

THE PUZZLING SIDE OF CHESS

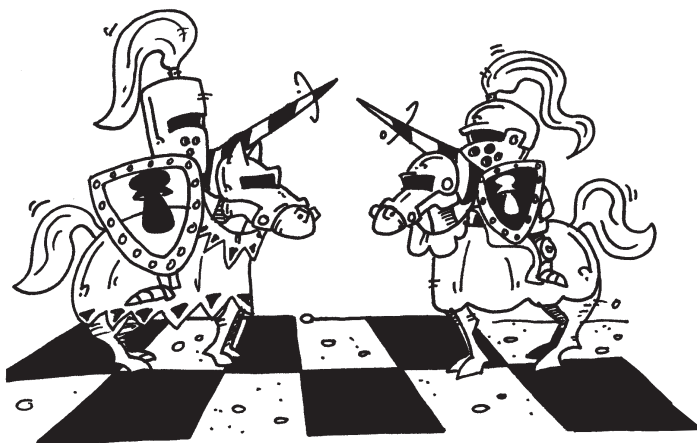
Jeff Coakley

QUEEN AND KNIGHT PAIRS

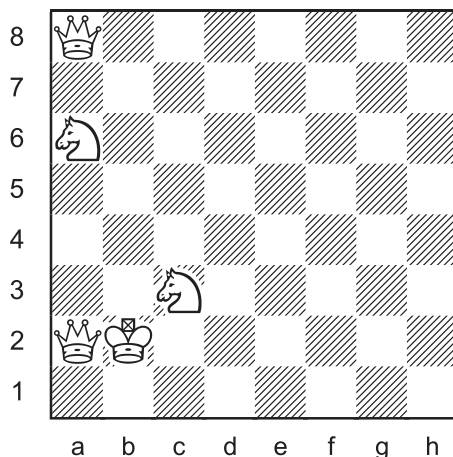
number 143

February 24, 2018

This column presents six puzzles of various types, all involving queens and knights. Our side theme is the peculiar evolution of knighthood.



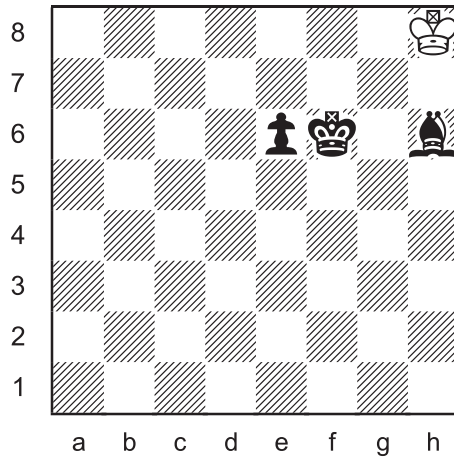
Triple Loyd 70



Place the black king on the board so that:

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

Inverted Loyd 46



Add white queen and knight
so that White has mate in 1.

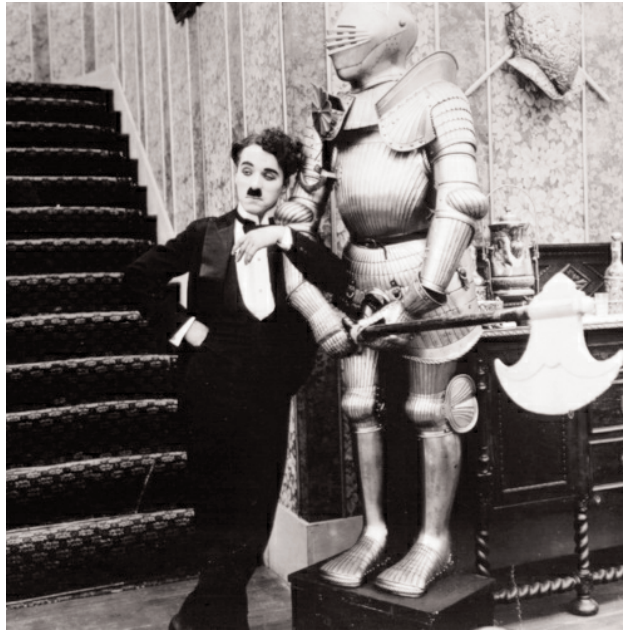


The Accolade Edmund Blair Leighton 1901

Everyone knows what a knight is. A noble warrior from times long ago, clad in armour, skilled with horse and sword, dedicated to serving his queen. A hero whose bravery lives on through the chess piece that bears his name.

