



THE PUZZLING SIDE OF CHESS

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SEASON THREE PREMIERE

Back in Black, Back on Track

number 94

February 6, 2016

Hello, friends. Welcome to *The Puzzling Side of Chess!*

It's been eight months since Chess Cafe closed its doors. But here we are again. New location, new format, and a new collection of fun and challenging puzzles.

To celebrate the relaunching of the column, we have a selection of ten problems for your amusement and solving pleasure. Please fasten your seat belts. We're about to take off.

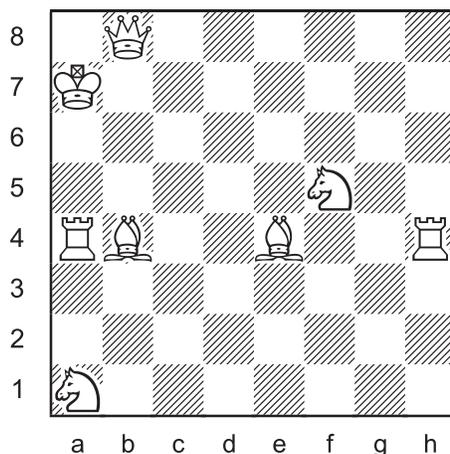
10 ... 9 ... 8 ...



A *triple loyd* is three puzzles in one. In each part, your task is to place the black king on the board to achieve a certain goal.

Triple Loyd 45

10



Place the black king on the board so that:

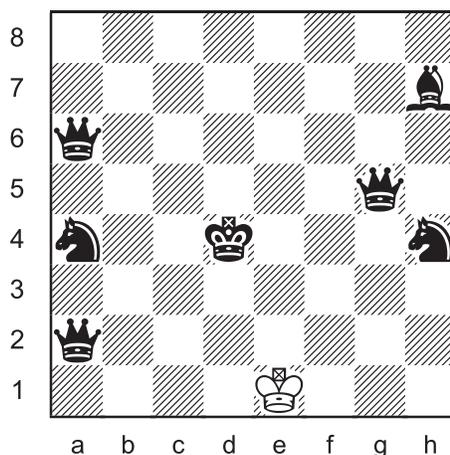
- A. Black is in checkmate.
- B. Black is in stalemate.
- C. White has a mate in 1.

For triple loyds 1-44 and information about Sam Loyd, visit the *Puzzling Side* archives, currently under reconstruction and only partially complete.

In an *inverted loyd*, the black king is already on the board, and the white pieces are added for a mate in one.

Inverted Loyd 19

9



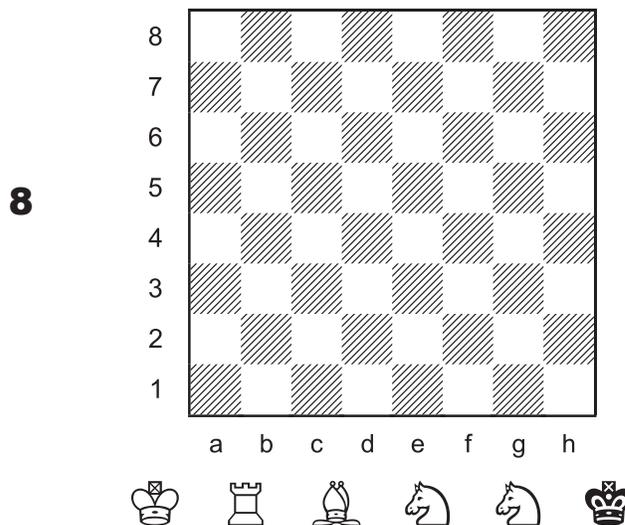
Place a white rook, bishop, and two knights on the board so that White has a mate in 1.

See the archives for earlier inverted loyds. Most of them appear at the end of triple loyd columns. An index of problem types and composers will be available when the archives are complete.

Since the pieces are handy, let's continue with another problem involving R B N N.

