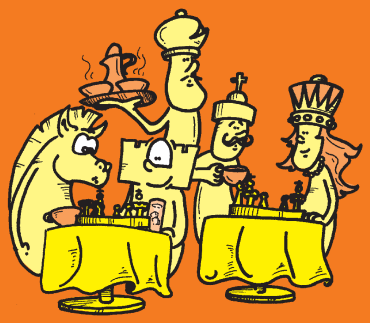


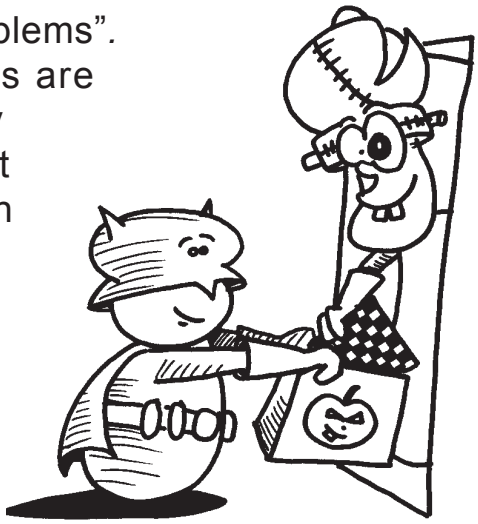
THE PUZZLING SIDE OF CHESS

Jeff Coakley

MATE TRICKS and RETRO TREATS

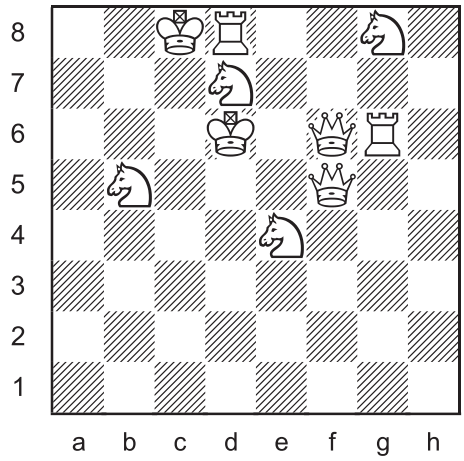
number 72 October 25, 2014

This column presents ten “Halloween problems”. They are called that because the pieces are wearing disguises. We know where they stand, but we don’t know their colour. Part of the solver’s task is to figure out which pieces are white and which are black.



The normal name for this type of puzzle is a *colouring problem*. The earliest compositions date from the 1960s. Here is a fairly basic example to get the party started.

Halloween 01



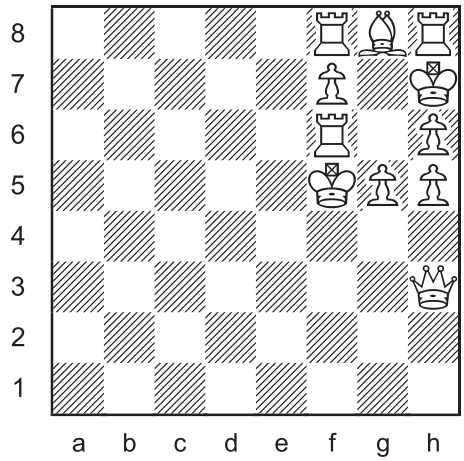
Colour the pieces so that White has mate in one.

As you can see, all the pieces in the diagram are shown as white. The object of the puzzle is to determine which pieces are actually black.

It almost goes without saying, but the position after colouring must be legal.

Next up is a tricky mate by Ukrainian composer Stanislav Kirilichenko. No relation to Kiril the Pawn.