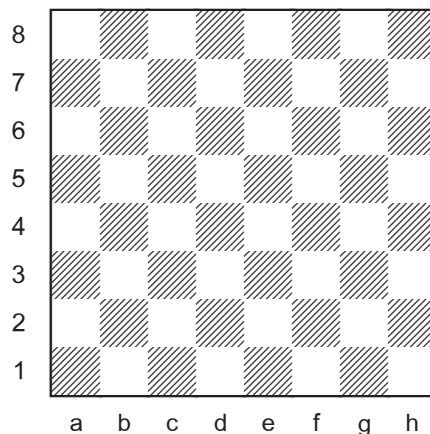
But the modern British monarchy has a very different idea about knighthood. As absurd as it seems, the Queen of England now bestows the title on famous actors and musicians.

Court jesters as knights! Sir Lancelot must be turning in his grave.



Sir Charlie Chaplin, knighted in 1975.

Construction Task 14



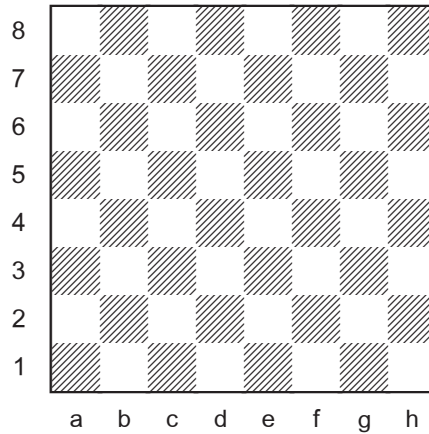
Construct a position with a white king, two queens, and two knights against a lone black king so that White has the most mates in 1.

14a. Discovered checks are not allowed.

14b. 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 Queen 4 Knight Move Maximizer

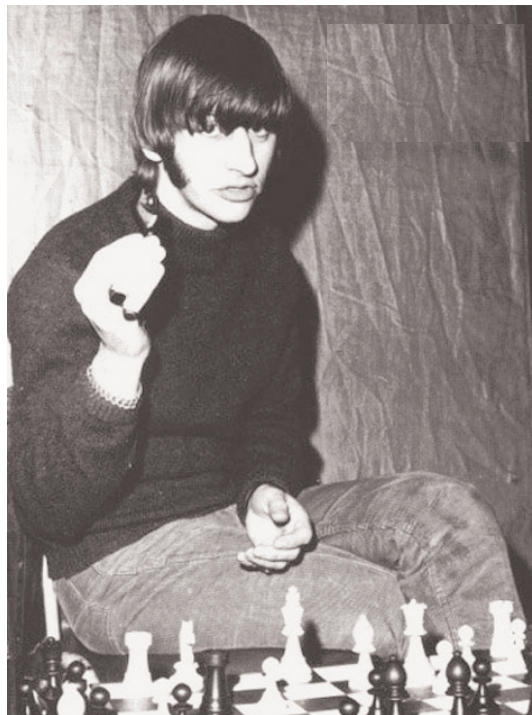


Place four queens and four knights on the board so that they have the most total moves.

4 Queen 4 Knight Move Minimizer

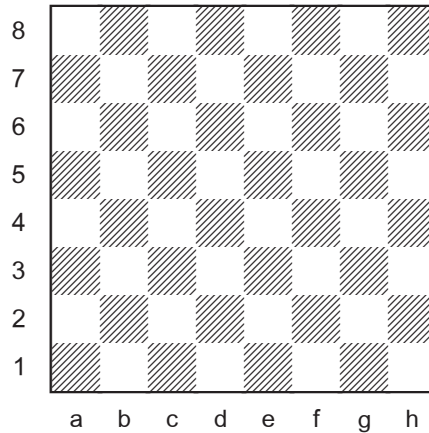
Place four queens and four knights on the board so that they have the fewest total moves.

