3 ♔g6 5. ♔e4 ♔h5



32b ▷6

6. ♘f3

6. ♔d5? g4 forces white to give up one of the knights to prevent promotion.

6...♔g6 7. ♘g1

7. ♘h2 repeats moves.

7...♔h5 8. ♔f3 ♔g6! 9. ♔g4

This is the same position as diagram 31a, except the knight is now on g1 instead of h2.

9...♔f7 10. ♘d4 ♔g6 11. ♘h3

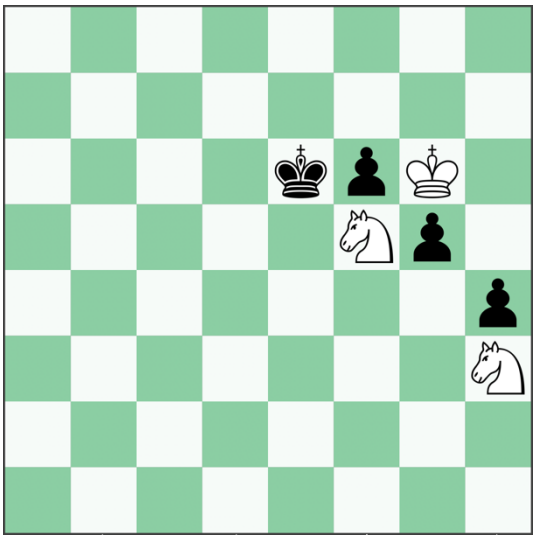
White can now advance his king.

11...♔f7 12. ♔f5 ♔g7 13. ♘e6+ ♔f7 14. ♘c5

Black has no way to defend f6.

14...♔g7 15. ♘e4 ♔f7 16. ♘xf6

Now white has won the f-pawn, the g-pawn will fall next move.

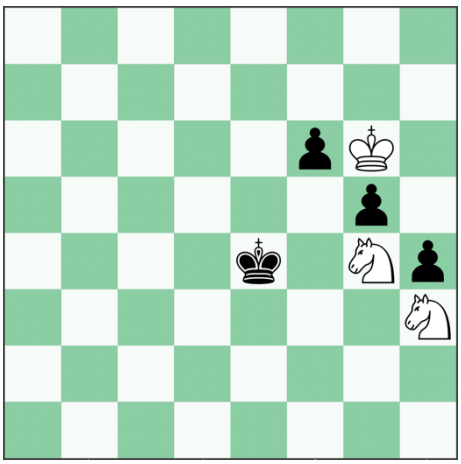


33 A.A. Troitsky 1930 ▷1

1. ♘h6

Troitsky correctly noted that 1. ♘e3 is also good. Black to move could draw with 1...♔e5 or 1...g4.

1...♔e5 2. ♘g4+ ♔e4!



33a ▷3

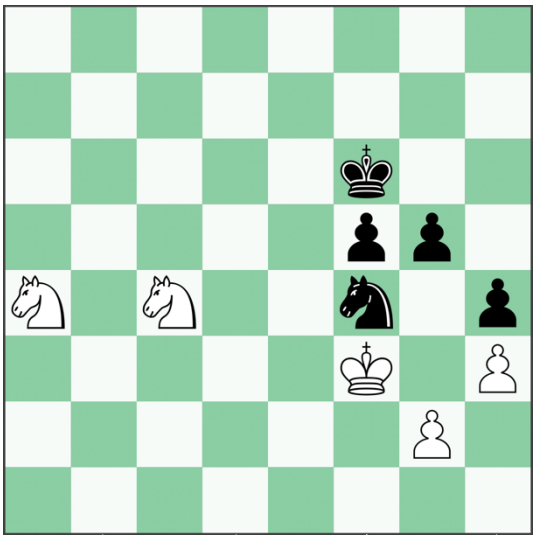
3. ♔xf6

Troitsky's analysis is inaccurate here, because his recommended move 3. ♘xf6+ allows black a forced draw (without even needing the 50-move rule) after 3...♔f3! 4. ♘xg5+ ♔g3

5. ♘ge4+ ♔g2, when white has no way to blockade the pawn.

3...♔f3 4. ♔xg5

White has blockaded the pawn on h4, but, as we know from the second Troitsky line (diagram 27), this is not enough to win when the 50-move rule is applying.



34 ▶69

M. Taimanov – B. Milić

Belgrade (Yugoslavia-USSR match) 1956

In desperation, black looks to get rid of white's remaining pawns.

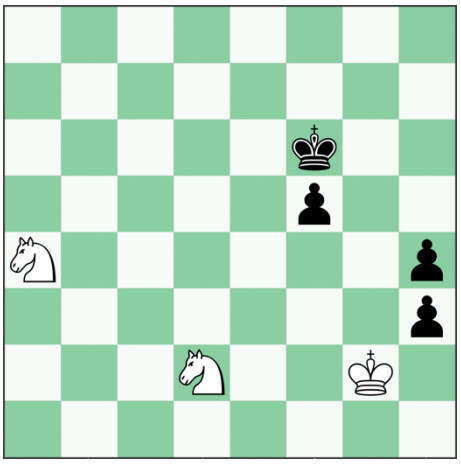
69...♘xg2?

69...♘xh3+! 70. gxh3 g4+ would have been a better method.

70. ♔xg2 g4 71. ♘d2!?

