



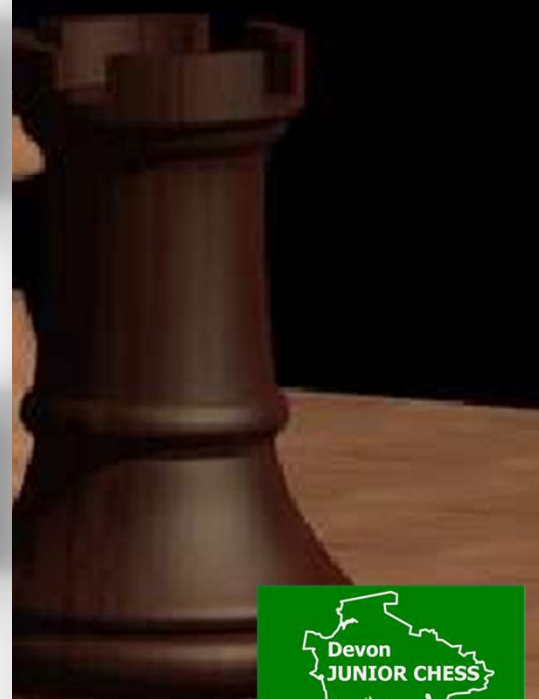
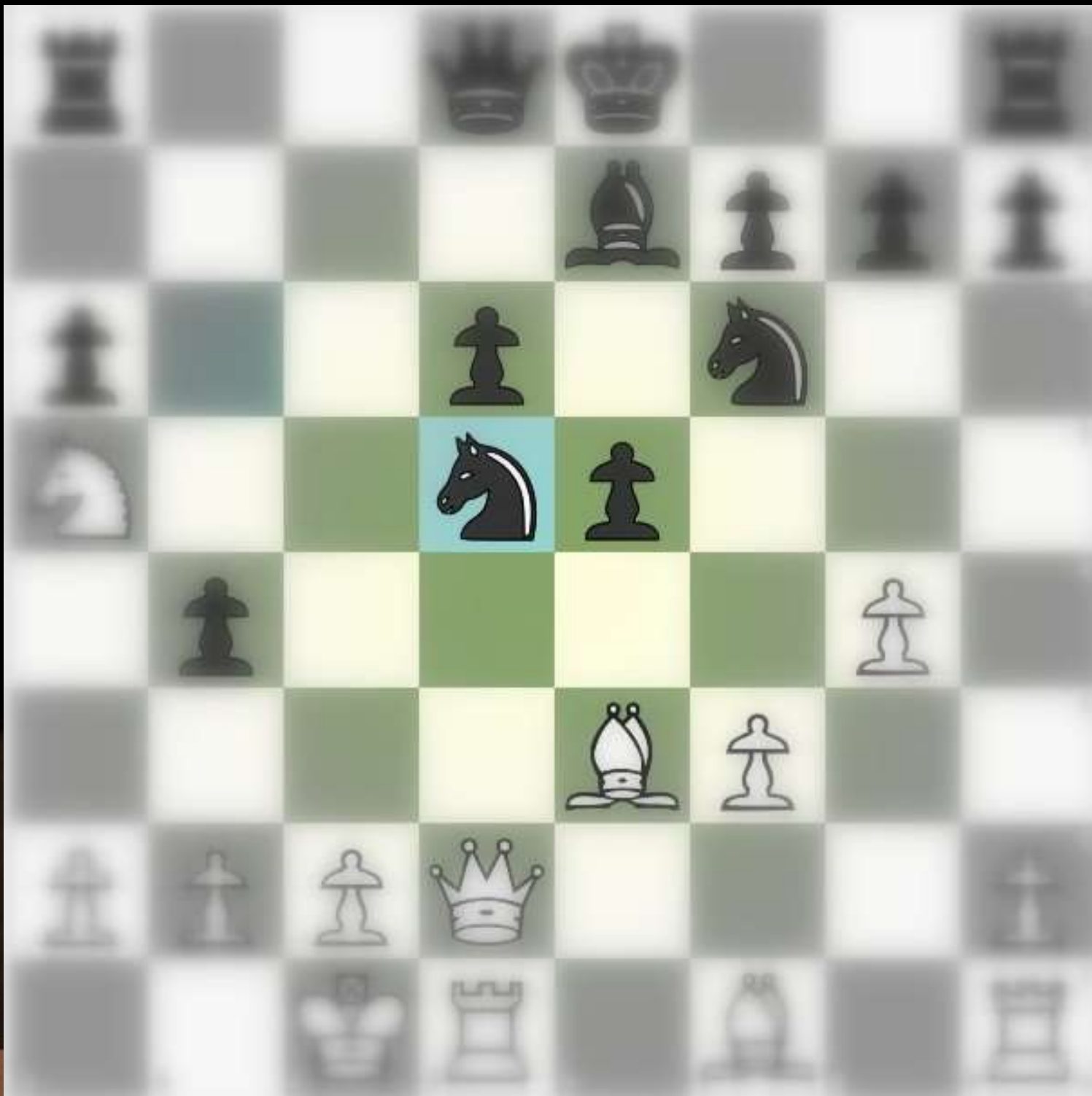
Boardsight and Visualisation