A *construction task* is a puzzle in which the solver must compose a position to achieve a certain goal. The most common goal, as in this two-part problem, is to maximize the number of mates in 1.

Construction Task 09



Construct a position with a white king, rook, bishop and two knights against a black king so that White has the most mates in one move.

part a. Discovered checks are not allowed.

part b. Discovered checks are allowed.

In *part b*, each different move by a piece that uncovers mate is counted separately.

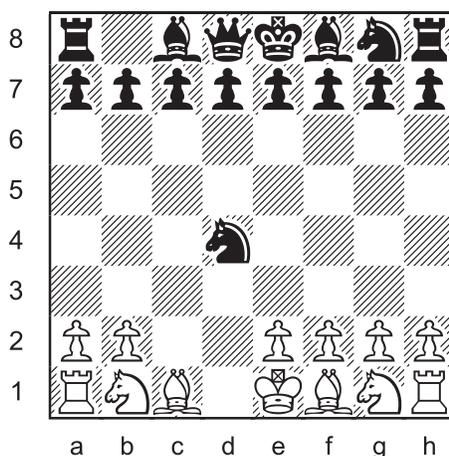
Constructed positions must be legal, which means “reachable in an actual game”. Make sure Black had a legal move on the previous turn.



Time now for some detective work.

Proof Game 46 (4.0 moves)

7

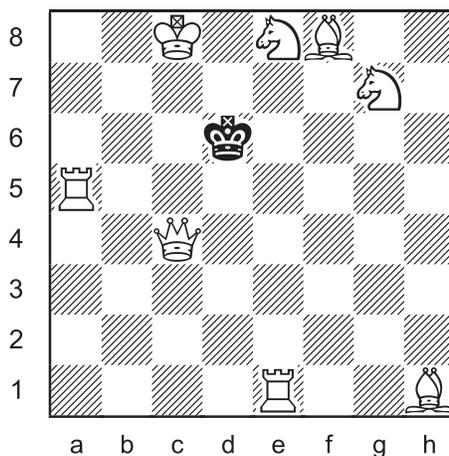


This position, with White to play, was reached in a game after each player made exactly four moves. What were the moves?

Retrograde analysis is a form of logical reasoning in which past events are deduced from details in the present situation. In a *last move problem*, the task is to determine the moves which led to the given position. Moves are counted separately for White and Black. “Last four moves” is two turns by each side.

Retro 34

6

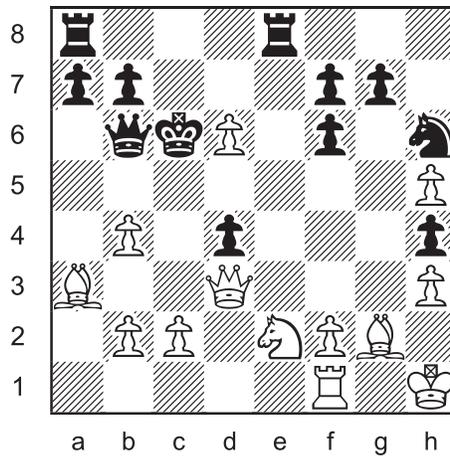


What were the last four moves?

The usual purpose of retrograde analysis is to determine what happened previously in a position. In *goof* problems, it is used to show why a position could not happen.

Who's the Goof? 31

5



Why is this position illegal?

The following puzzle is a *cyclotron* (three-way switcheroo). In case you're new to this type of puzzle, here are the rules.

Switch the position of three pieces so that Black is in checkmate. No actual chess moves are made. The pieces simply swap squares. The pieces trade places in a "cycle". Piece A goes to square B, piece B goes to square C, and piece C goes to square A.

Any three pieces can trade places. Colours do not matter. The cycled pieces can be all white, all black, or a mix of both. Cycling the black king is a common trick.