71. hxg4 fxg4!? is a draw (this is generally the case when black has connected pawns on the fifth rank) but so is 71...h3+!, of course.

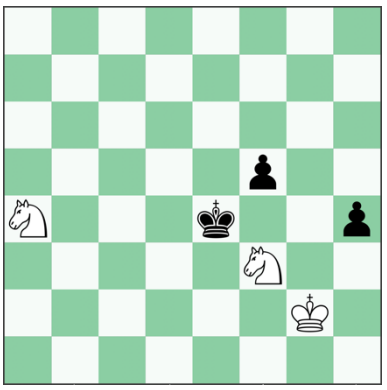
71...gxh3+



34a ▷72

72. ♔h2

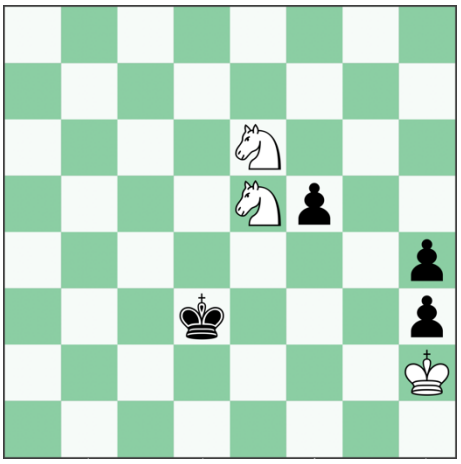
An interesting choice. Another way to keep a chance of winning would have been 72. ♔xh3 ♔e5 73. ♘f3+ ♔e4 74. ♔g2.



variation

74...h3+ 75. ♔f2 h2 76. ♘xh2 f4 77. ♘f3. Taimanov presumably rejected the immediate capture in favour of a future ♘xh3, thereby guaranteeing that the rear h-pawn could advance no further than h4. The problem with either capture is that, with best play, black has a draw under the 50-move rule.

72...♔e5 73. ♘c5 ♔d4 74. ♘e6+ ♔e3 75. ♘c4+ ♔d3 76. ♘e5+?!

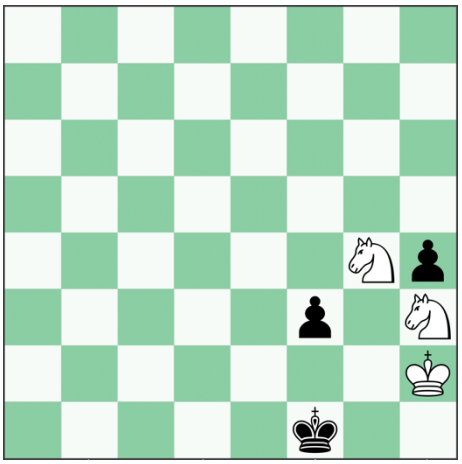


34b ▶76

76...♔e4!

Now black doesn't even need the 50-move rule.

77. ♘f7 f4 78. ♘eg5+ ♔e3! 79. ♘xh3 f3! 80. ♘e5 ♔e2 81. ♘g4 ♔f1

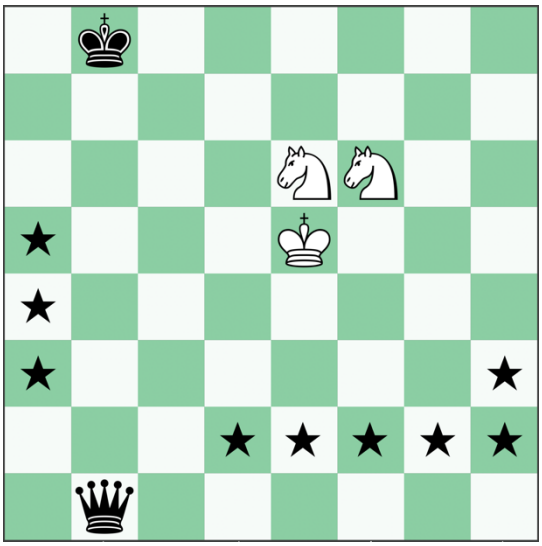


34c ▷85

White's king is restricted to the squares h2, h1 and g1, because the *free knight* (on g4) cannot force the black king off the f1, e1 and e2 squares. The *blockading knight* (on h3) cannot move at all, because of …h3. A draw was agreed after a few more moves.

Black promotes a pawn

There are, of course, some positions where black can promote. In this case white has a simple drawing technique, easy enough to be worth remembering, even though this material combination will probably never occur in any of your games.



35 ▷1

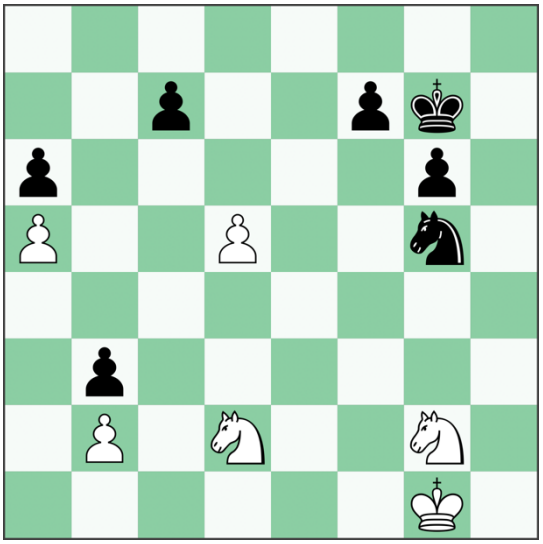
Black has just promoted on b1. White's knights are in the ideal configuration, not protecting each other, but instead standing side by side. Because the king is close to the knights black has no way to win. (In fact, white only loses if the king stands on one of the squares marked with a "★".) White has various ways to proceed. One line could be:

1. ♔d6 ♕b5 2. ♔e7 ♔c8 3. ♔f7 ♕b7+ 4. ♔g6

Black is making no progress.