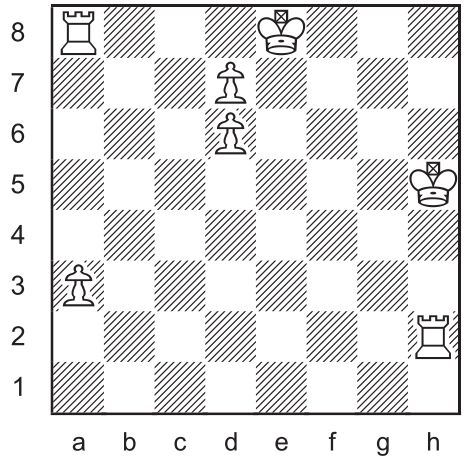
Halloween 02



Colour the pieces so that
White has mate in one.

The following two problems, with mates in two and three moves, are by Vladimir Korolkov (1907-1987) of Russia.

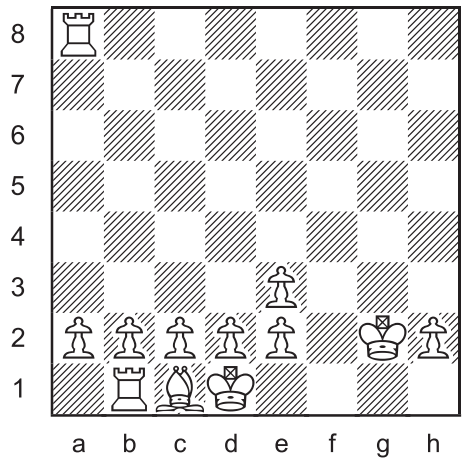
Halloween 03



Colour the pieces so that
White has mate in two.

Here's a well-disguised position.

Halloween 04



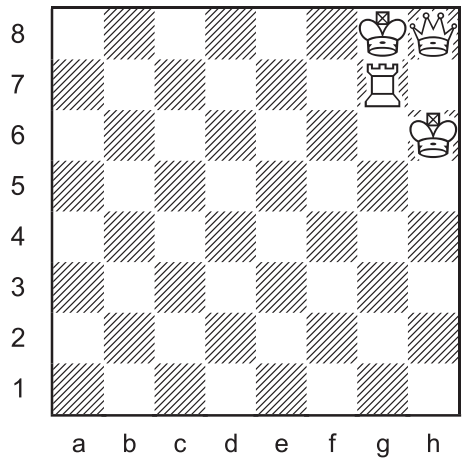
Colour the pieces so that
White has mate in three.

So much for the mate tricks. Now it's time for the retro treats. In the remaining problems, the task is twofold: colour the pieces so that the position is legal and determine what the last move was.

Usually the last move must be known before picking the right colours.

Puzzles 5 and 6, by Israeli composer Gideon Husserl (1922-2013), are two of the best known colouring problems.

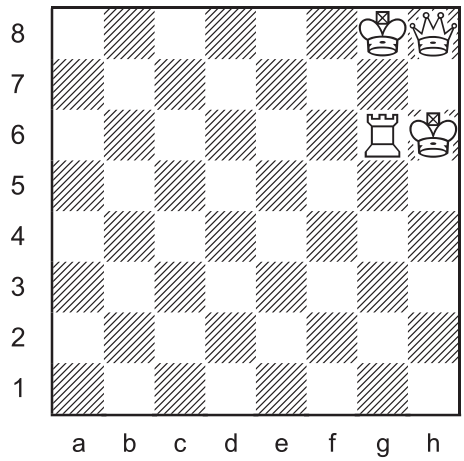
Halloween 05



Colour the pieces so that
the position is legal.
What was the last move?

A *twin* position is always a nice touch.

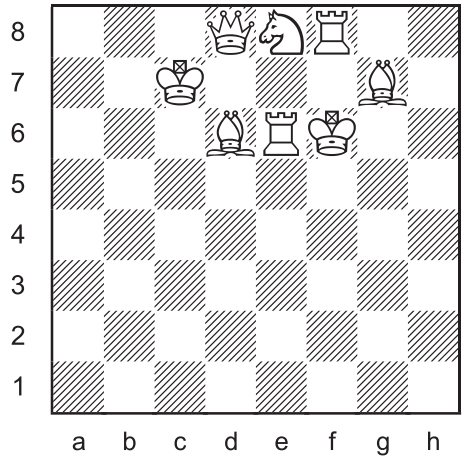
Halloween 06



Colour the pieces so that
the position is legal.
What was the last move?