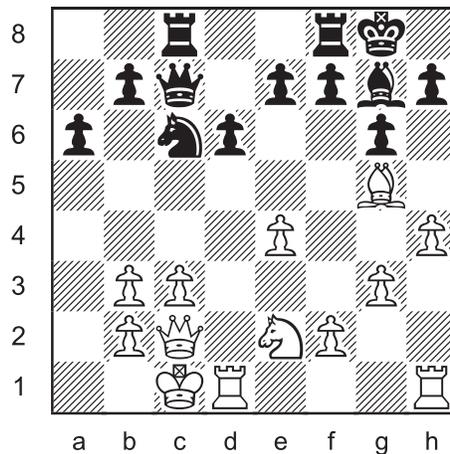
The position after the cycle must be legal. This rule implies several things.

- a) A pawn cannot be on the 1st or 8th rank.
- b) Both kings cannot be in check.
- c) There must be a way to reach the position with a legal white move. Impossible checks, especially double checks, are a frequent "violation".
- d) In some cases, retrograde analysis is required to decide if the position after a cycle is legal.

For more information on cyclotrons, see columns 55 and 74.

Cyclotron 37

4



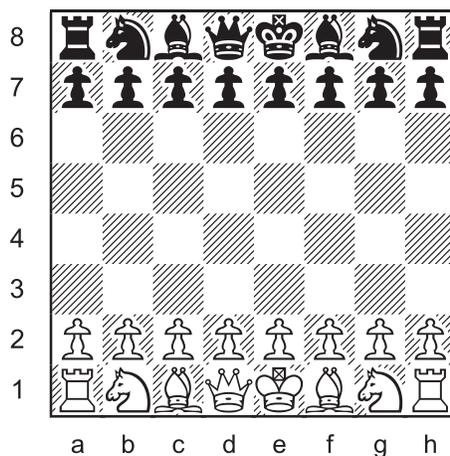
Cycle three pieces so that
Black is in checkmate.

Good news for cyclotron fans from the past. Next week's column will be part 3 of *Cyclotronic Overdrive*, a series of problems that started last April and was left uncompleted when *ChessCafe.com* stopped posting new material.

A *synthetic game* is similar to a proof game. But instead of finding the move sequence that leads to a given position, the task is to compose a game that ends with a particular move.

Synthetic Game 15

3

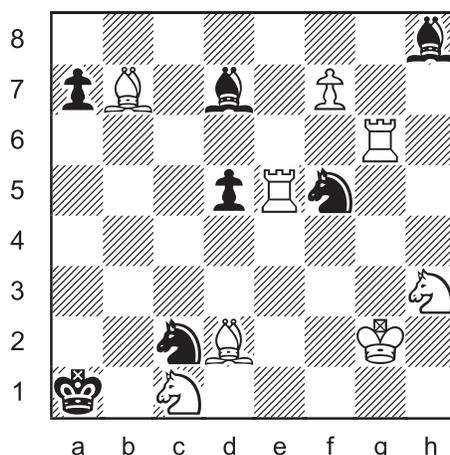


Compose a game that ends
with the move 5...Kg6#.

The next puzzle is a *Toronto style* chess maze. Captures are not allowed. For more details, see the instructions below (and column 69).

Chess Maze 13

2



Pawn Maze

Which kind of promoted piece gets through the maze fastest?
Rook, bishop, or knight?

Only the white pawn moves. When it reaches the last rank, it may become a rook, bishop, or knight. But not a queen. After the promotion, only the promoted piece moves. Find the shortest path to capture the black king, without taking any pieces or moving to a square attacked by a black piece. It is possible to go through the maze with a rook, bishop, or knight. Figure out which piece has the shortest path, and which the longest.

Before proceeding to the last puzzle, a few words about Chess Cafe.