Simplifying to two knights versus pawn(s)

Most positions with two knights versus pawn(s) arise from endings with a single rook, bishop or knight against the two knights. Knowing when and when not to simplify to this ending may be very important.



36 ▶45

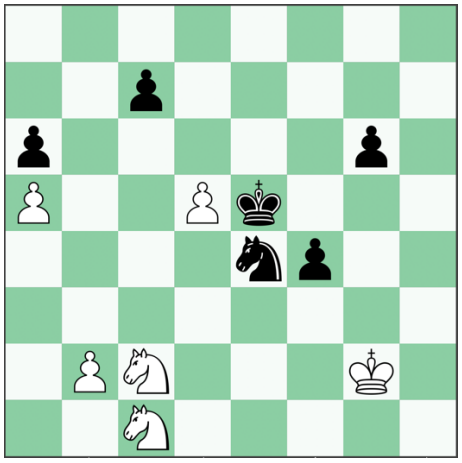
S. Karjakin – S. Sevian
Isle of Man 2018

Five moves earlier both sides had a queen and a rook, and endgame theory was probably far from the players' minds. Now the smoke of battle has cleared, and black has a problem because of his weak pawns on b3 and a6. On the other hand, white's pawns don't look secure either, and if black can give up his knight to capture them all, he will have a good chance of a draw.

45...♔f6! 46. ♘xb3 ♘e4!

Black prevents 47. ♘c5 and restricts the approach of the white king.

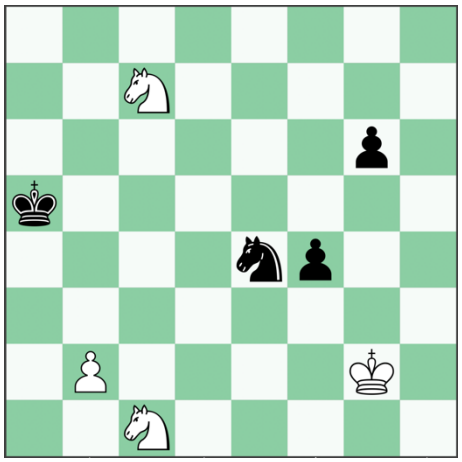
47. ♘e3 ♔e5 48. ♔g2 f5 49. ♘c1 f4 50. ♘c2



36a ▶51

Now comes a sequence of moves that clarifies black's drawing plan.

50...♔xd5 51. ♘b4+ ♔c4 52. ♘xa6 ♔b5 53. ♘xc7+ ♔xa5



36b ▷54

White might think "I can never promote the b-pawn, so my only hope of winning is to reach two

knights versus pawn. To do this, I will need to force black to give up the knight for the b-pawn. This means that black cannot be allowed to attack the pawn with both the king and the knight. I currently have an effective barrier along the third rank, and this prevents the approach of the black king. If the black threatens to attack the pawn with the knight, I can play ♘d3, and then push b3, with another barrier, this time on the fourth rank. So why not leave the pawn where it is and blockade one of the kingside pawns as soon as possible? "

The player of the black pieces might think "It is going to be very difficult for white to stop me from sacrificing my knight for the b-pawn, so why don't I forget about it and push my f- and g-pawns as quickly as possible?"

The objective truth is that this is a draw, but white's only hope of a win is if black mishandles the defence of two knights versus pawn.

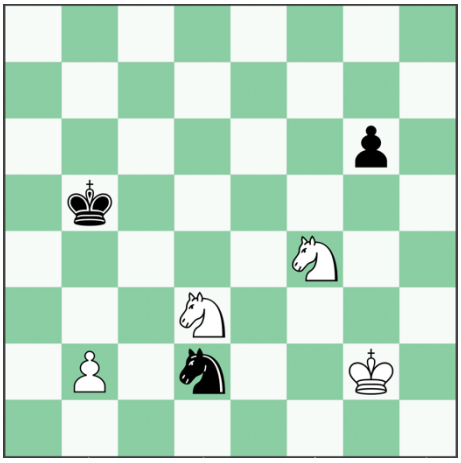
54. ♘d3!?

54. ♘e6 runs into black's main plan: 54...g5 55. ♔f3 ♘d2+ 56. ♔e2 ♘c4 57. b3 f3+ 58. ♔xf3 g4+, with an easy draw.

54...♘d2 55. ♘e6 ♔b5

55...g5 also draws, but requires very accurate play from black: 56. ♘xg5 ♘c4! 57. ♘f3! ♔a4! (...♘xb2 on this move or the next draws, but only because of the 50-move rule) 58. ♔f2 ♔b3 59. ♘d4+ ♔a2 60. b3 ♘d2 61. b4 ♔a3 62. b5 ♘c4 63. ♘c5 ♔b4, and the b-pawn eventually falls.