Have you selected your Halloween costume yet? Perhaps you could dress up as a chess piece!? Or maybe as a chess player?!

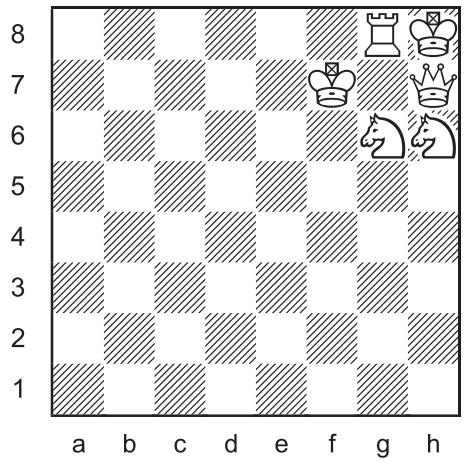
Halloween 07



Colour the pieces so that
the position is legal.
What was the last move?

The next position is a joint effort by the two leading composers of colouring problems, Andrey Frolkin and Andrey Kornilov (1944-2011). They are truly the masters of this puzzle-type, having published more than a hundred problems, many with twenty or more pieces.

Halloween 08

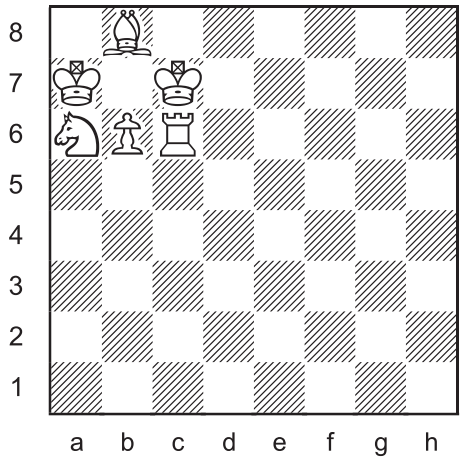


Colour the pieces so that
the position is legal.
What was the last move?

This week's menu at the Cafe features pumpkin cider and pumpkin seed ice cream. What do you do with your pumpkins?

Autumn colours of Oregon.