Boardsight







8 Queens



Place 8 black Pawns on the chessboard, so that, if they were Queens, no Queen would attack/defend any other Queen

Tough to mark your own homework!

<https://www.chessmail.eu/pages/eight-queens-puzzle> and phone apps

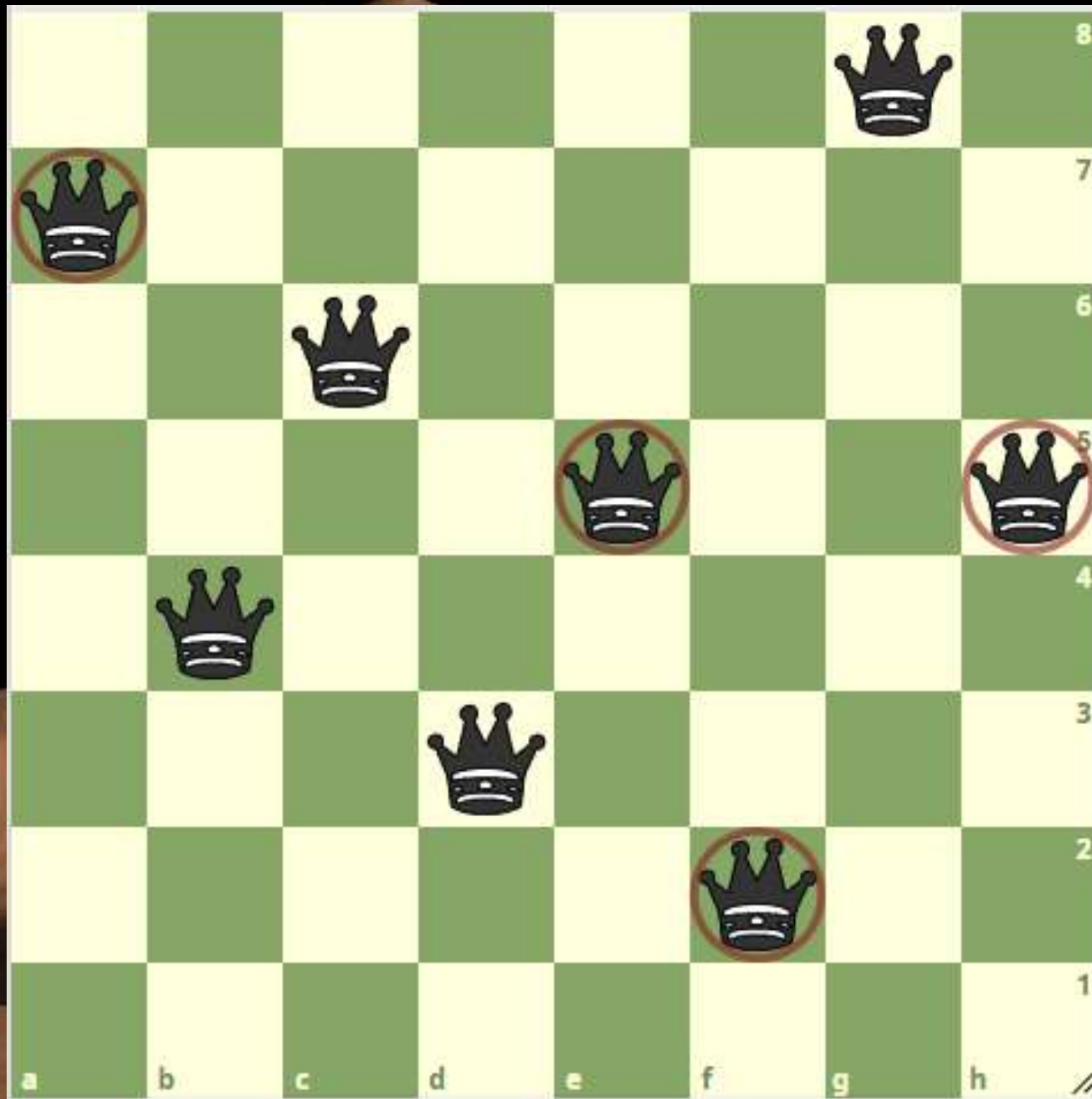
Similar:

