

# THE PUZZLING SIDE OF CHESS

# **Jeff Coakley**

# **REBUS UPLOAD 07**

number 230

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The RE bus is on the road again. Is everybody on board? Our tour today features five new chess rebuses plus a bonus picture riddle.



<u>Rebus 101</u>

"anagram"



Each letter represents a different type of piece. Uppercase is one colour, lowercase is the other. Determine the position and, if possible, the last move.

#### <u>Rebus 102</u>

"do-re-mi"



Each letter represents a different type of piece. Uppercase is one colour, lowercase is the other. Determine the position and, if possible, the last move.

Rebuses are puzzles in which symbols must be deciphered. In chess rebuses, we decode letters on a board into a legal position. In a picture rebus, we decode a row of images into a meaningful sentence.

Riddle: "Why those who fake it are held in lower regard."



#### <u>Rebus 103</u>

"box set"



Each letter represents a different type of piece. Uppercase is one colour, lowercase is the other. Determine the position and, if possible, the last move.



Each letter represents a different type of piece. Uppercase is one colour, lowercase is the other. Determine the position and the last move. Our final puzzle is a revised version of a problem from five years ago. Changes were made to eliminate a dual solution and to otherwise enhance the retro content.

The stipulation for this rebus is more complicated than most. After pieces are assigned to the letters in the puzzle diagram, the resulting position will be illegal because of multiple checks. Additional pieces must then be added to the board to make a legal position by blocking some of the checks.

Even though the position will be illegal, it is still possible to determine piece assignment based on the need to avoid illegal situations which cannot be corrected by the addition of more pieces.



Rebus 105 "New Year"

Each letter represents a different type of piece. Uppercase is one colour, lowercase is the other. Determine the position. Add pieces to legalise the position. What was the last move?



Rook, Bishop, und Springer.

# SOLUTIONS

All chess rebuses are joint compositions by Andrey Frolkin and Jeff Coakley. The original version of Rebus 105 was published in 2018. The others are *Puzzling Side of Chess* (2023).

**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.

Archives. Past columns are available in the Puzzling Side archives.



#### <u>Rebus 101</u>

 $\hat{\pi} = \emptyset$  There are no pawns. All letters on 1st or 8th rank.  $\hat{\Psi} = (AGR)$  Letters with one uppercase, one lowercase.

Each of the potential kings (AGR) is "attacked" by the other 4 letters along a rank or file. Regardless of piece assignment, there is necessarily a <u>double check</u> by a queen and a rook.

AR ≠ 🗳	No legal double check is possible.		
G = 🖑	There is a promotion	legal <u>double check</u> with NR = (營邕) by the 1.h7xg8=Q/R++.	
R = 筥	R ≠ ₩	Both kings in check (g7)	
N = ₩			
A = 🛱	A≠ ⊲	Triple check (f7).	
M = 🖄			
Last move: 1	.h7xg8=Q#	. The type of piece captured is unknown.	
caps = black		Lowercase promotion on 8th rank.	

## <u>Rebus 102</u>



"do-re-mi" D = king O = pawn R = rook E = knight M = bishop I = queen caps = white last move: 1.b6/d6xc7+



B = (DE) Letters with one uppercase, one lowercase.

```
D = 🖑 If E = 🖑
```

One king is in <u>check</u> by letter R ( $\exists$ g5,  $\triangle$ b1, or  $\triangle$ e1).

 $R \neq \overset{\text{W}}{\cong}$  Both kings in check (b1 g5).

 $DIMO \neq$ <sup>W</sup> Impossible multiple checks.

So E ≠ 🗳

**R** =  $\square$  R  $\neq \triangle$  Both kings in check (b1 c6).

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R \neq \bigotimes \mathbb{Q} Both kings in check (e1 g5).
```

```
O = \triangle O \neq \triangle Impossible double check (b7 f7).
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 $O \neq \textcircled{B}$  Both kings in check (a5 c7).

**caps = white** A white king could not be on d8 if there were black pawns on b7 c7 f7 g7. Impossible "king in the box".

The black king is in <u>check</u> by the white pawn on c7.

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Last move: 1.b6xc7+ or 1.d6xc7+. The type of piece taken is unknown.
EIM = (\bigotimes \square \square)
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E = 2 $E \neq \textcircled{2}$ Both kings in check (e5).I = 2 $M \neq \overleftrightarrow{2}$ Both kings in check (c4).M = 2

If you are looking for more chess rebuses, check out the *rebus index* in the appendix to column 188. It lists numerous articles and over 250 problems, most of which are readily available online.

#### Rebus 103 "box set"



B = rook O = kingX = knightS = pawn

E = bishop

T = queen

last move:



h

B = (EOST) Letters with one uppercase, one lowercase.