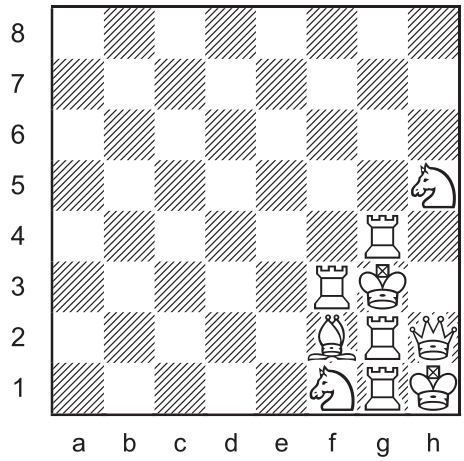
Halloween 09



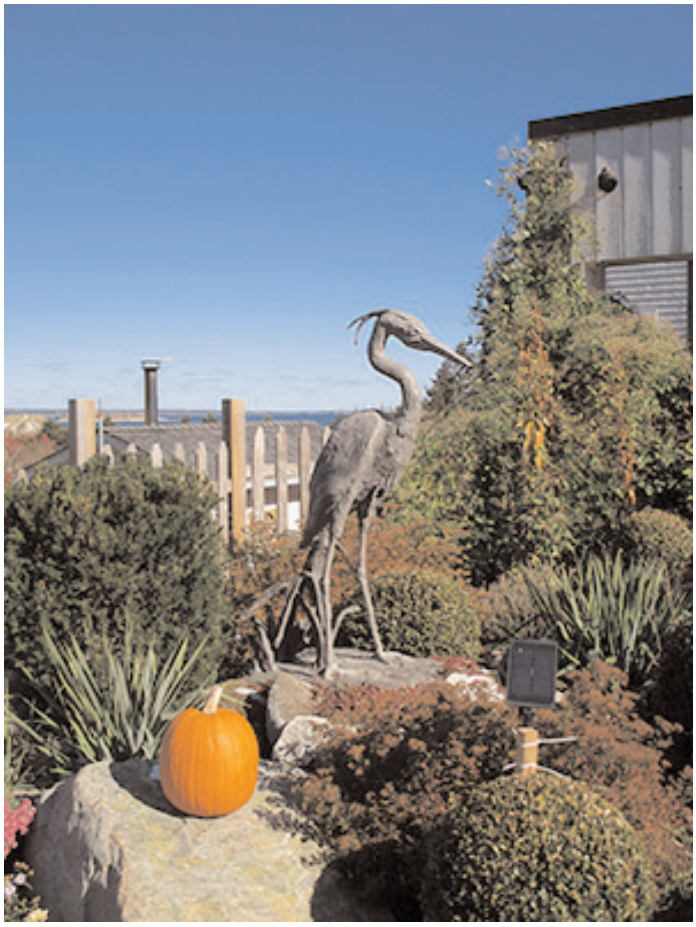
Colour the pieces so that the position is legal.
What was the last move?

Our final problem requires you to figure out the last two moves.
Another work of art by the two Andreys!

Halloween 10



Colour the pieces so that
the position is legal.
What were the last two moves?



Pumpkin & Heron *Nova Scotia*

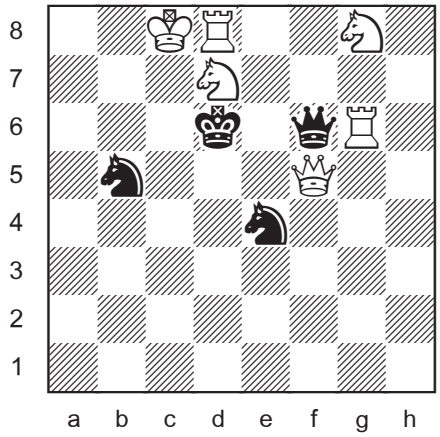
SOLUTIONS

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.

Halloween 01

J. Coakley 2014

ChessCafe.com



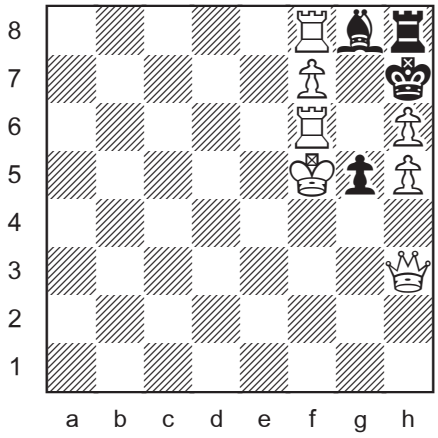
1.Nb8#

The queen on f6 and knights on b5 and e4 must be black. Otherwise they would be checking the black king on d6. The pin by the white rook on g6 prevents 1...Qxd8+.

Halloween 02

Stanislav Kirilichenko 1977

feenschach



1.hxg6 e.p.#

continued next page

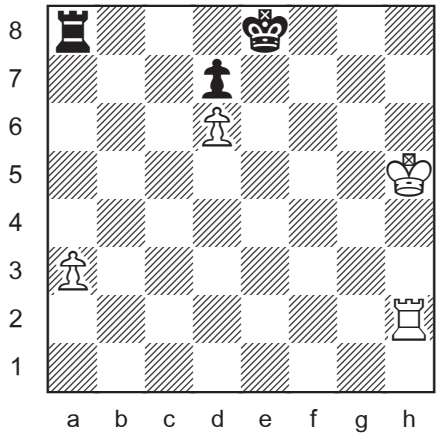
An *en passant* capture is only allowed in a chess problem if it can be proven that the last move was a double jump by the captured pawn.

