



THE PUZZLING SIDE OF CHESS

Jeff Coakley

ROOK AND KNIGHT PAIRS

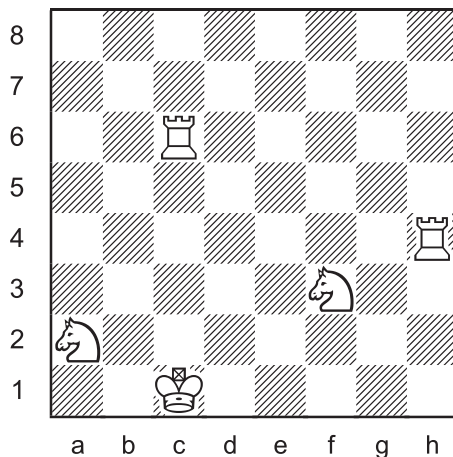
number 86

March 20, 2015

This column presents seven puzzles of various types, all involving rooks and knights. The grand finale is a very challenging “eight pair loop”.



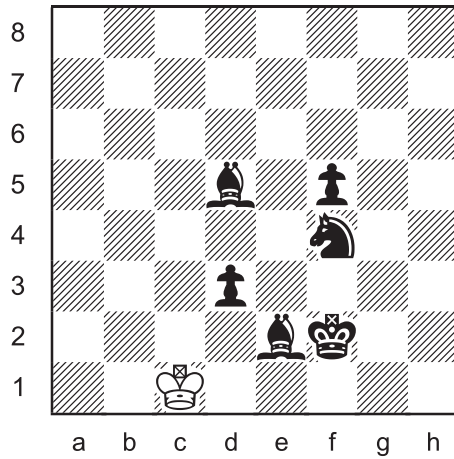
Triple Loyd 43



Place the black king on the board so that:

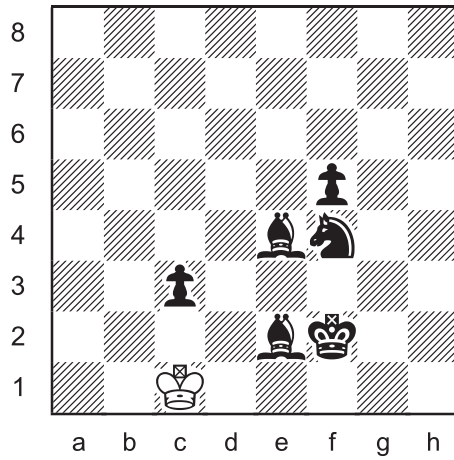
- A. Black is in checkmate.
- B. Black is in stalemate.
- C. White has a mate in 1.

Inverted Loyd 16

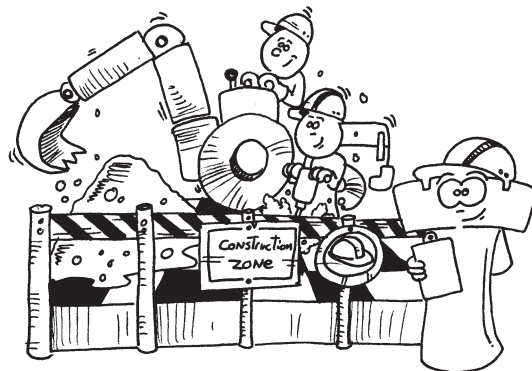


Add two white rooks and two white knights so that White has mate in one.

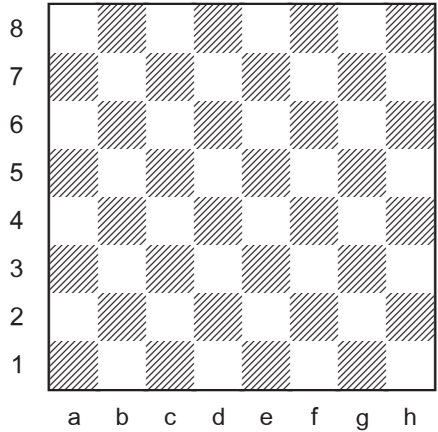
Inverted Loyd 17



Add two white rooks and two white knights so that White has mate in one.