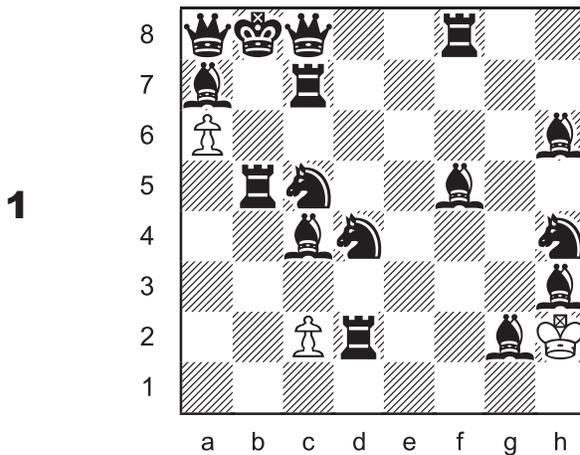
Since its inception in 1996, *ChessCafe.com* was one of the world's best websites. I was very fortunate to be a columnist for three years. Sadly, the site ceased operations in May 2015, evidently for financial reasons. As far as I know, the last anybody heard from them was a posting on June 2 which said "we are taking a three-month hiatus".

Best wishes to Mark.



The final problem in our countdown is a potential stumper. We don't want people saying the *Puzzling Side* is too easy. It's a grotesque series-mate in which two white pawns and a king take on the entire supercharged black army. Good luck.

Multi-Wham 22



series-mate in 24

White plays twenty-four moves
in a row to mate Black.

Only the last move may give check. Captures are allowed. White may not place their own king in check. Black does not get a turn.

3 ... 2 ... 1... IGNITION!

That's it, folks. The *Puzzling Side* is back in orbit. Circling the planet once every week. I hope you enjoy the puzzles. If you do, please tell your friends about the column. Thanks.

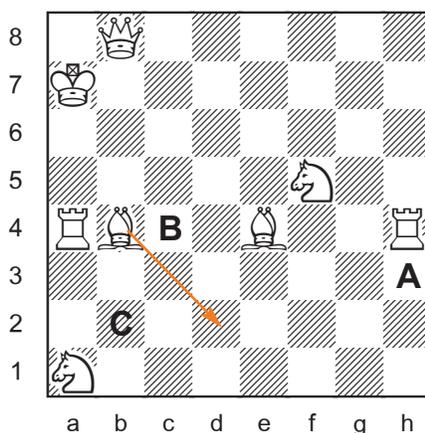
SOLUTIONS

All problems by J. Coakley. Numbers 6 (revised) and 8 are from *Winning Chess Puzzles For Kids Volume 2* (2010). The others are *Puzzling Side of Chess* originals (2016).

PDF hyperlinks. You can advance to the solution of any puzzle by clicking on the underlined title above the diagram. To return to the puzzle, click on the title above the solution diagram.

10

Triple Loyd 45

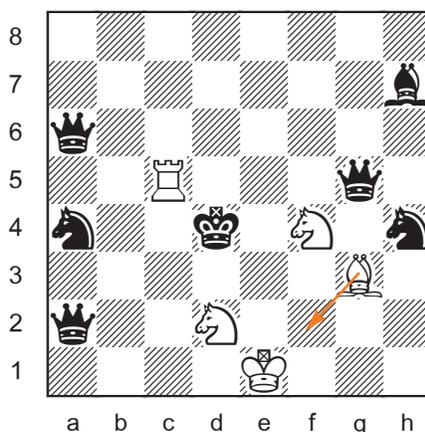


- A. Kh3#
- B. Kc4=
- C. Kb2 (Bd2#)

A rare eight officer loyd.