56. ♘exf4

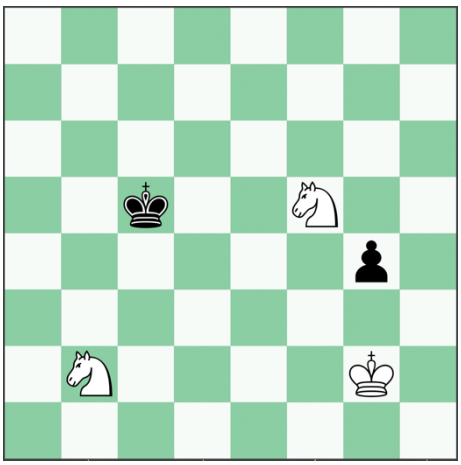


36c ▶56

56...♘c4

56...g5 looks to be an easier route: 57. ♘e2 ♘c4 58. b3 ♘a5 59. b4 ♘c6 60. ♘c3+ ♔b6 61. b5 ♘d4, and black captures the pawn.

57. ♘e6 ♘xb2 58. ♘xb2 g5 59. ♘d4+ ♔c5 60. ♘f5 g4

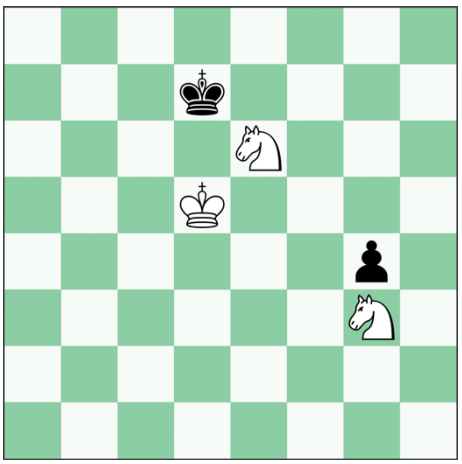


36d ▷59

The pawn is comfortably past the Troitsky lines, and black can draw, even without the help of the 50-move rule. All he has to remember is to retreat towards a8. If you look at the

mating configurations on page A7 you will see that the white king stands on b6 (in which case …g1♕ will come with check) or on c7 (when a queen on g1 prevents ♘b6#). The only exception is diagram 5b, but this requires the blockading knight to be very close. The black king is going to be safe on a8.

61. ♘g3 ♔d4 62. ♔f2 ♔c3 63. ♘d1+ ♔d3 64. ♔e1 ♔c4 65. ♔d2 ♔d4 66. ♘c3 ♔c4 67. ♘ce2 ♔d5 68. ♔c3 ♔c5 69. ♘f4 ♔c6 70. ♔c4 ♔d6 71. ♘d3 ♔c6 72. ♘e5+ ♔d6 73. ♔d4 ♔e6 74. ♘c4 ♔f6 75. ♘e3 ♔e6 76. ♘ef5 ♔d7 77. ♔d5 ♔c7 78. ♘d4 ♔d7 79. ♘e6



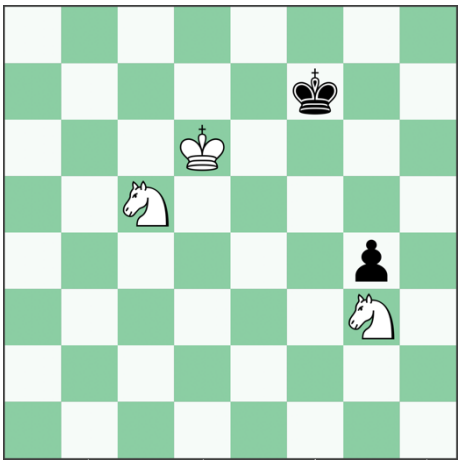
36e ▶79

So far, so good. Now black can safely play 79…♔c8, for the reasons explained above. His next move, however, makes things slightly more difficult:

79…♔e7?! 80. ♘c5!

Psychologically powerful. White is practically daring black to go to d8.

80…♔f7 81. ♔d6!

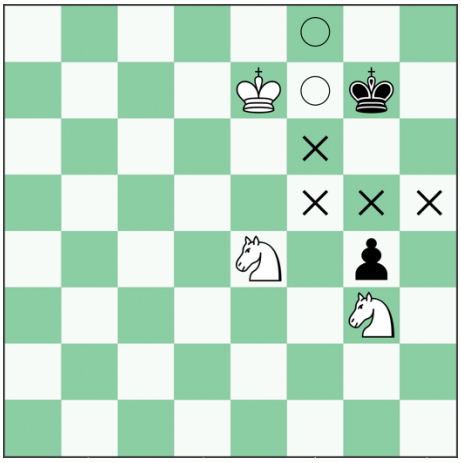


36f ▶81

81…♔f6??

81…♔e8! was the only drawing move. If you know that a8 is the correct corner you should have no trouble defending this ending, but now white can build a wall.