Musicians who have been knighted for “services to music” include Paul McCartney, Elton John, Cliff Richard, Tom Jones, Mick Jagger, Ray Davies, Rod Stewart, Van Morrison, Ravi Shankar, George Martin, and just last month, Barry Gibb and Ringo Starr.



Sir Ringo

Queen & Knight Defensive Loops



Place an equal number of queens 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. four queens and four knights
- B. five queens and five knights
- C. six queens and six knights

Actors who have been knighted for “services to film or theatre” include Michael Caine, Sean Connery, Laurence Olivier, Patrick Stewart, Kenneth Branagh, Sidney Poitier, John Hurt, Roger Moore, Ian Holm, Ben Kingsley, Anthony Hopkins, Christopher Lee, Daniel Day-Lewis, Alfred Hitchcock, and Alec Guinness (Jedi knight *Obi-Wan Kenobi*).



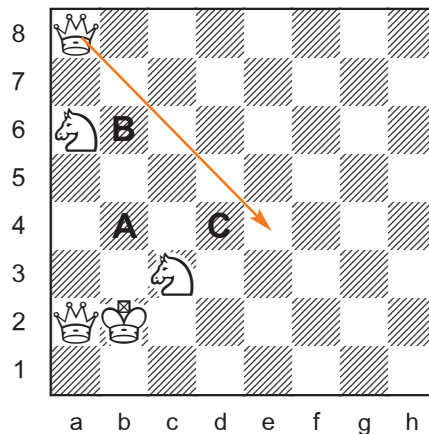
Sir Alec. The force is with him.

SOLUTIONS

All puzzles by J. Coakley, *Puzzling Side of Chess* (2018).
Computer analysis of 4Q/4N move maximizer and 6Q/6N loop
by Adrian Storisteanu (Caisay 4.1).

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 70



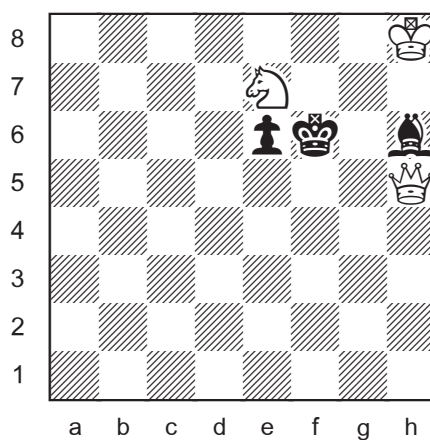
- A. Kb4#
- B. Kb6=
- C. Kd4 (Qe4#)

A rare multi-queen triple loyd. In part A, placing the king on a4 is an illegal double check.



Future grandmaster Sammy Reshevsky vs. Charlie Chaplin 1923

Inverted Loyd 46



Qh5 Ne7 were added.

1.Ng8#

Not too tough for the solver. But from a compositional point of view, it's tricky to limit the queen and knight for a unique solution.

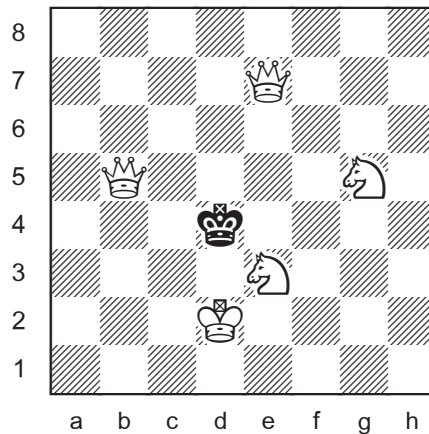


Queen and horse, 1951.