What's the most bishops you can get on a board so that no bishop attacks or defends another? (Steven Addison)

Rooks?

Knights?

8 Queens



Jeff Coakley, Winning Chess



Exercises

wKe4. From how many squares can a black LSB safely check it?

How many minor pieces does it take to attack every square on a file?

wNe4. How many squares are there which the Knight will take more than three moves to hop to?

wBf1. How many ways can the Bishop reach e4 in three moves?

Place a R and B on the board so the most squares are attacked by both pieces. THEN, R&N, Q&R, Q&N, Q&B

Arrange five queens on the board so that every single square is attacked. How many Knights to do the same thing? Bishops?

Rooks?



Martin Gardner's chess posers

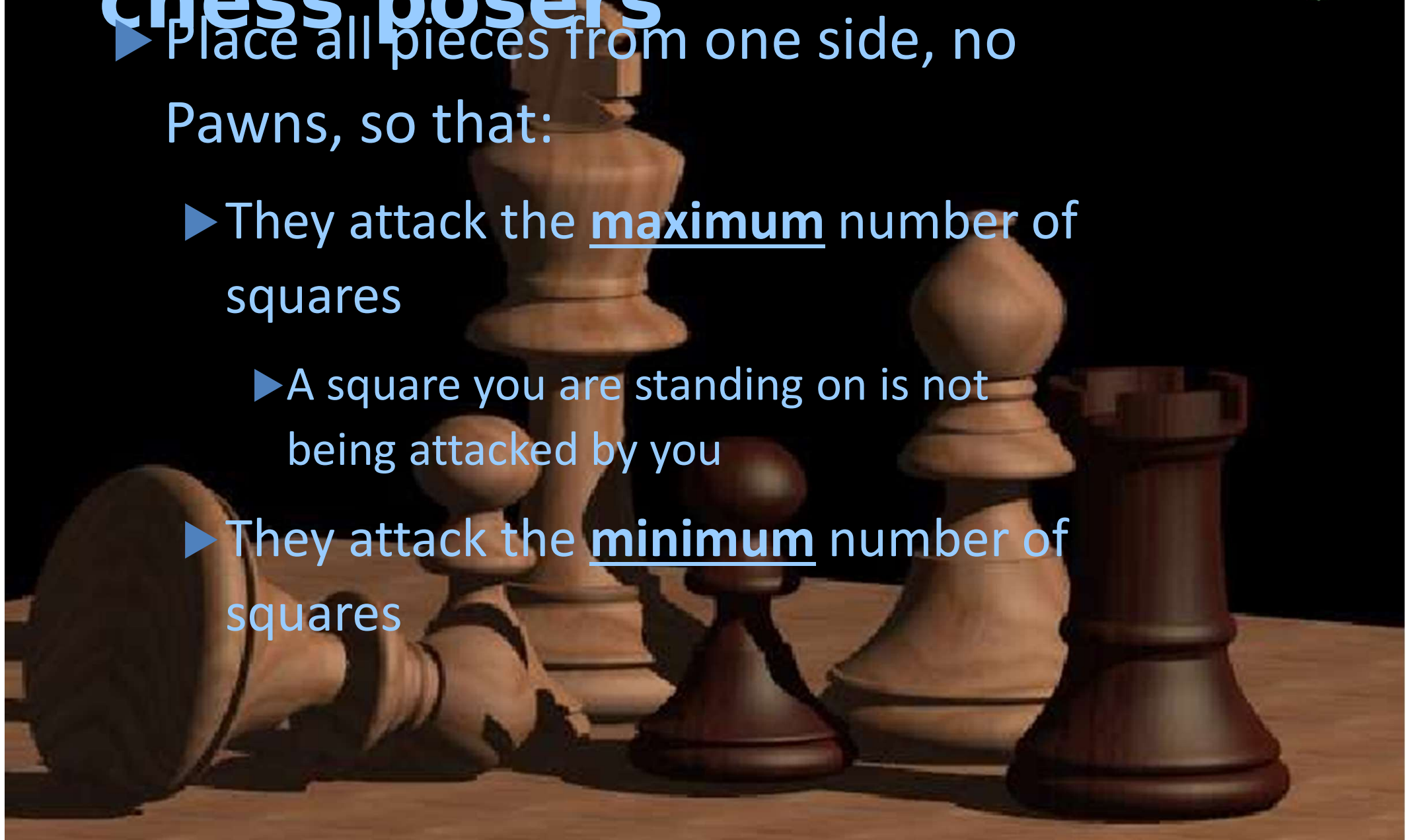
▶ Place all pieces from one side, no

Pawns, so that:

▶ They attack the maximum number of squares

▶ A square you are standing on is not being attacked by you

▶ They attack the minimum number of squares





Checks and captures

Find a position in a book or database or <https://chessfromposition.com/home> or <https://github.com/Stannislav/chess-gen>

Count all the checks and captures available for both sides in that position (doesn't matter if they are bad moves, count them)

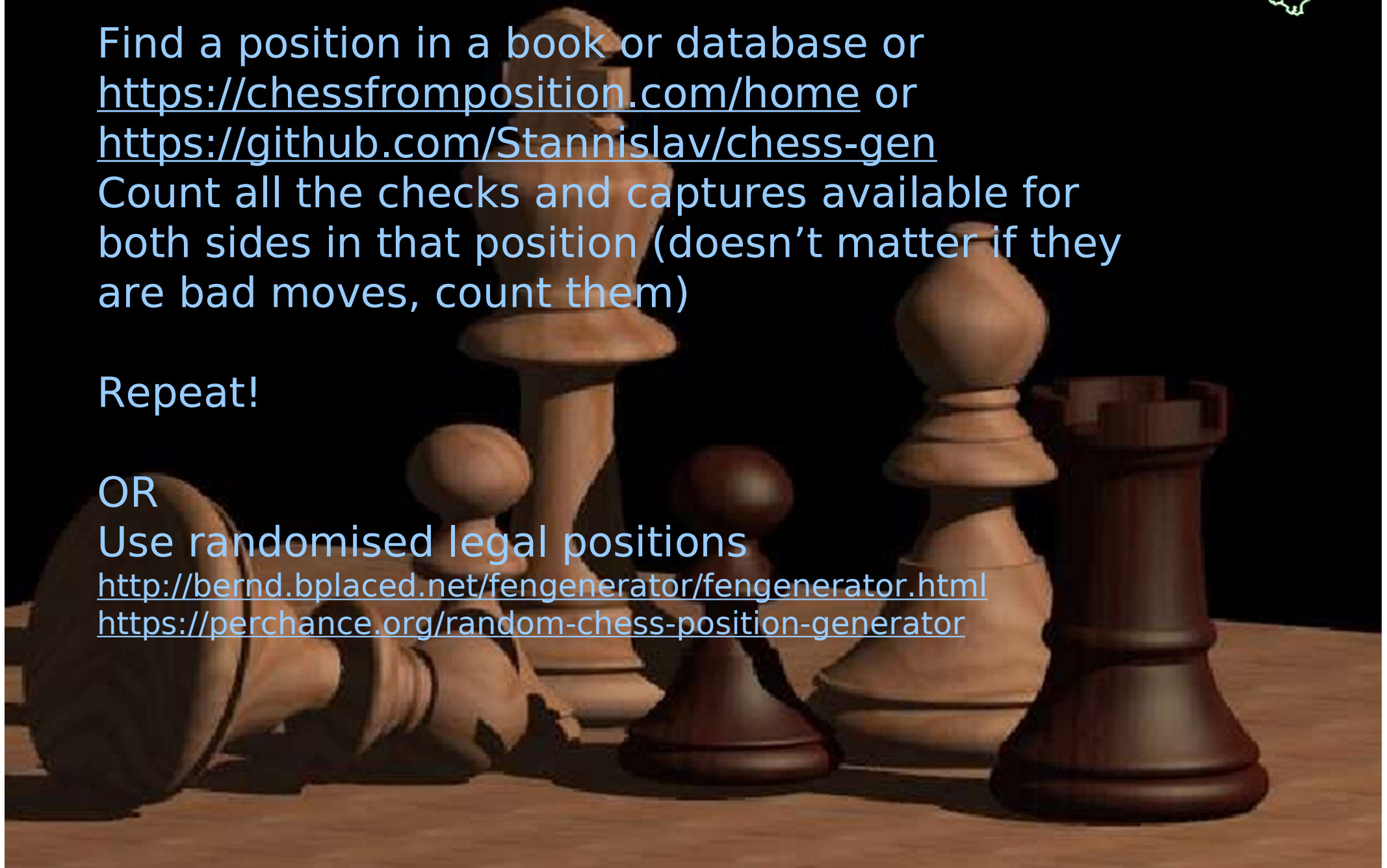
Repeat!