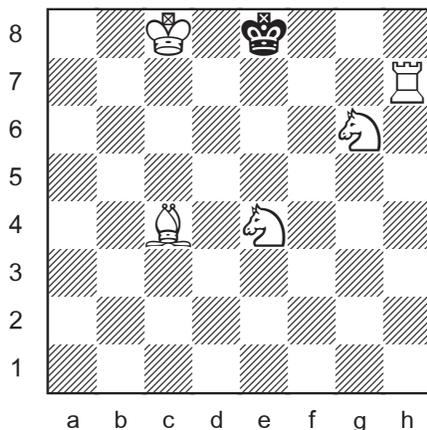
9

Inverted Loyd 19

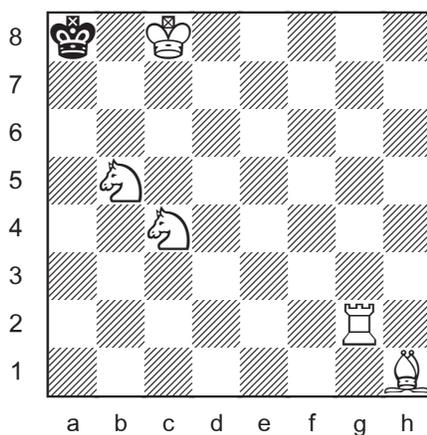


Rc5, Bg3, Nd2 Nf4 were added.
1.Bf2#

Shield the checker. Block the blocker.

Construction Task 09**9a.** no discovered checks

6 mates in one
 (2R + 2B + 2N + 0N)

9b. with discovered checks

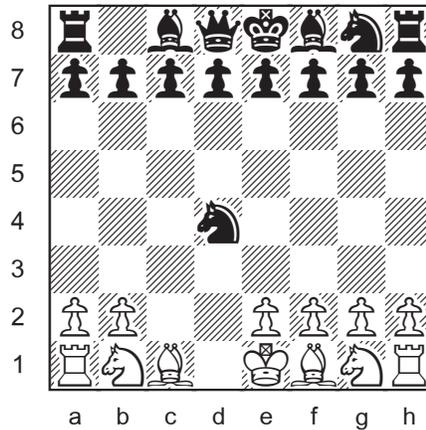
15 mates in one
 (14R + 0B + 0N + 1N)

Other positions with the same number of mates are possible. Did you match the records?

Back to the Puzzle. Have you noticed the hyperlinks within this pdf document? They allow you to switch back and forth between each puzzle diagram and its solution. For instructions, see the beginning of the solution section. For convenience, thank the *Puzzling Side!*

7

Proof Game 46 (4.0 moves)



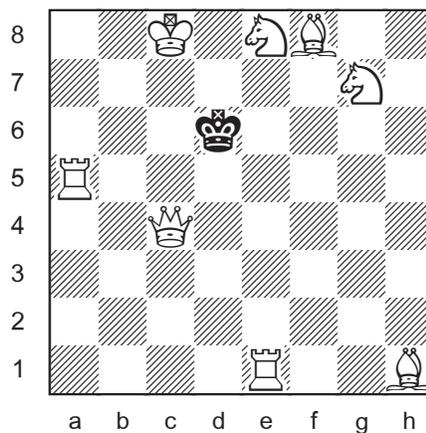
1.c4 Na6 2.c5 Nxc5 3.Qb3 Nxb3 4.d4 Nxd4

An unusual path by the black knight.

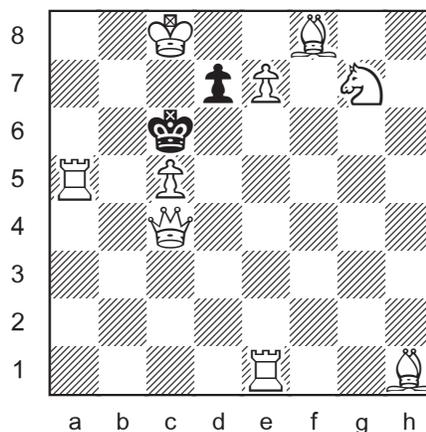
As with most problem types on the *Puzzling Side*, more proof games can be found in the archives.

6

Retro 34



The diagram below shows the position four moves ago.