Construction Task 08



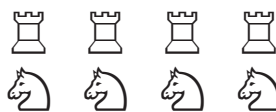
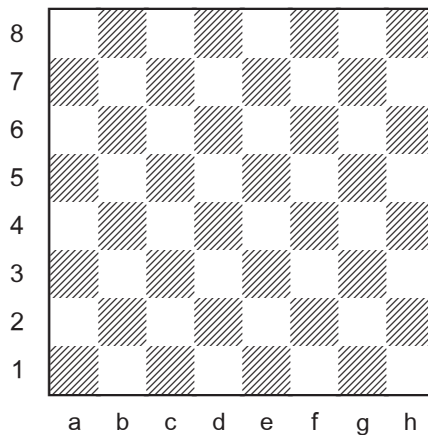
Construct a position with a white king, two rooks, and two knights against a lone black king so that White has the most mates in one move.

8a. Discovered checks are not allowed.

8b. Discovered checks are allowed.

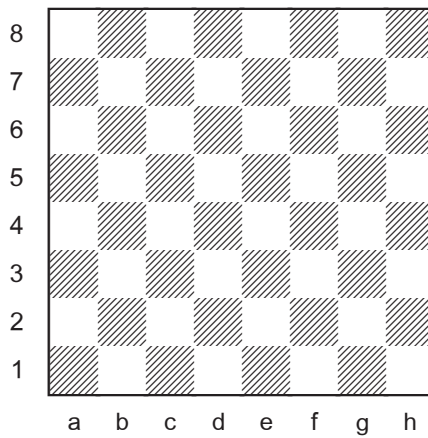
In *part b*, each different move by a piece that uncovers mate is counted separately. Constructed positions must be legal. In other words, they must be reachable from an actual game.