Construction Task 14

14a

no discovered checks



23 mates in one
(10Q + 10Q + 2N + 1N)

The last moves were 1.Ne6-g5+ Ke4-d4.

Another solution with 23 mates is:

Kd2 Qc7 Qg4 Na3 Nc3 vs. Kd4 (10 + 11 + 2 + 0).

This record has not been verified by computer. Can you beat it?



Sir Mick in drag.

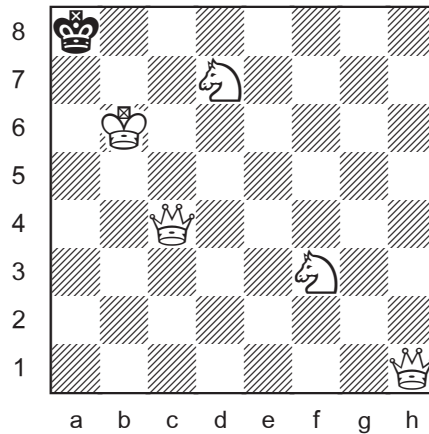
photo: Anton Corbijn, 1996

His bandmate Keith Richards described Jagger's knighthood as a "paltry honour", saying "It's not what the Stones is about."

Construction Task 14

14b

with discovered checks



18 mates in one
(8Q + 0N + 8N + 2Q)

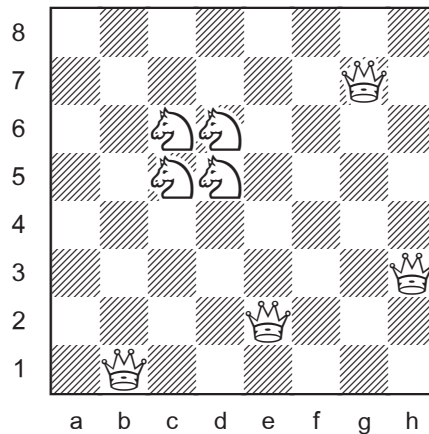
The maximum number of mates is greater without discovered checks.
Unusual for this type of problem.



Red queen, black knight.

It should be mentioned that actors and musicians are not the only breed of modern warriors. Many athletes, lawyers, politicians, and businessmen have also been knighted.

4Q 4N Move Maximizer



120 moves

(Q21 + Q23 + Q23 + Q21 + N32)

A record position found by the great Caisay, a program written by Canadian composer and computer expert Adrian Storisteanu. My own human efforts only achieved 117 moves.

There are seven patterns for the maximum solution. The first four are very similar, with just one piece placed differently (underlined).

Qb1 Qe2 Qg7 Qh3 Nc5 Nc6 Nd5 Nd6 (diagram)

Qb1 Qe2 Qg7 Qf4 Nc5 Nc6 Nd5 Nd6

Qb1 Qe2 Qg7 Qh4 Nc5 Nc6 Nd5 Nd6

Qf4 Qe2 Qg7 Qh3 Nc5 Nc6 Nd5 Nd6

Qd1 Qe4 Qf6 Qg3 Nb4 Nb5 Nc4 Nc5

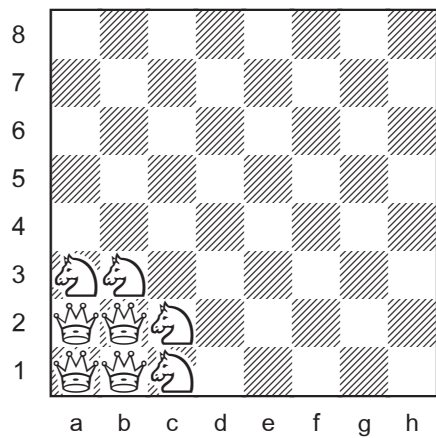
Qb5 Qc2 Qd4 Qg3 Ne6 Ne7 Nf6 Nf7

Qb5 Qd2 Qe4 Qg3 Ne6 Ne7 Nf6 Nf7



*King Arthur (Sir Sean Connery) and Lady Guinevere
First Knight 1995*

4Q 4N Move Minimizer



18 moves
(Q6 + N2 + N4 + N2 + N4)