OR

Use randomised legal positions

<http://bernd.bplaced.net/fengenerator/fengenerator.html>

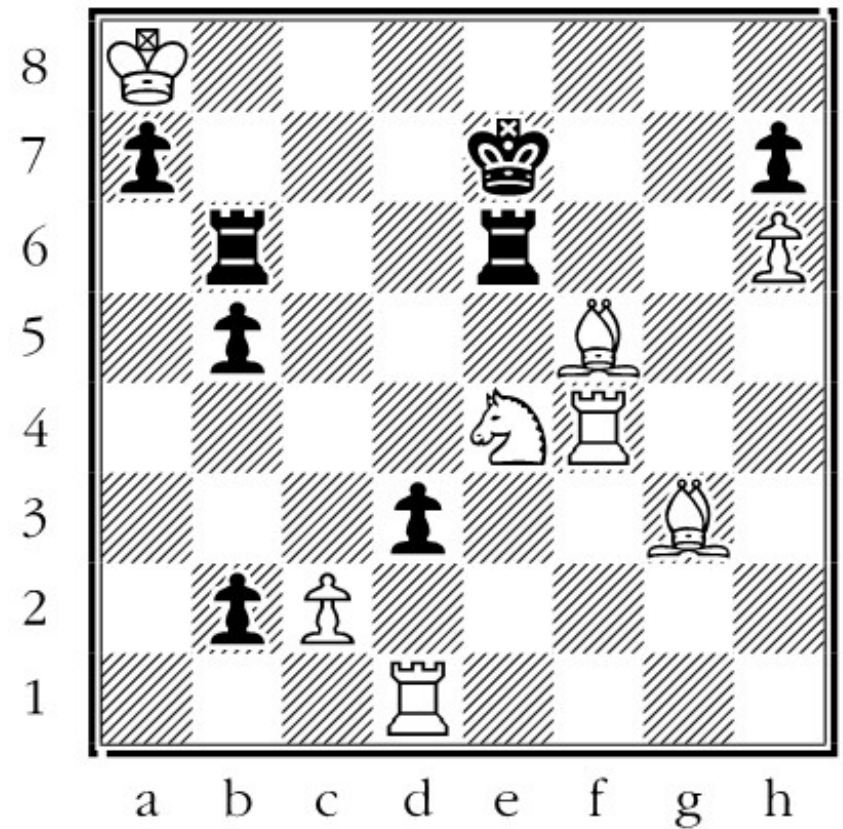
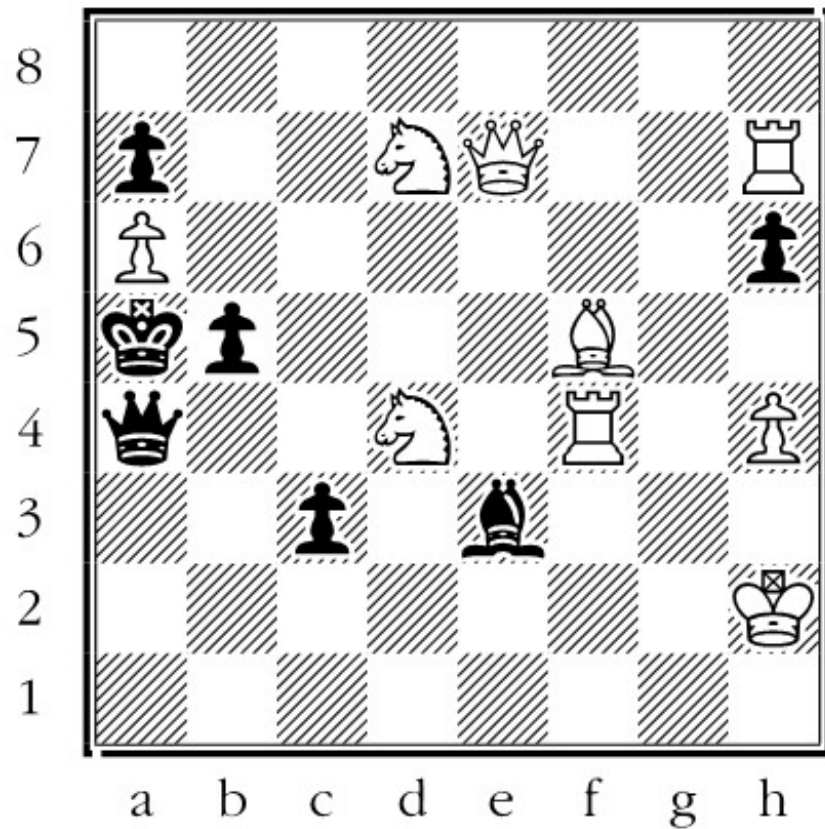
<https://perchance.org/random-chess-position-generator>



