



# THE PUZZLING SIDE OF CHESS

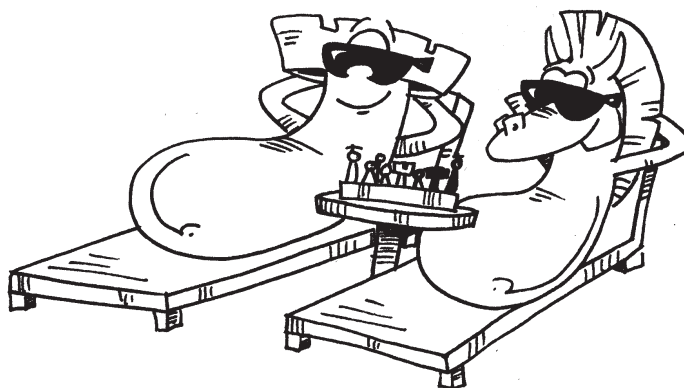
Jeff Coakley

## LOYDS AND RHOMBOIDS

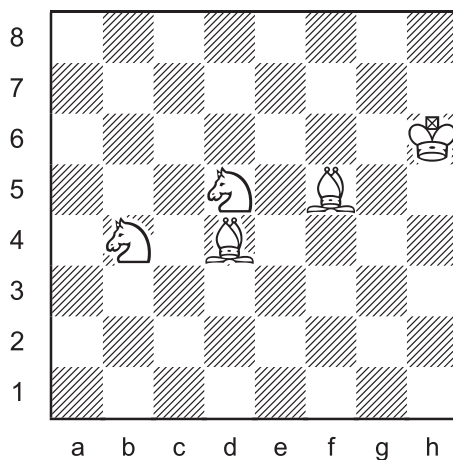
number 122

August 20, 2016

Relaxing in the sun, pondering the nature of life and fun. "Four puzzles and two lemonades, please."



### Triple Loyd 58



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.



The final puzzle may require a geometric introduction. A *parallelogram* is a four-sided figure in which the opposite sides are parallel and equal in length. There are four types:



square



rectangle



rhombus

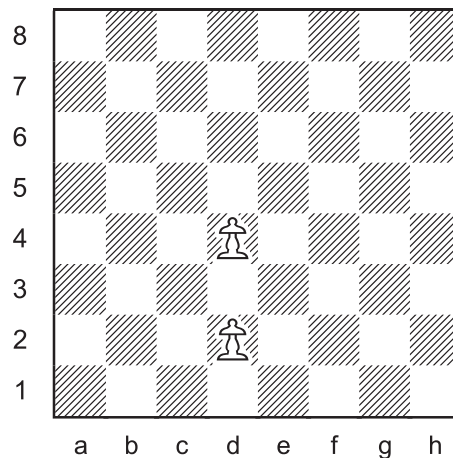


rhomboid

Squares and rectangles have right angles ( $90^\circ$ ). Rhombi and rhomboids do not.

In squares and rhombi, all four sides are equal in length. In rectangles and rhomboids, only opposite sides are equal.

### Rhomboids



- A. In how many ways can two pawns be added to the board so that the four pawns form a rhomboid?

*Do not count squares, rectangles, or rhombi.*

- B. How many squares, rectangles, and rhombi can be formed by adding two pawns?

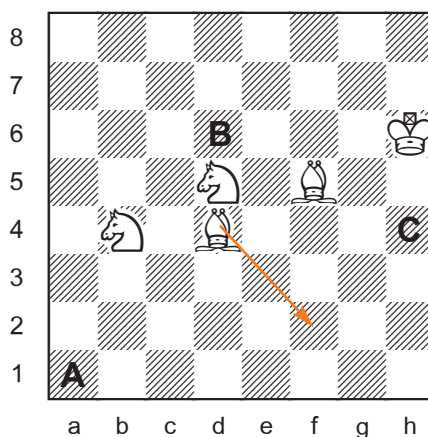


## SOLUTIONS

All problems by J. Coakley, *Puzzling Side of Chess* (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.