82. ♘ce4+! ♔f7 83. ♔d7! ♔f8 84. ♘d6 ♔g7 85. ♔e6 ♔g6 86. ♘de4 ♔g7 87. ♔e7



36g ▶88

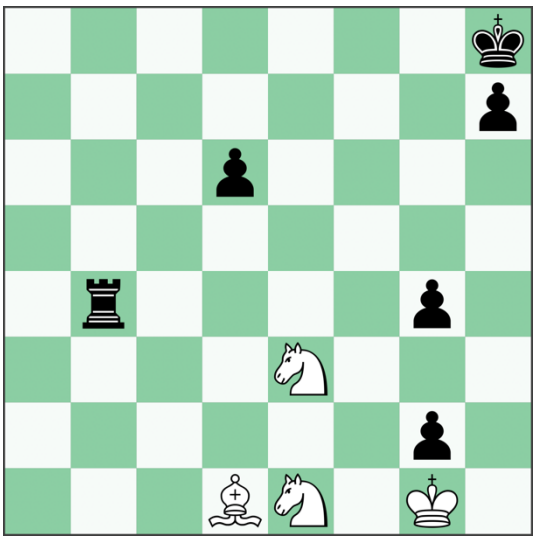
88…♔g8

If 87…♔g6 the wall allows white to play 88. ♔f8!

88. ♔f6

In fact white could have won even faster with 88. ♘f5 g3 89. ♘f6+ ♔h8 90. ♔f8 g2 91. ♘h6 and 92. ♘f7#.

88...♔h7 89. ♘f5 ♔g8 90. ♔e7 g3 91. ♘f6+ ♔h8 92. ♔f8 1:0



37 ▷44

A. Karpov – G. Kasparov
Tilburg 1991

Although less common, many other paths may lead to two knights versus pawns.

44. ♗xg4! h5

Kasparov declines to simplify with 44... ♖xg4?? This would have lost, although after 45. ♘xg4 h5 46. ♘f6!? h4 47. ♘d5! ♔g7 48. ♘f3 ♔f7 49. ♘g5+ ♔g6 50. ♘h3 ♔f5 51. ♔xg2 ♔e4 white has to find the "only" move 52. ♘hf4!

45. ♗f3

Karpov was never going to fall for 45. ♗xh5?? ♖h4 46. ♗e2 ♖h1+ 47. ♔xg2 ♖xe1, with a draw.

45...d5

This move and black's next signal his intention to keep open the idea of sacrificing rook for bishop and reaching two knights versus pawn.

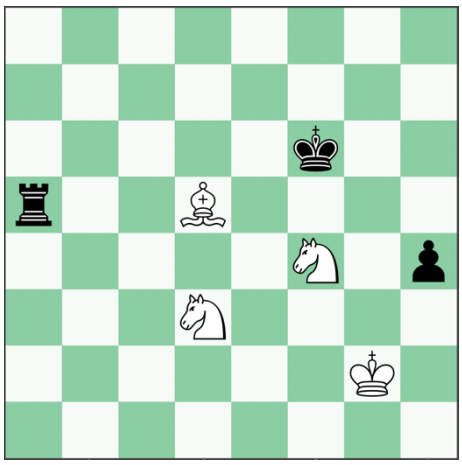
46. ♘3xg2

46. ♘xd5? ♖b1 is a draw, and 46. ♗xd5 is similar to the game.

46...h4 47. ♘d3 ♖a4 48. ♘gf4 ♔g7 49. ♔g2 ♔f6

As Speelman[10] points out, white has to decide how many pawns to take. If he leaves the d-pawn, black can't sacrifice the rook for the bishop, but this requires a knight to blockade the pawn, and a piece to protect the knight. Karpov goes instead for three minor pieces versus rook.

50. ♗xd5 ♖a5

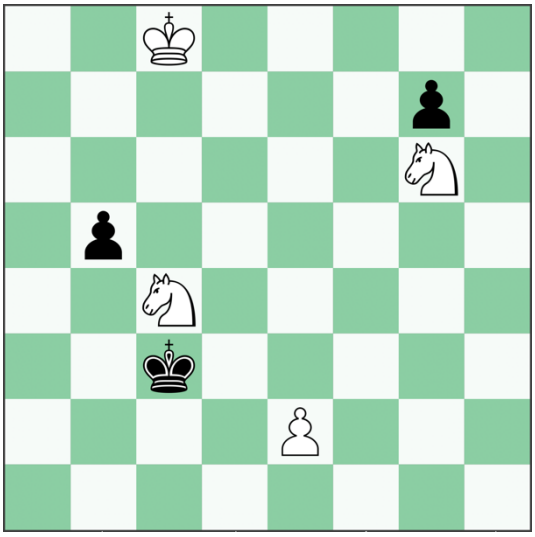


37a ▷51

51. ♗c6

[10] *New in Chess* 1991; (8): 25-29

White carefully avoided the drawn endgame after 51. ♔h3 ♖xd5!, but was unable to win with bishop and two knights against rook. Essentially, as long as black's king heads to the corner of the opposite colour to the bishop the draw is guaranteed.



38 B. Soukup-Bardon 1966 ▷1

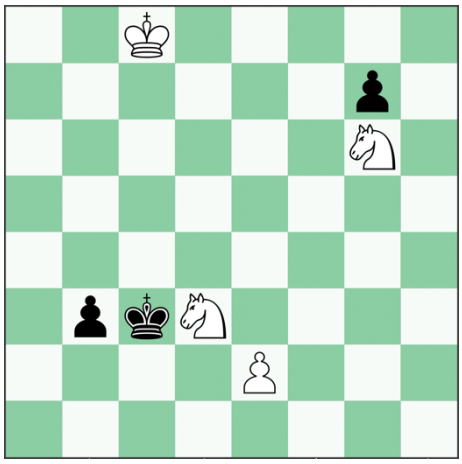
Even in deceptively simple positions white needs to be careful. In this study any sensible move by the c4-knight maintains the win.