Checks and captures



Count them!





Getting your homework marked

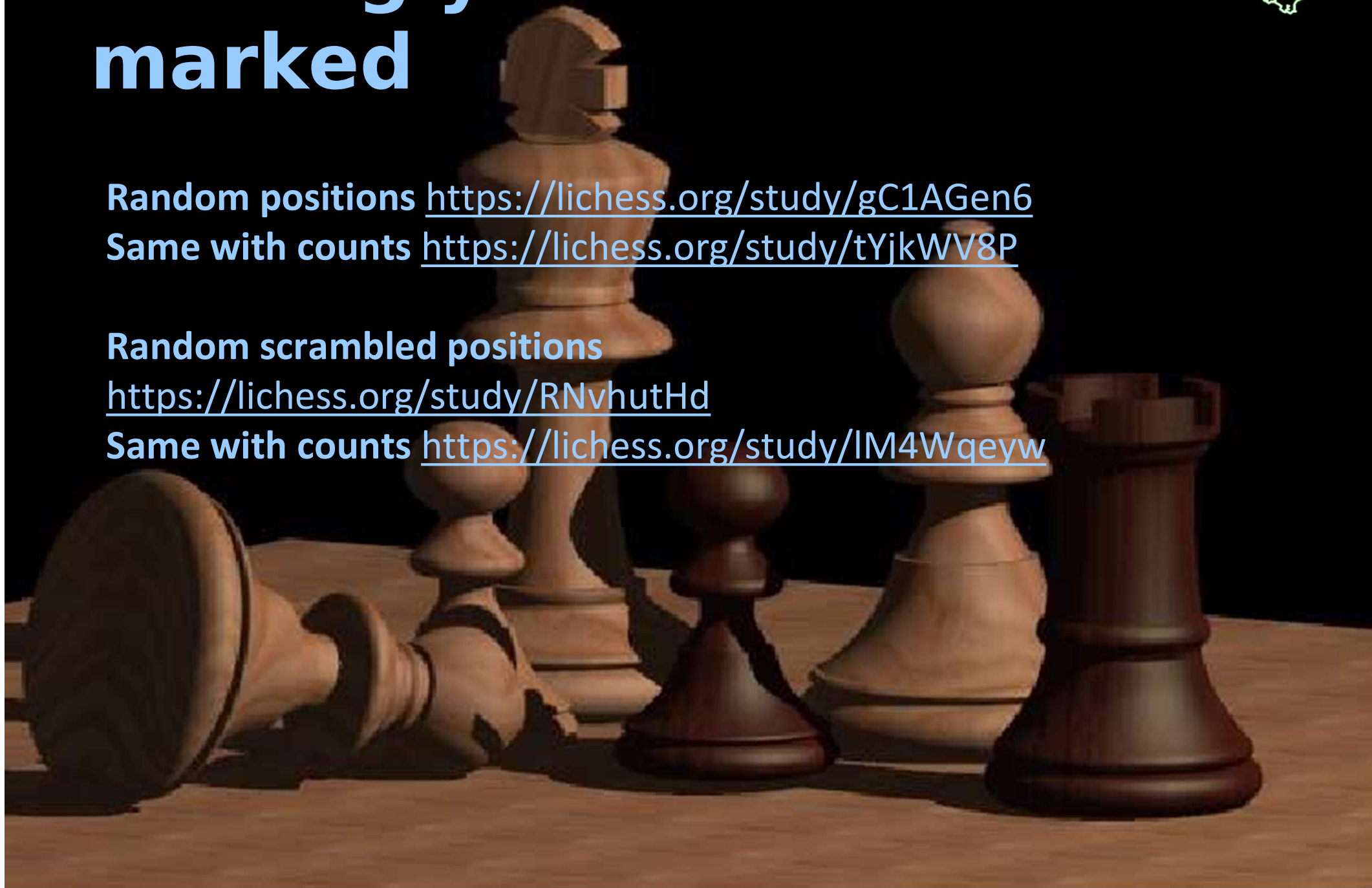
Random positions <https://lichess.org/study/gC1AGen6>