### Triple Loyd 58

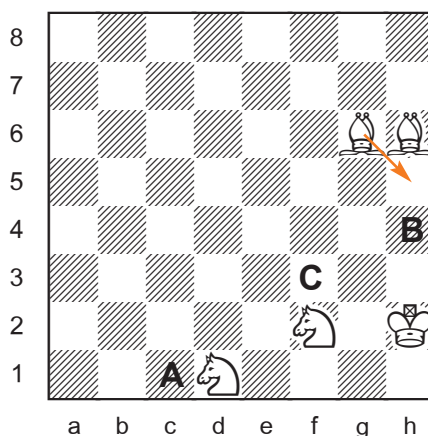


- A. Ka1#
- B. Kd6=
- C. Kh4 (Bf2#)

Criss-cross mate.

Not named for singer Christopher Cross of "Sailing" fame.

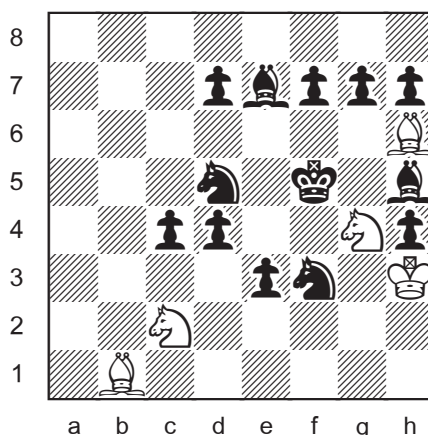
### Triple Loyd 59



- A. Kc1#
- B. Kh4=
- C. Kf3 (Bh5#)

Minor pieces and major keys.

## Inverted Loyd 38

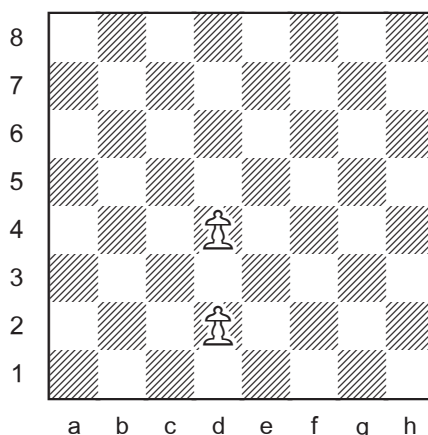


Bb1, Nc2, Ng4, Bh6 were added.

1.Nxd4#

*[March 2025: Diagram corrected, adding a black pawn on h7.]*

## Rhomboids



There are **47** ways to form a rhomboid by adding two pawns.

Same file (35):

a1-a3, a3-a5, a4-a6, a5-a7, a6-a8, b1-b3, b3-b5, b4-b6, b5-b7, b6-b8  
 c1-c3, c3-c5, c4-c6, c5-c7, c6-c8, e1-e3, e3-e5, e4-e6, e5-e7, e6-e8,  
 f1-f3, f3-f5, f4-f6, f5-f8, g1-g3, g3-g5, g4-g6, g5-g7, g6-g8,  
 h1-h3, h3-h5, h4-h6, h5-h7, h6-h8

Mixed files (12):

a1-g5, a2-g4, a4-g2, a5-g1, b1-f5, b2-f4, b4-f2, b5-f1, c1-e5, c2-e4,  
 c4-e2, c5-e1

The four sides are not equal with b1-b3.

See the next page for parallelograms that are not rhomboids.

**3** ways to form a square.

b2-b4, f2-f4, c3-e3!

**5** ways to form a rectangle.

a2-a4, c2-c4, e2-e4, g2-g4, h2-h4

**2** ways to form a rhombus.

a3-g3, b3-f3

Total number of parallelograms =  $47 + 3 + 5 + 2 = 57$

Until next time!

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