4 Rook 4 Knight Independent Domination

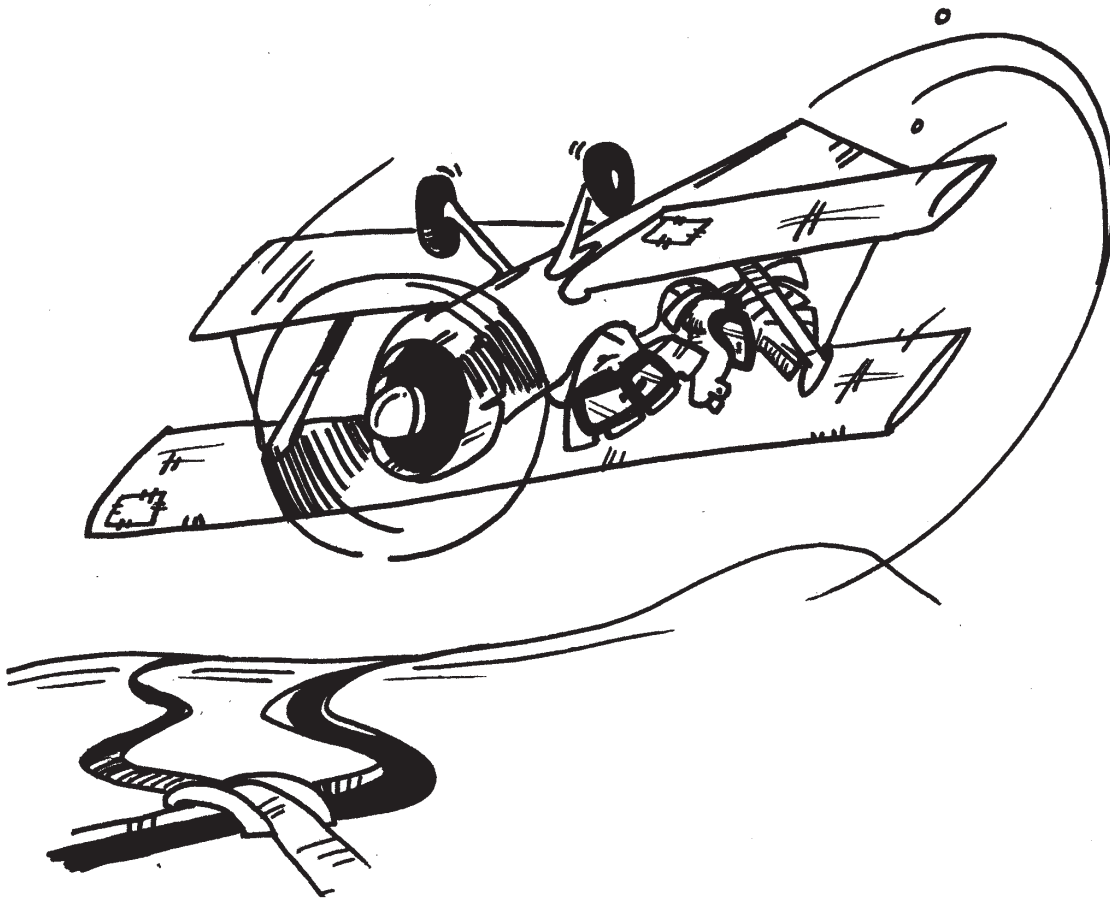


Place four rooks and four knights on the board so that no pieces are guarded and all vacant squares are attacked.

5 Rook 5 Knight Total Domination



Place five rooks and five knights on the board so that all pieces are guarded and all vacant squares are attacked.

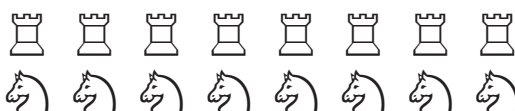
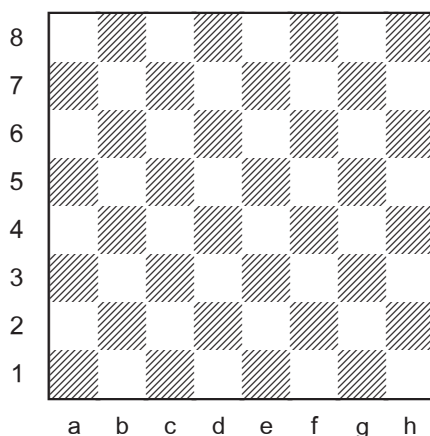


*R & N Stunt Pilot School
"Buckle Up!"*

Our final puzzle has three parts, each with an additional pair of pieces. Part A is a fun relatively easy warm-up. Part B requires more effort and may test your defensive skills. Part C is the stumper. I gave up after several hours without finding a solution. Fortunately, computer assistance from Adrian Storisteanu enabled us to solve the task. In quite an interesting way.

Congratulations in advance to anyone making an 8R 8N loop on their own.

Rook & Knight Defensive Loops



Place an equal number of rooks and knights on the board so that each piece is defended exactly once and each piece defends exactly one other piece. The chain of defence must form a continuous loop.

- A. Six rooks and six knights
- B. Seven rooks and seven knights
- C. Eight rooks and eight knights

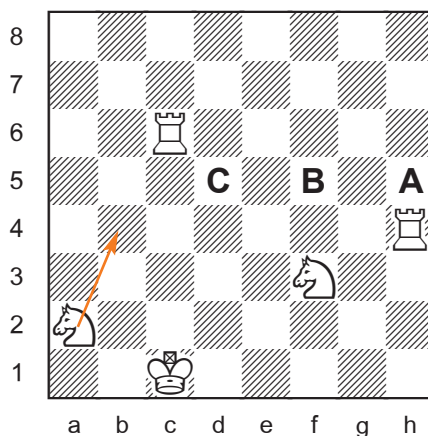


SOLUTIONS

All puzzles by J. Coakley. Construction task 08 is from *Winning Chess Puzzles For Kids Volume 2* (2010). The others are *ChessCafe.com* originals (2015).

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.

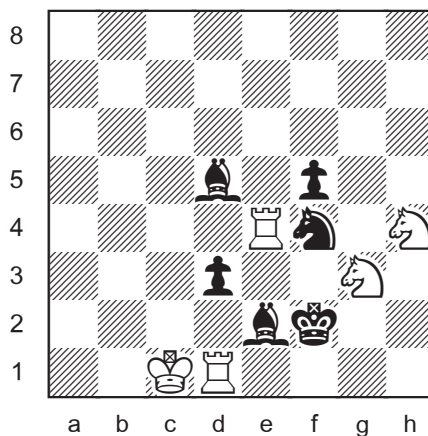
Triple Loyd 43



- A. Kh5#
- B. Kf5=
- C. Kd5 (Nb4#)

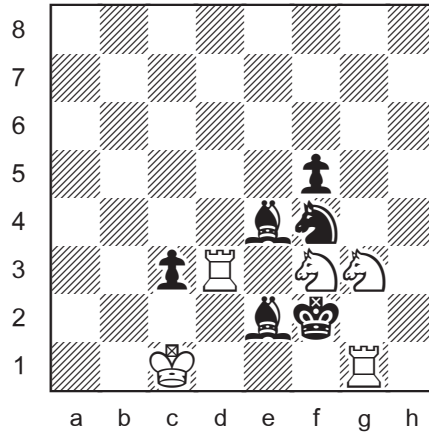
For more triple loyds, see *Men in Black 3* (column 56).