Same with counts <https://lichess.org/study/tYjkWV8P>

Random scrambled positions

<https://lichess.org/study/RNvhutHd>

Same with counts <https://lichess.org/study/IM4Wqeyw>





Dave's posers

Place all pieces from one side, no Pawns, so that:

None are attacked/defended OR

They are all defended exactly once and defend just one other piece

Place all pieces from both sides, no Pawns, so that:

All the white pieces are all defended, while all the White pieces are attacking a black piece AND No black pieces are defended, but all are attacked

Try again with just one defender for each white piece, one attacker for each black piece, each white piece making just one attack

Visualisation





Problems 13-21: Visualizing Knight Moves

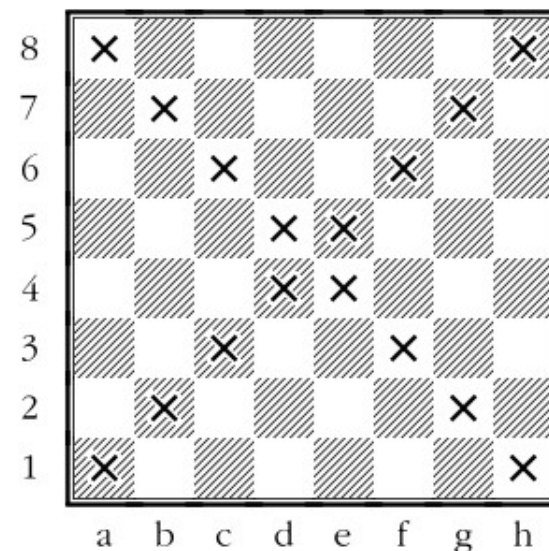
For each problem, a starting square and an ending square are listed. Find the shortest path for a knight to move from the first square to the second one. There will often be more than one correct answer. A solution for Problem 13 is provided as an example.