By colouring the pieces as in the diagram, Black's previous move had to be **...g7-g5**. The move ...g6-g5 was impossible because a black pawn on g6 would be checking the white king. *It cannot be Black's turn if White is in check*. Additionally, the last move was not ...Kg7-h7 because the black king would be in an impossible check on g7 from the pawn at h6, which had no move on the previous turn to reach h6.

Halloween 03

Vladimir Korolkov 1969

Schachmatist Ulybaetsja



1.Kg6 any 2.Rh8#

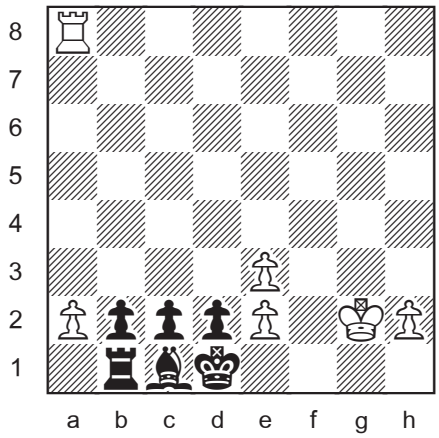
The tricky thing here is that Black cannot castle. Castling is allowed in chess problems unless it can be proven that the king or rook has previously moved. In this position, Black's last move could only have been ...Ke8 or ...Ra8.

That explains why the pawn on a3 must be white. If it were black, the previous move could have been ...a4-a3, and Black could play 1...0-0-0.

Halloween 04

Vladimir Korolkov 1969

Schachmatist Ulybaetsja



1.Kf2 Ra1
2.Rg8 any
3.Rg1#

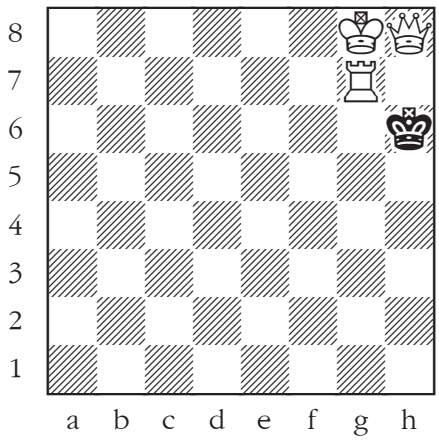
If the pawn on a2 were black, then 1.Kf2 a1=B! 2.Rg8 is stalemate.

Colouring all the pieces white except for a black king (on d1 or g2) is mate in five.

Halloween 05

Gideon Husserl 1986

feenschach



The last move was 1.h7-h8=Q#.

The queen is attacking both kings. A pawn promotion is the only way she could have reached the corner on the last turn. 1.Qh7-h8+ is impossible since the queen would already be checking from h7.

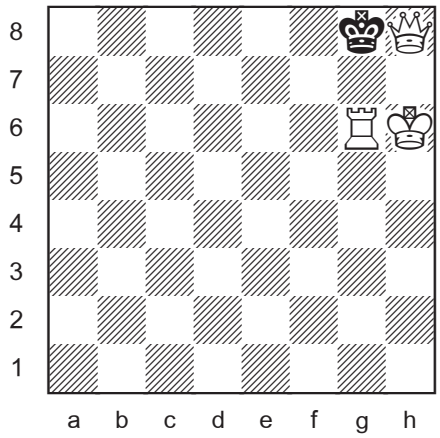
Some sources give the composer's year of birth as 1922, others 1925.

For more information on *last move problems*, see column 30.

Halloween 06

Gideon Husserl 1986

feenschach



The last move was 1.g7xh8=Q+.