Inverted Loyd 16



Rd1 Re4 Ng3 Nh4 were added.
1.Nh1#

Inverted Loyd 17

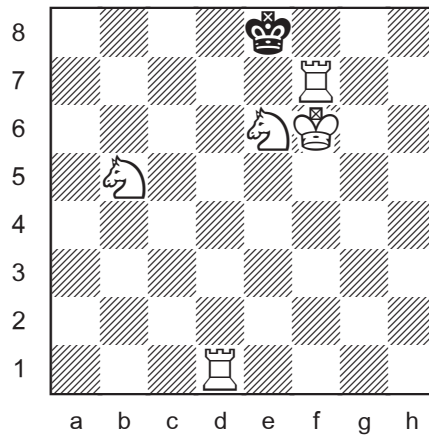


Rd3 Rg1 Nf3 Ng3 were added.
1.Nh1#

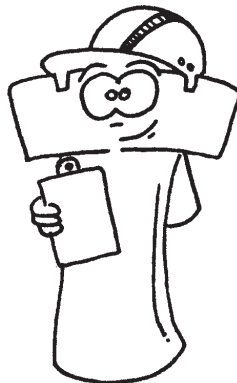
Construction Task 08

8a

no discovered checks

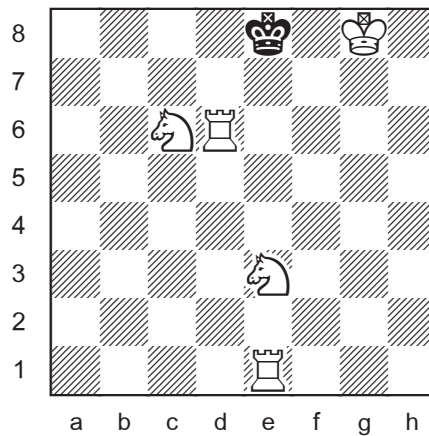


7 mates in one
(2N + 1R + 2N + 2R)



8b

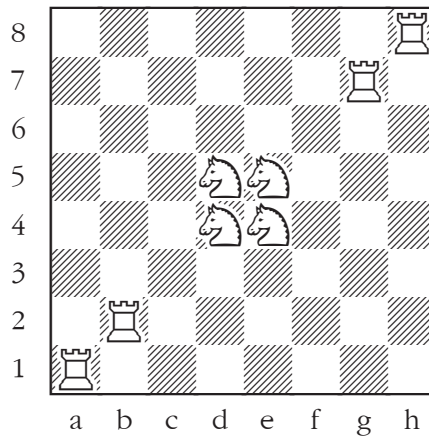
with discovered checks



9 mates in one
(0N + 1R + 0R + 8N)

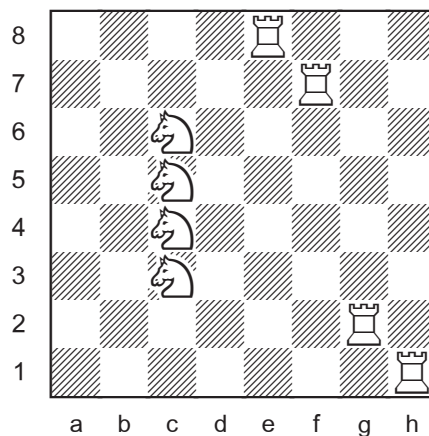
For more *construction tasks*, see *Minor Niner* (column 70).