1. ♘ce5!?

(1) The composition was based on the mistaken idea that white's only winning move was 1. e4? In fact, this leads to a draw after either capture of the knight, for example 1…bxc4 2. e5 ♔d2! 3. ♘h4!? c3 4. ♘f3+ ♔e2! (Soukup-Bardon considered only 4…♔e3?) 5. ♘d4+ ♔d3! 6. ♘b3 ♔c4! 7. ♘c1 ♔d5, or 1…♔xc4 2. e5 b4 3. e6 b3 4. ♘e5+ ♔d5! (4…♔c3? 5. ♘d3!! was the composer's idea) 5. e7 b2 6. e8♕ b1♕.

(2) Even 1. ♘b6?! wins: 1…♔d4 2. ♔d7 ♔e3 3. ♔c6, and now both 3…♔xe2 4. ♔xb5 and 3…b4 4. ♘d5+ lead to two knights versus pawn positions that are very winnable for white.

1…b4 2. ♘d3 b3



38a ▷3

3. ♘c5

Even the preposterous 3. ♔d8?! wins here, but Soukup-Bardon analyses only 3. ♘gf4?, when black can draw with 3…♔d2! [not the composer's 3…g5, when white has 4. ♘h5!! ♔d4 5. ♘g3 (building a wall) ♔e3 6. ♔d7 b2 7. ♘xb2 ♔f2 8. e4] 4. e4 g5!

3…♔d2

3…b2 allows 4. ♘a4+, and 3…♔c2 4. ♘xb3 is also easily winning for white.

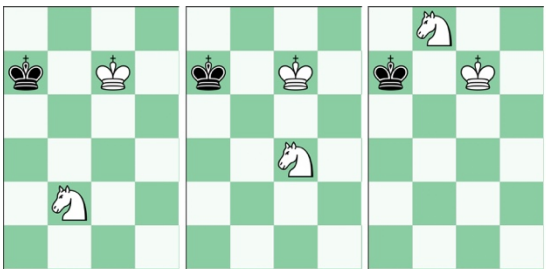
4. ♘xb3+!! ♔xe2

Now it's mate in 67 with two knights versus pawn. White will, therefore, need to restart the 50-move clock at the appropriate time.

Glossary

2-square cages

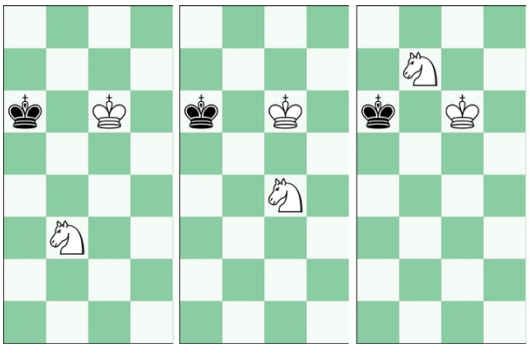
When the white king and the free knight permanently confine the black king to two squares at a corner of the board, a 2-square cage has been achieved. Various configurations are possible:



39

3-square cages

It is not possible for the king and free knight between them to confine the black king to any three squares on the board. Nevertheless, if there is only one escape route from a group of three squares extending along a row or file, white can force the conversion to a 2-square cage.



40

Consequently, the achievement of a 3-square cage is an important goal for white.

50-move rule

The game is drawn if one player successfully demonstrates that the last 50 moves by each side have been played (or are about to be played) without a pawn move or a capture.

Blockade

White can only win if the advance of the black pawn is restrained by a knight that must stand in its way.

Blockading knight

The knight that obstructs the advance of the black pawn.

Changing the blockader

A manoeuvre where the blockading and free knights exchange roles. Examples include diagrams 24c, 24g and 24j (pages A23 to A26).

Free knight

The knight that does not blockade the black pawn, but instead works with its king to force the opposing king towards a corner of the board.

Magic squares

This is a set of squares (two for each corner of the board) that are used by the free knight to convert the 3-

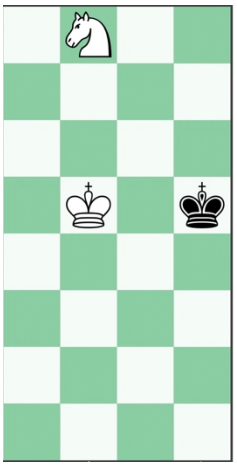
square cage to the 2-square cage. See for example diagram 23i (page A21).

The opposition

When the kings stand on the same rank or file, separated by one square, they are said to be in opposition. In general, it is better not to have the move in this configuration. For an example of how to use the opposition see diagram 10b (page A9).

The rake

A knight manoeuvre where white deprives the black of one square when it is confined to an edge of the board.

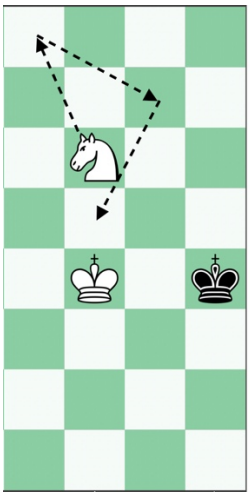


White "drags" the black king towards the h8 corner with 1. ♘g6, forming a hook-shaped wall (g6, g5, g4 and h4). After 1...♔h6, white may also play 2. ♘f4, covering h5, forcing the black king even closer to the h8 corner.