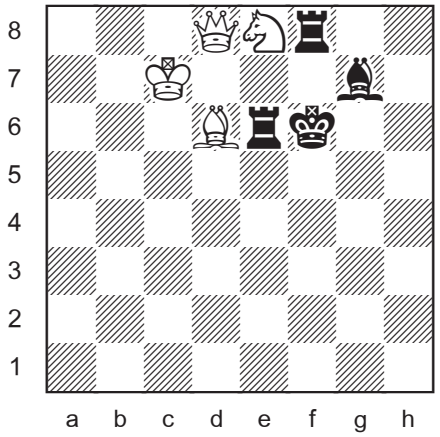
The queen and rook are both attacking both kings. This colouring is the only possible explanation of a double check.

The black piece captured on h8 was either a knight or a bishop. White would have been in an impossible check if there were a black queen or rook on h8 (before 1.g7xh8=Q+).

Halloween 07

J. Coakley 2006

Winning Chess Puzzles For Kids



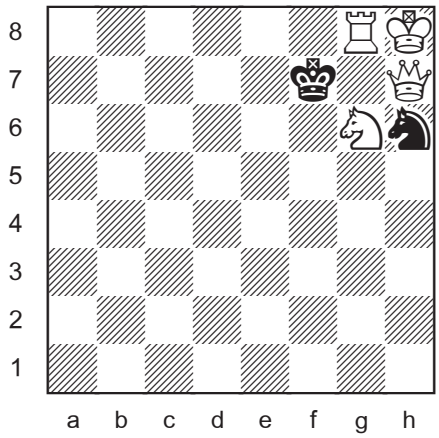
The last move was 1.e7-e8=N+.

The queen and knight are both attacking both kings. The only possible double check is an underpromotion to knight. Therefore the knight (and queen) are white since only a white pawn can promote on e8. This means that the king on f6 is black and the king on c7 white. The other four pieces (RRBB) must all be the same colour as the king they attack.

Halloween 08

Andrey Frolkin & Andrey Kornilov 1989

Rex Multiplex



The last move was 1.g7-g8=R+.

The queen is attacking both kings, which means that the previous move was a check by her. The queen did not move from g7 because she would already be checking both kings.

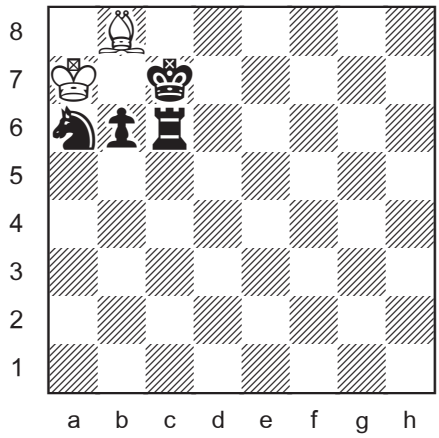
The only explanation is a discovered check (and promotion) by advancing a pawn from g7 to g8. So the queen and rook must be white. Therefore the king on f7 is black and the king on h8 white.

The two knights must each be the same colour as the king they attack.

Halloween 09

J. Coakley 2014

ChessCafe.com



The last move was 1.b7-b8=B+.

continued next page

The bishop is attacking both kings. Since the bishop could not have moved to b8 on the previous turn, the last move had to be a promotion. Therefore the bishop is white.

If the pawn on b6 was white, then it would also be checking one of the kings, and that king would be in an impossible double check. So the pawn must be black.

To decide the colour of the kings, consider the situation with a black king on a7. The knight and rook would have to be white (in order to be the same colour as the white king they attack on c7). In that position (white: Kc7 Rc6 Na6 b7 vs. black: Ka7 b6), Black would not have a legal move on the previous turn. The king could not have moved from a8 because he would be in an impossible check from the white pawn on b7. Therefore, the king on a7 cannot be black.