The other five letters each "attack" one of the kings along a rank or a file, so there are <u>checks</u> by a queen <u>and</u> by a rook. No legal double check is possible

T 
$$\neq$$
  $\textcircled{B}$ If T =  $\textcircled{B}$ One of the kings is in check by letter B ( $\blacksquare$  b1,  $\clubsuit$  f1, or  $\textcircled{D}$  e1).B  $\neq$   $\textcircled{B}$ Both kings in check (b1 f1).ESX  $\neq$   $\textcircled{B}$ Impossible second check (b3, g3, or g1).O  $\neq$   $\textcircled{B}$ If O =  $\textcircled{B}$ Check (c6).B =  $\textcircled{D}$ Last move: Nf3-e1+. Double check.ESX  $\neq$   $\blacksquare$ Third check (b3, g3, or g1). $\blacksquare$  =  $\emptyset$ ?No letter can be rook. $\textcircled{B}$  =  $\emptyset$ ?No letter can be queen.

## **O** = 🛱

The letters BSTX each attack one of the kings along a diagonal, so there is necessarily a <u>check</u> by either a queen or a bishop. There is no legal double check by queen and bishop so the remaining letter E must be a queen or a bishop.  $E = ( \overset{\text{\tiny W}}{=} \overset{\text{\tiny A}}{=} )$ 

 $\mathbf{E} = \mathbf{A}$ E≠₩ Impossible second check (g5).

Therefore one king is in <u>check</u> by a queen.



 $T = rac{16}{2}$ B  $\neq rac{16}{2}$ Both kings in check (d6 e6). $S \neq rac{16}{2}$ Both kings in check (b5 g3). $X \neq rac{16}{2}$ Impossible double check (b4 d1).

The king on c6 is in <u>check</u> by the queen on g2.

BSX = (三心立) S = ☆ BX ≠ ☆ On 1st rank. caps = white If caps = black Impossible double check (pawn b5). X = ◇  $X \neq \Xi$  Both kings in check (b4). B = Ξ Check (d6).

Last move: 1.Rd6>e6++. Double check.

This move may or may not have been a capture.



## <u>Rebus 104</u>

"TakeN"



T = rook A = pawn K = knight E = king N = queen caps = white last move: 1...Rg5-g4+



B = (EKN) Letters with one uppercase, one lowercase.

A =	If E = 🗳	A≠ 🗳 Â Ô	Impossible multiple checks.
		A≠ Ä	Impossible check (f3). No last move.
	lf K = 🗳	A≠螢邕幻	Impossible multiple checks.
		A ≠ 🗳	Impossible check (f7). No last move.
	lf N = 🗳	A≠螢邕幻	Impossible multiple checks.
		A ≠ 🛱	Impossible check (f7). No last move.
cans =	white	The nawn fo	rmation with 'caps = black' would

caps = white

The pawn formation with 'caps = black' would require far too many captures.

With 16 pawns on the board, there are no promoted pieces.

Each side has made 3 captures with pawns.

White: d2xe3, g2xf3, h2xg3. Black: ...d7xe6, ...g7xf6, ...h7xg6.

That accounts for the 6 missing pieces. No other captures were made.





- $T \neq rac{1}{2}$  There are no promoted pieces. Each side has 2 T's.
- $T \neq A$  An unpromoted white bishop cannot be on h7 with black pawns on e7 f7 g6 g7.
- T ≠ 
   This is the tricky deduction. No queen, rook, or bishop escaped from the 1st or 8th rank until at least one pawn capture was made. So the first piece captured in the game had to be a knight. Therefore there cannot be 4 knights on the board. Each side has 2 T's.
- T = ≝ E = ∰
- K ≠ <sup>®</sup>
   Impossible check (b8).
   All captures were made by pawns, so the last move was not 1.Ra8xb8+.
   N ≠ <sup>®</sup>
   Impossible check (h4).

The last move was not the capture 1.Rxh4+.

The white king on d4 is in <u>check</u> by the black rook on g4.

Last move: 1...Rg5-g4+

N ≠ Â

**K** = a K  $\neq \textcircled{b}$  Impossible double check (b6).

N = ₩

An unpromoted white bishop cannot be on g8 with black pawns on e7 f7 g6 g7.