White has just played 1.Re4-e1+ with a discovered check from the bishop on h1. This move may or may not have been a capture. The game continued:

1...d5 2.cxd6 e.p.+ Kxd6 3.e8=N#

Analyzing backwards from the puzzle position: Black is in double check by the knight at e8 and bishop at f8. This double check could only happen by the pawn promotion 3.e7-e8=N#.

On the previous turn, with a white pawn on e7, the black king did not move to d6 from c5, d5, e5, or e6 because he would be in an impossible double (or triple) check on those squares.

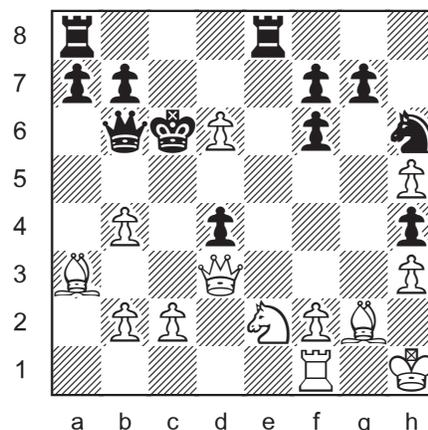
It appears that the black king would also be in an impossible double check on c6. However, the double check can be explained with an *en passant* capture, the most over-used trick in the retro arsenal. "If something seems impossible, look for *en passant*!"

So Black's last move was 2...Kc6xd6, capturing the white pawn that just took *en passant* from c5. This means that the two previous moves were 1...d7-d5 2.c5xd6+ e.p.

The Case of the Vanishing Pawns.

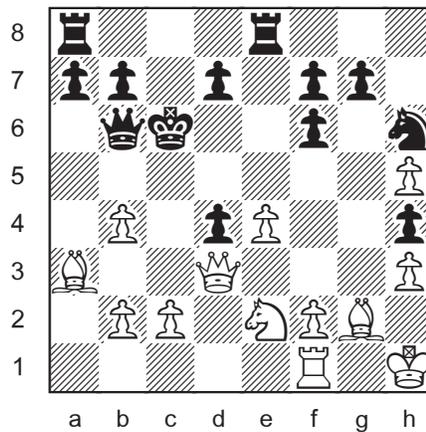
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Who's the Goof? 31



The position is illegal because there are not enough missing pieces to explain the pawn structure.

The black king is in check from the white bishop on g2. This is a legal check. It could occur by means of the *en passant* capture 1...d7-d5 2.e5xd6 e.p.+. White's previous move was the discovered check 1.e4-e5+. Consider the position before those moves.



A survey of the board shows that White is missing **3** pieces (RNp) and Black is missing 3 pieces (BBN). But we can deduce from the unmoved pawns on b7 and d7 that the black light-square bishop was captured on c8. So only **2** black pieces (N and dark-square B) were available for capture elsewhere.

Examining the pawn structure, White has doubled b- and h-pawns. Black has doubled d- and f-pawns.

Two missing white pieces were captured by the doubled black pawns, which leaves only one missing white piece unaccounted for. This means that the black h-pawn did not capture on the g-file and then return to the h-file with another capture. Therefore the white pawn on h5 got there by g4xh5, capturing on a light square.

The white pawn on b4 did not come from the d-file because that would require an additional capture. It did not capture on b4 from a3 because then there would be no way for the bishop to reach a3. So the pawn must have gone to b4 from b3 after a2xb3, capturing on a light square.

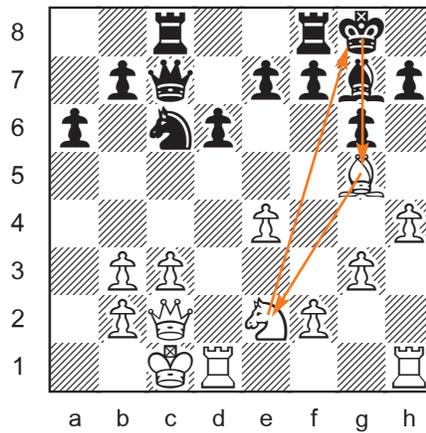
Since the white doubled pawns required two captures on light squares and one of the two missing black pieces available for capture is a dark-square bishop, the position is illegal.