4R 4N Independent Domination

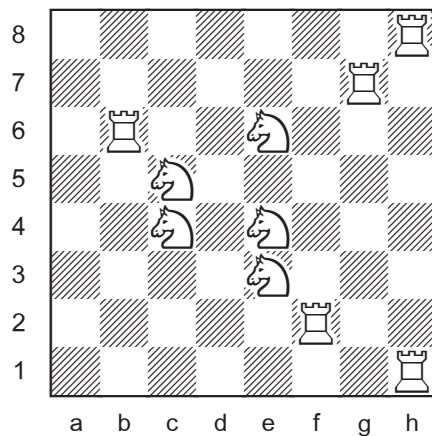


No piece guarded. All vacant squares attacked.

There are many solutions. Here's another.



5R 5N Total Domination



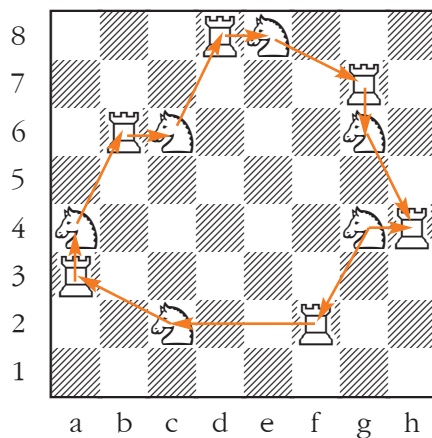
All pieces guarded. All vacant squares attacked.

There are many solutions.

For similar problems, see *Board Domination* (column 6) and *Minor Inconvenience* (column 71).

Rook & Knight Defensive Loops

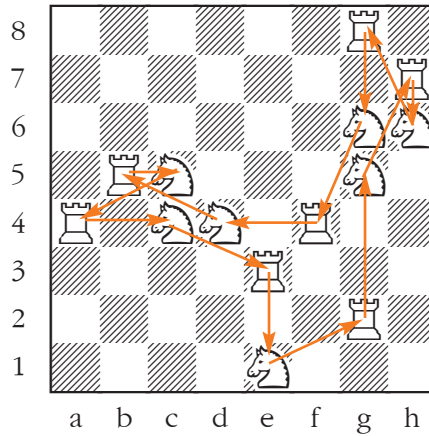
A



Six rooks, six knights. One of innumerable solutions.

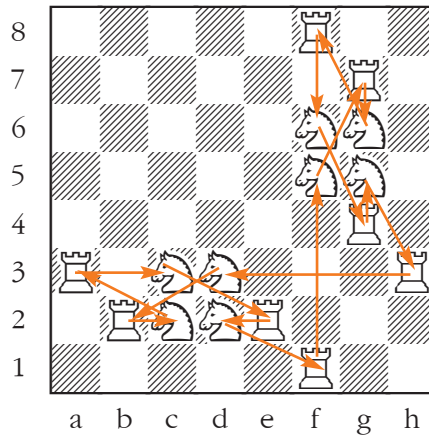


B



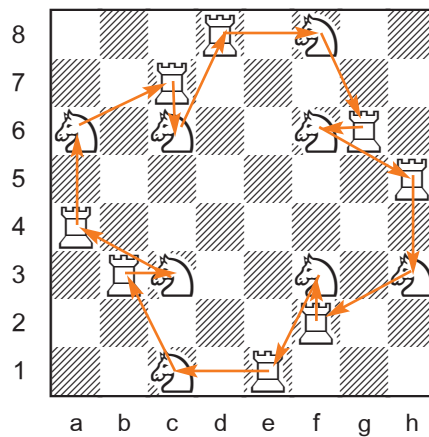
Seven rooks, seven knights. There are many solutions.

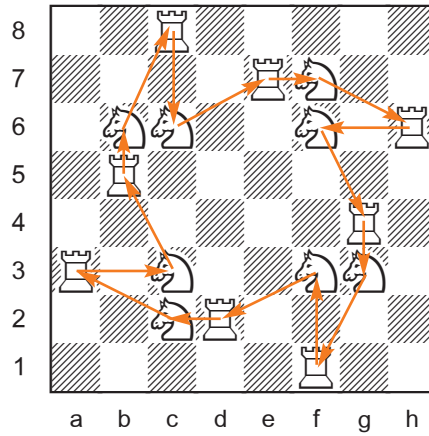
C



Eight rooks, eight knights. There are three basic patterns. All three are symmetrical! With rotation and reflection, a total of eight different solutions (4 + 2 + 2).

Thanks to Caisay 4.1 for the analytic assist.





In case you were going to try, a 9R 9N loop is impossible.

Until next time!

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