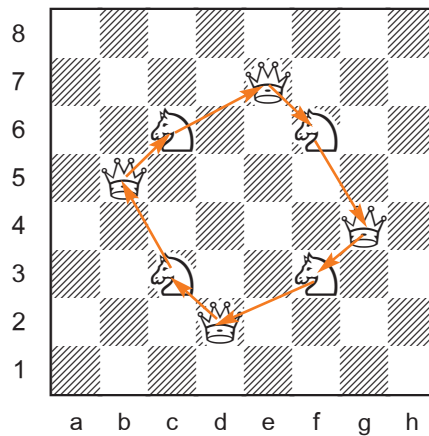


Sir Elton, ready for battle, 2007.

Not all British celebrities are keen to become knights. Some notable exceptions are David Bowie, author Aldous Huxley, and sculptor Henry Moore, who all turned down a knighthood.

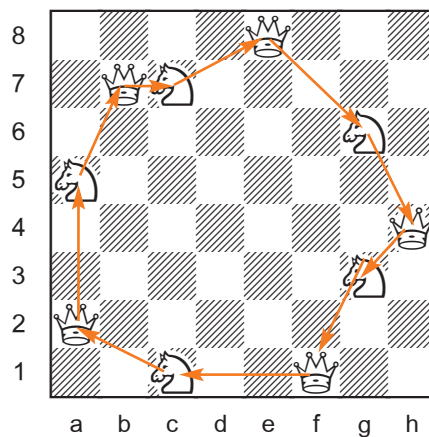
Queen & Knight Defensive Loops

A



Four queens, four knights. Each defends one piece, each is defended once. There are many solutions.

B

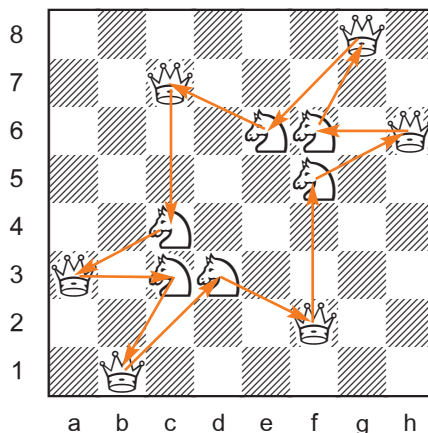


Five queens, five knights. There are many solutions (331 to be exact).



A pair of knights.

C



There are seven patterns. Thanks to Caisay 4.13 for the analytic assist.

Qa3 Qb1 Qc7 Qf2 Qg8 Qh6 Nc3 Nc4 Nd3 Ne6 Nf5 Nf6 (diagram)

Qa3 Qb1 Qc7 Qe8 Qf2 Qh6 Nc3 Nc4 Nd3 Ne6 Nf5 Nf6

Qa4 Qb6 Qc1 Qf8 Qg3 Qh5 Nc3 Nc4 Nd3 Ne6 Nf5 Nf6

Qa4 Qb1 Qc7 Qf2 Qg8 Qh5 Na6 Nb2 Nd2 Ne7 Ng7 Nh3

Qa6 Qb1 Qc7 Qf2 Qg8 Qh3 Nb4 Nb5 Nd2 Ne7 Ng4 Ng5

Qa6 Qb1 Qd7 Qe5 Qf2 Qg8 Nb4 Nc3 Nf3 Nf8 Nh3 Nh6

Qa5 Qb1 Qd7 Qe2 Qg8 Qh4 Na3 Nc1 Nc6 Nf3 Nf8 Nh6

Six queen and knight pairs are the maximum for this task.



Coming soon: an entire column about defensive loops, featuring new computer analysis by François Labelle. Among other things, he has calculated that the puzzle presented last month with 8 pairs of rooks and bishops is in fact impossible. So we can stop trying to solve it!

Until then.

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