An equally valid argument, based on the same facts, is that the position is illegal because White is only missing three pieces and the black pawn structure requires four captures (two by the black h-pawn). As usual in goof problems, there is more than one way to demonstrate a contradiction.

So who is the goof? A single culprit cannot be pinpointed, but the leading suspects are the pawns at h4 and h5.

4

Cyclotron 37



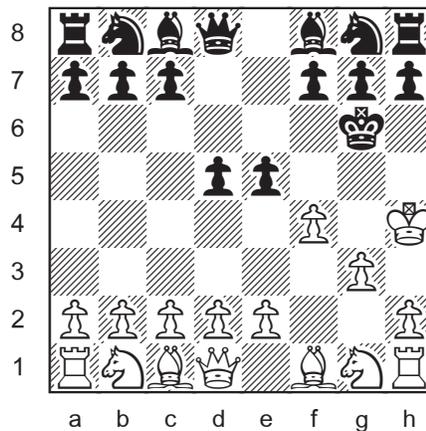
Ne2→g8 Kg8→g5 Bg5→e2

A new way to attack in the Dragon Sicilian.

(The position after the cycle Ne2→g5 Bg5→g8 Kg8→e2 is illegal because of the white bishop on g8 with unmoved pawns at f7 and h7. The bishop cannot be a promoted d-pawn because that would require three captures. Black is missing three pieces but one of them was captured on b3.

3

Synthetic Game 15



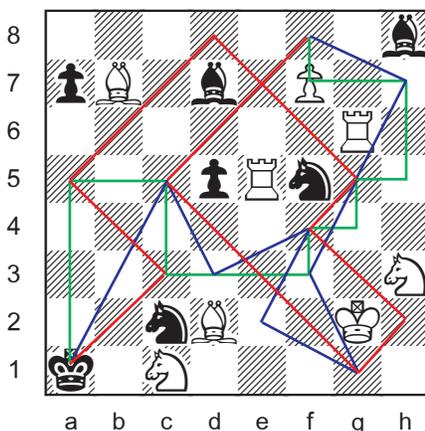
1.f4 e5 2.Kf2 d5 3.Kg3 Ke7 4.Kh4 Kf6 5.g3 Kg6#

The solution is not unique. Black's first four moves can be played in various orders and ...d5 can be replaced by ...d6. White can play 1.f3 instead of 1.f4.

For more synthetic games, see the *Proof Game* columns in the archives.

2

Chess Maze 13



A bishop is fastest. 10 moves.
f8=B-c5-g1-h2-f4-g5-d8-a5-c3xa1



A knight is runner-up. 11 moves.
f8=N-h7-g5-f3-g1-e2-f4-d3-c5-b3xa1

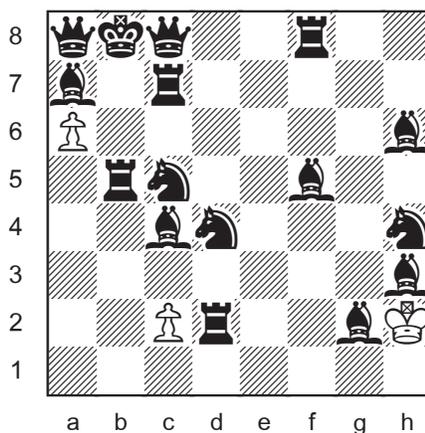


A rook is the slow poke. 12 moves.
f8=R-f7-h7-h5-g5-g4-f4-f3-c3-c5-a5xa1

(A queen only takes 4 moves. f8=Q-d8-a5xa1)