### <u>Rebus 105</u>

Andrey Frolkin & Jeff Coakley Chessproblems.ca Bulletin 15, 2018 corrected version Puzzling Side of Chess 2023

"New Year"

N = queen



E = pawn W = bishop Y = king A = rook R = knight caps = white last move: 1...h6-h5+



- Y = 3 Only letter with one uppercase, one lowercase.
- $E \neq \[Both kings in check (e3 f4). Because an E stands$ adjacent to each king, checks from a queen or rookon e3 and f4 cannot be blocked by adding a pieceon an intervening square.
- $E \neq \hat{A}$  Impossible and unblockable check (h5).
- $E \neq \triangle$  Both kings in check(c3 f2). Knight checks cannot be blocked.
- $N = rac{16}{2}$ WAR  $\neq rac{16}{2}$ Too many lowercase promotions.There are six lowercase pawns on the board. At least<br/>two of the 4 lowercase W's are promoted pieces. $W \neq rac{16}{2}$ 6 pawns + 3 promoted queens? $AR \neq rac{16}{2}$ 6 pawns + 1 promoted queen + 2 promoted W?

The king on e4 is in <u>check</u> from <u>three</u> queens (a4 b7 c2). To legalise the position, two or three of these checks must be eliminated by adding pieces.

This version of the problem eliminates dual solutions as published in 2018. Among other alternatives, adding a white pawn on f5 instead of a knight was also possible. The original problem had e/b5, e/f6, w/f2, r/h7, with h3 vacant.

The pawn formation with caps = black is possible, but it requires more captures than with caps = white. So the resulting position cannot be legalised because there are not enough missing pieces available to block all the impossible checks. Analysis of this try is given after the solution with caps = white is completed.

caps = white



The white king (g4) is in <u>check</u> by the black pawn on h5.

Last move: <b>1h6-h5+</b> .	This check cannot be blocked.

W	=	Â	

W ≠ ¤ W ≠ ∮)

Both kings in check (e5). Impossible double check (f6).

The white king is in <u>check</u> from <u>two</u> bishops (e2 e6). To legalise the position, these checks must be eliminated by adding pieces.

**R** =  $\triangle$  R ≠  $\square$  Impossible double check (h4). **A** =  $\square$ 

The white king is in <u>check</u> from <u>two</u> rooks (g2 g6). Two more checks to eliminate by adding pieces.





To legalise the position, pieces must be added to eliminate the <u>seven</u> impossible checks. But which pieces on which squares?

There are nine missing pieces. Because seven are needed to block checks, only two pieces could have been captured earlier.

Black is missing a queen. White is missing a light-square bishop, two rooks, two knights, and three pawns. (Two pawns promoted to queen.)

Black has 6 pawns and 3 light-square bishops. So Black necessarily promoted two pawns on the light square b1. That means that the black a-pawn had to <u>capture</u> on the b-file to promote on b1. Another <u>capture</u> was made by one of the black doubled f-pawns. This accounts for both captures.

Three white pawns (ceh) are on the board. The white b-pawn did not promote. It was captured by the black a-pawn to clear the b-file so that the black ab-pawns could both promote on b1. Two white pawns queened without making a capture. This could only happen on the a-file and g-file. The white f-pawn did not promote. It cannot be replaced on the f-file to block a check. A white pawn on f3 would give check. A white <u>passed</u> pawn on f5 would require two additional captures. So the white b-pawn and f-pawn are the two pieces that were captured by black pawns. That leaves the white d-pawn. It could not promote and is available to add on the d-file.





So the 7 pieces that can be added to the board are a black queen, two white knights, two white rooks, a white light-square bishop, and a white pawn (on the d-file).

Law and order is achieved by adding Bc4 bQd3 Pd5 Nf3 Nf5 Rg3 Rg5.

The white light-square bishop cannot be on c6 d3 d5 f3 f5 because it would give check, so it is added on c4.

The white d-pawn cannot be on d3 because of check, so it is added on d5. The black queen cannot be on f3 f5 g3 g5, so it goes on d3. The white knights cannot be on g3 g5, so they go on f3 f5. Leaving the white rooks for g3 g5.



Another new year!

The try *caps* = *black* is easy to refute.

See diagram at right.

In this case, there is no check by the pawn on h5.

R =	R ≠ Ä	Impossible check (h4).
	R ≠ Â	Impossible check (h3).
A = 🛱	A ≠ 🛱	If A = Â, then W = ⊟.



Too many promotions. Caps - black White has 6 pawns and 3 promoted pieces (2 rooks and 1 light-square bishop).

**W =** 🔔 Diagram.

There are 7 checks: 3 by black queens, 2 by white rooks, and 2 by white bishops. To legalise the position, 6 of those checks must be blocked by adding pieces. But that is impossible.

There are 9 missing pieces.

The pawn formation with 3 sets of inverted pawns (ceh) and 4 promotions required at least 7 captures.

That leaves only 2 missing pieces available for adding to the position. And 6 are needed to block checks. Therefore, caps  $\neq$  black.



Until next year!

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