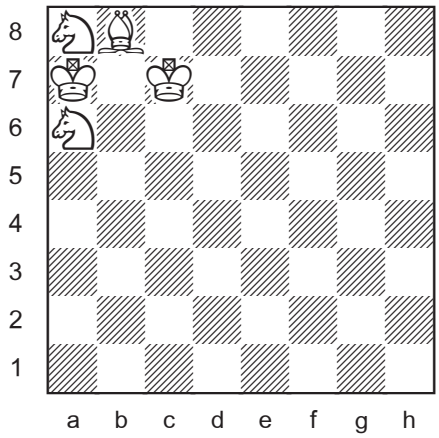
With a white king on a7 and black king on c7, the knight and rook must be black.

Here is a simpler similar problem by Serbian composer Ivan Arandjelovic.

Halloween 09b

Ivan Arandjelovic 1985

Mat (Belgrade)



The solution and basic reasoning are the same.

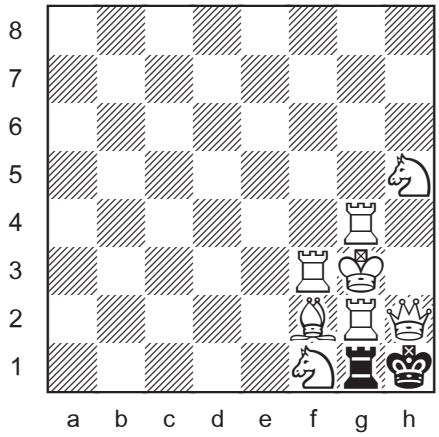
White: Ka7 Bb8
Black: Kc7 Na6 Na8

last move: 1.b7=b8=B+

Halloween 10

Andrey Frolkin & Andrey Kornilov 1989

Rex Multiplex



The last two moves were 1...h3-h2 2.Qh4xh2#.

The queen is adjacent to both kings. So the last move had to be by the queen from h3 or h4. On those squares, she would already be checking the king on g3, which means that the queen is the same colour as the king on g3 and that she is checking the king on h1.

The last move had to be a capture on h2, or the king on h1 would already be in check from the queen at h3 or h4.

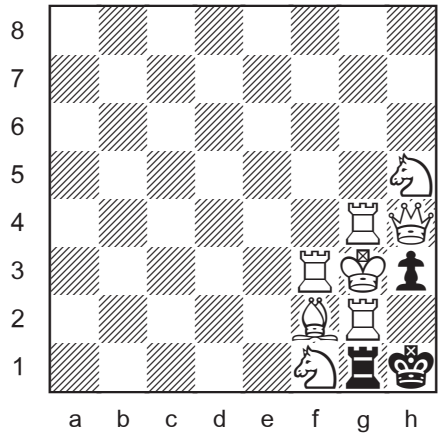
Any piece that is attacking the king on g3 is also the same colour as the queen, otherwise both kings would be in check. The only piece not attacking g3 is the rook on g1. It is the same colour as the king on h1, or else the king on h1 would be in an impossible double check.

Because the rook on g1 and king on h1 had no possible moves last turn, the previous move by that side had to be by a piece that was then captured on h2. The only way this could happen is if the piece moved from h3 to h2, and was then captured by the queen from h4.

It was not a rook or queen that moved from h3 to h2 because it would be checking the king on g3 before it moved. The only other possibility is a pawn move. Only a black pawn can move from h3 to h2, so the king on h1 and rook on g1 are also black.

All the other pieces are white. See diagram next page.

Here is the earlier position.



The Puzzling Side of Black and White

Are white and black colours? Surprisingly, this seems to be a complicated question.

If we analyze light, then white is the *combination of all colours*, as can be seen in a rainbow or through a prism. And black is the *absence of colour.*

When we examine pigments, the physics are reversed. White is the *absence of colour* and black is the *combination of all colours.*

But that shouldn't affect our usual way of talking. It's surely quite safe to say that the colour of the night sky is black. And the colour white is definitely in my box of crayons.

Until next time!