41

The staggering knight manoeuvre

A three-step knight manoeuvre, which deprives the black king of one square when it is confined to an edge of the board.



White has already restricted the black king, but now wants to deprive it of the h4 square. After 1...♔h3 2. ♘e8 ♔h4 3. ♘g7 the knight once again covers h5, and the black king must retreat with 3...♔h3, allowing 4. ♘f5, covering h4.

42

Triangulation

A king manoeuvre intended to lose a tempo, usually in order to achieve the *opposition*. For an example of this tactic, see diagram 23d (page A20).

The wall

White needs to build a barrier to contain the black king, and force it towards a 3-square cage. This barrier is made up of squares controlled by the knights (indicated in some of the diagrams by the "×" symbol) and the king ("○").

Zugzwang

A situation in which the obligation to make a move is a serious, often decisive, disadvantage.

Summary

This ending is rare, but there are some simple ideas that we should learn in case the possibility ever occurs in one of our games.

White wins if he or she can blockade the pawn (with a knight) far enough up the board. It is nice to have a rough idea of where the blockade has to be, but for practical purposes at patzer level it doesn't matter – white will try to win, and black will exploit any inaccuracy to get a draw by the 50-move rule.

White's winning method has five steps:

Step 1. The pawn must be securely blockaded by a knight

Knight security comes first. Do not let the black king fork the knights. If the pawn is initially blockaded by the white king, it can advance at least one square when blockading duties are transferred from the king to one of the knights.

Step 2. The black king must be forced to one edge of the board

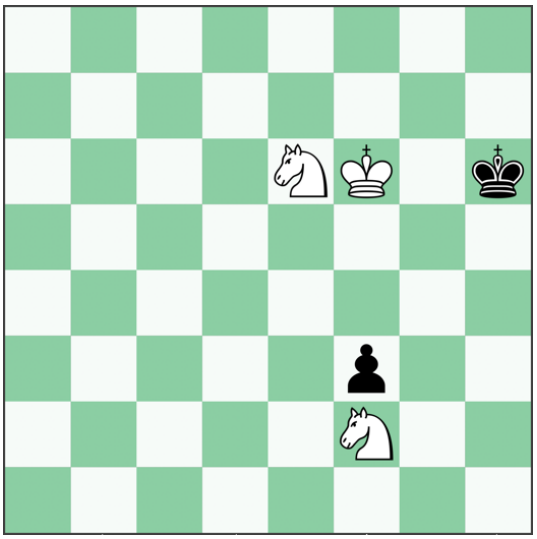
This is the hardest part of the plan. The free knight and the king must cooperate precisely, using those imaginary walls to restrict black's king. The other (blockading) knight may sometimes contribute by covering a potential escape square.

Step 3. The 3-square cage

The king and the free knight together construct a barrier of squares that forces the black king into a corner.

Step 4. The 3-square cage must be converted to a 2-square cage

This technique is actually quite easy to learn. The white king may need to use triangulation in order to gain the opposition.



43 ▷1

1. ♘g7!

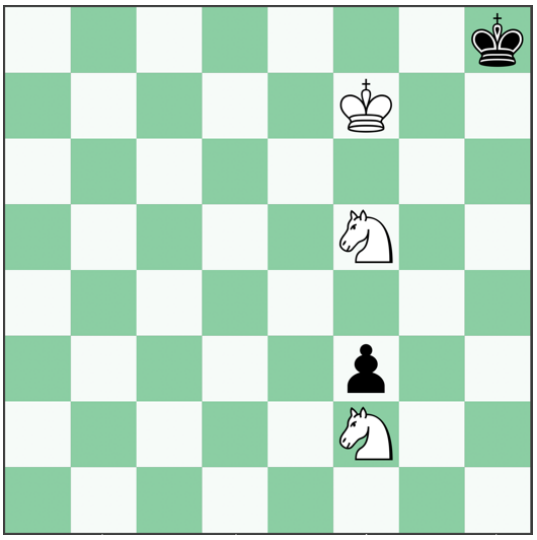
The 3-square cage.

1...♔h7 2. ♘f5! ♔g8 3. ♔e7! ♔h7 4. ♔f7!

The 2-square cage.

Step 5. The blockading knight now approaches, and mate is delivered

This may be very easy, but if the pawn's promotion square is going to be unfavourable (from white's point of view) it may be necessary to shuffle the king and the free knight around before releasing the blockade.



44 ▷1

1. ♔g6 ♔g8 2. ♘g7! ♔f8 3. ♔f6 ♔g8 4. ♘e6! ♔h7 5. ♔g5 ♔g8 6. ♔g6 ♔h8 7. ♔f7 ♔h7

White has set up the checkmate by transferring the free knight from f5 to e6, a square from which it can check the king on h7.

8. ♘g4 f2 9. ♘f8+ ♔h8 10. ♘f6

Covering black's potential check with the newly-promoted pawn.