1

Multi-Wham 22



series-mate in 24

1.Kg3

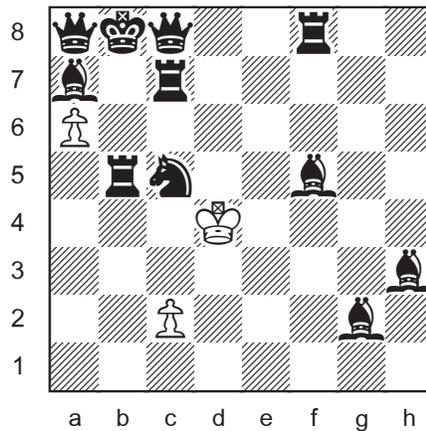
It's not obvious, but the first task is to clear the c4 square so that the c-pawn can capture on b5. If the c-pawn promotes on d8 after 1.c3 2.cxd4 3.d5 4.d6 5.d7, the mate takes 25 moves. For example, 6.d8=N 7.Ne6 8.Ng5 9.Kg3 10.Kf4 11.Ke3 12.Kxd2 13.Kc3 14.Kxc4 15.Ne6 16.Nxc7 17.Nxb5 18.Nxa7 19.Nb5 20.Nc7 21.Nxa8 22.Nc7 23.Kb5 24.Kb6 25.a7#

There is no series-mate if White promotes to Q, R, or B on d8, or to B on c8. But it is possible to mate in 28 by promoting to N on c8.

6.dxc8=N 7.Kg3 8.Kxh4 9.Kh5 10.Kxh6 11.Kg7
 12.Nd6 13.Nxf5 14.Nd4 15.Nf3 16.Nxd2 17.Nf3
 18.Ng5 19.Nxh3 20.Ng5 21.Ne6 22.Nxc7 23.Ne6
 24.Nxc5 25.Kxf8 26.Ke8 27.Kd8 28.Nd7#

- 2.Kxh4
- 3.Kh5
- 4.Kxh6
- 5.Kg5
- 6.Kf4
- 7.Kf3
- 8.Kxd2
- 9.Kc3
- 10.Kxc4
- 11.Kxd4

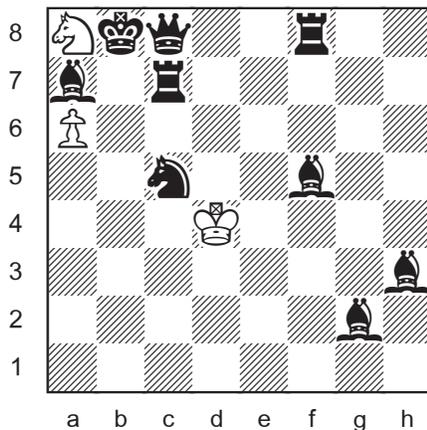
Removing the defender of the rook on d2.



- 12.c4
- 13.cxb5
- 14.b6
- 15.b7
- 16.bxa8=N

Now it's the c-pawn's turn.

There is no series-mate if White promotes to B on a8 or c8. Promoting to N on c8 takes 33 moves to mate.

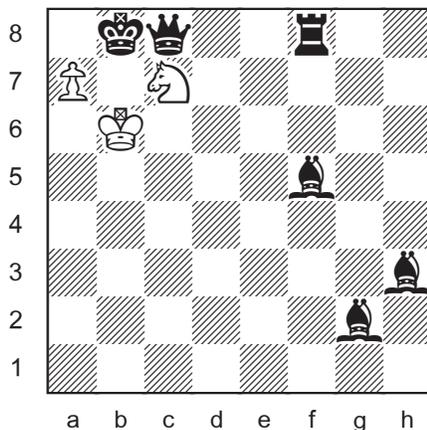


- 17.Nxc7
- 18.Nb5
- 19.Nxa7
- 20.Nb5
- 21.Nc7

The knight completes his duties, eliminating two defenders and preparing for the approach of the white king.

- 22.Kxc5
- 23.Kb6
- 24.a7#

And the a-pawn gets the glory.



For more series-mates, see *Double Whammy* columns in the archives.

Until next time!

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