10...f1♕ 11. ♘g6#

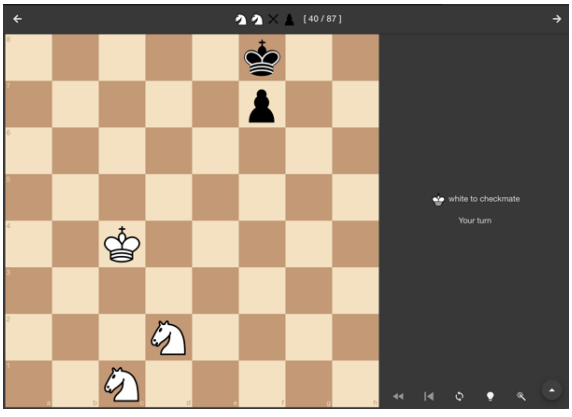
Defending against two knights

Push your pawn(s) as far as possible. Look for opportunities to threaten the blockading knight – defending it will cost white time and the 50-move rule is your friend. You can only be mated in a corner. Stay as close to the centre as possible, but when you are forced to an edge always try to get to the corner furthest from the blockading knight.

Practicing this endgame

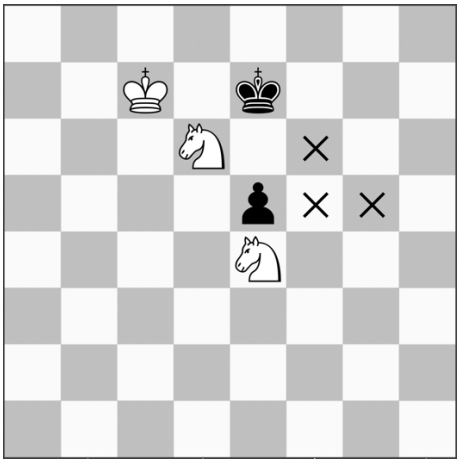
There is an excellent free online endgame trainer that has dozens of examples of two knights versus pawn. Don't be discouraged if you find these exercises difficult or even impossible at first. You will succeed with practice!

https://chess-endgame-trainer.firebaseapp.com/list/3/3



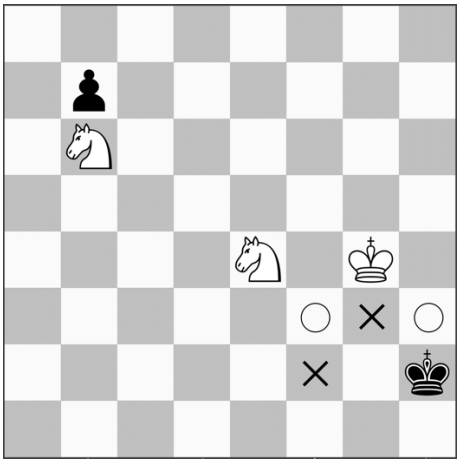
Test positions

For each position write down your first move, the reply that you feel would be most challenging, and your second move. The answers are on page A28.



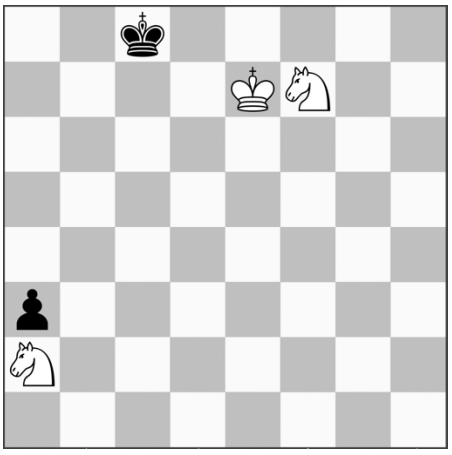
X1 ▷1

How does white prevent black's king from bolting through the hole at d5?



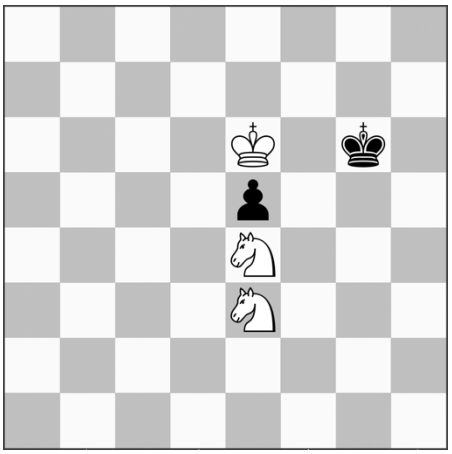
X2 ▷1

What's the quickest way to win?



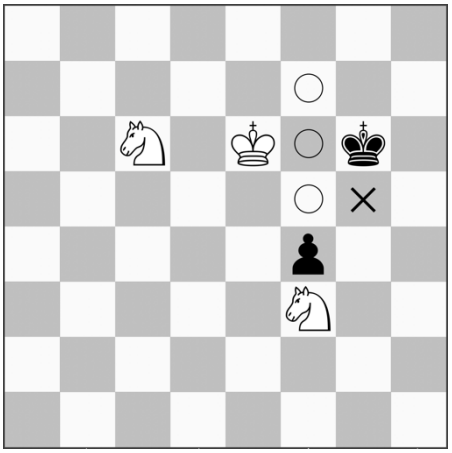
X3 ▶1

What is black's only drawing plan?



X4 ▷1

Black has the opposition, so how can white make any progress?



X5 ▷1

This should be easy!

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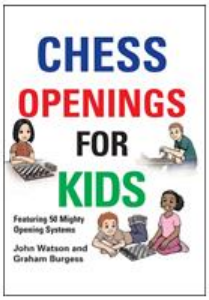

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