Special Instructions for Problems 13-21

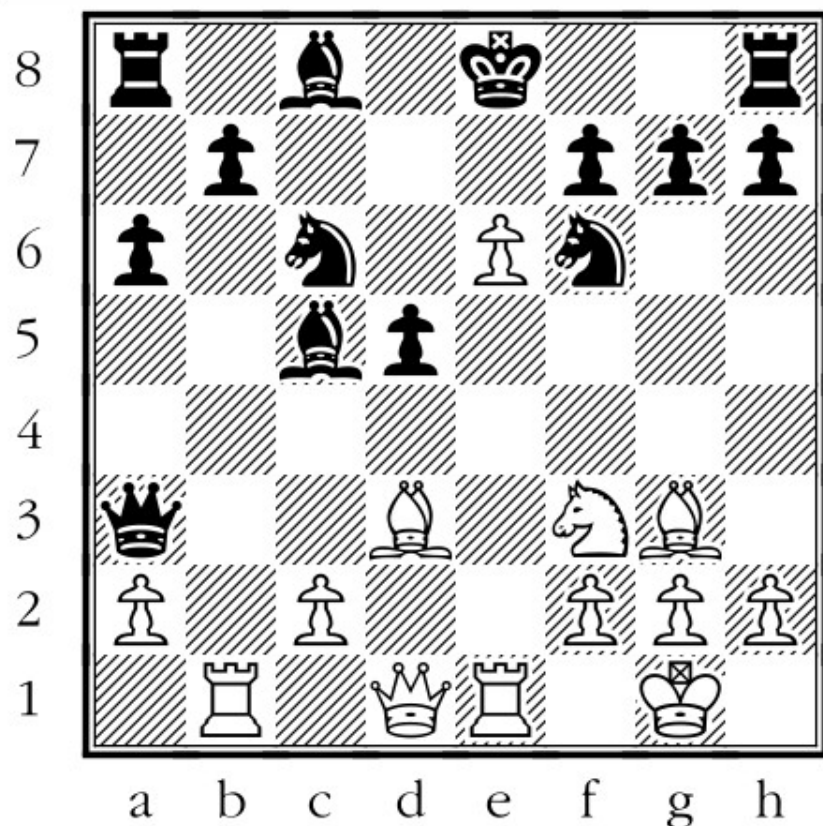
Levels 1-2: Use the chess diagram on the right to help you solve these problems. Ignore the Xs!

Levels 3-4: You may look at the diagram on the right for help. BUT, you must find answers that use NONE of the squares on the main diagonals. **The squares you may not use in your answers are marked by Xs.**

Levels 5-6: **Don't look at a chessboard or diagram!** Solve these by visualizing a chessboard. All squares (including the diagonals) may be used.



- | | | |
|------------------------------------|-----------------------|-----------------------|
| 13 a7 <u>- b5 - c7 -</u> a6 | 14 b1 _____ c2 | 15 e8 _____ g6 |
| 16 e6 _____ d6 | 17 g6 _____ g4 | 18 d3 _____ g6 |
| 19 c5 _____ f5 | 20 h4 _____ h3 | 21 f2 _____ g3 |



1. e6xf7+ Kxf7 (Levels 3-4)
2. Bh4 Nb4 (Levels 5-6)

Problems 9-12: More Captures and Checks

9

Write every way White could make a capture:

10

Write every way Black could make a capture:

11

Write every way White could give check:

12

Write every way Black could give check:

Cognitive Chess

Day 14:

66. White: ♔a1, ♖c3, ♘b1, ♗s a2, b2, h3. Black: ♚g7, ♞a5, ♙c7, ♜g3, ♗s f6, f7, g6. Which black piece can be safely captured by the white queen? Solution: ____

67. White: ♔g6, ♜c6, ♗s b5, h3. Black: ♚g8, ♞b7, ♗s b6, c7. White to move. How would you play? Solution: 1. ____

68. White: ♔e7, ♗b2. Black: ♚g8, ♜b7. White to move. How would you play? Solution: 1. ____

69. Play out the game without looking at the board: 1.e4 e5 2.♜f3 d6 3.h3 ♜f6 4.c3 ♜xe4?? White to move

75. Play out the game without looking at the board: 1.d4 d5 2.c4 dxc4 3.e3 b5?! 4.a4 c6 5.axb5 cxb5? White to move. Solution: 6. ____

Day 16:

76. Can a white ♘a2 stop black ♗s on d6, e5, f4, g3 and h2? If yes, give a move. White to move. Solution: 1. ____

77. White: ♔e5, ♞f3. Black: ♚g6, ♜b1. White to move. How would you play? Solution: 1. ____

78. White: ♔b1, ♞g2, ♗s f2, g3. Black: ♚b3, ♜f3, ♗s a6, g4. Black to move. How would you play? Solution: 1 ... ____

Cognitive Chess

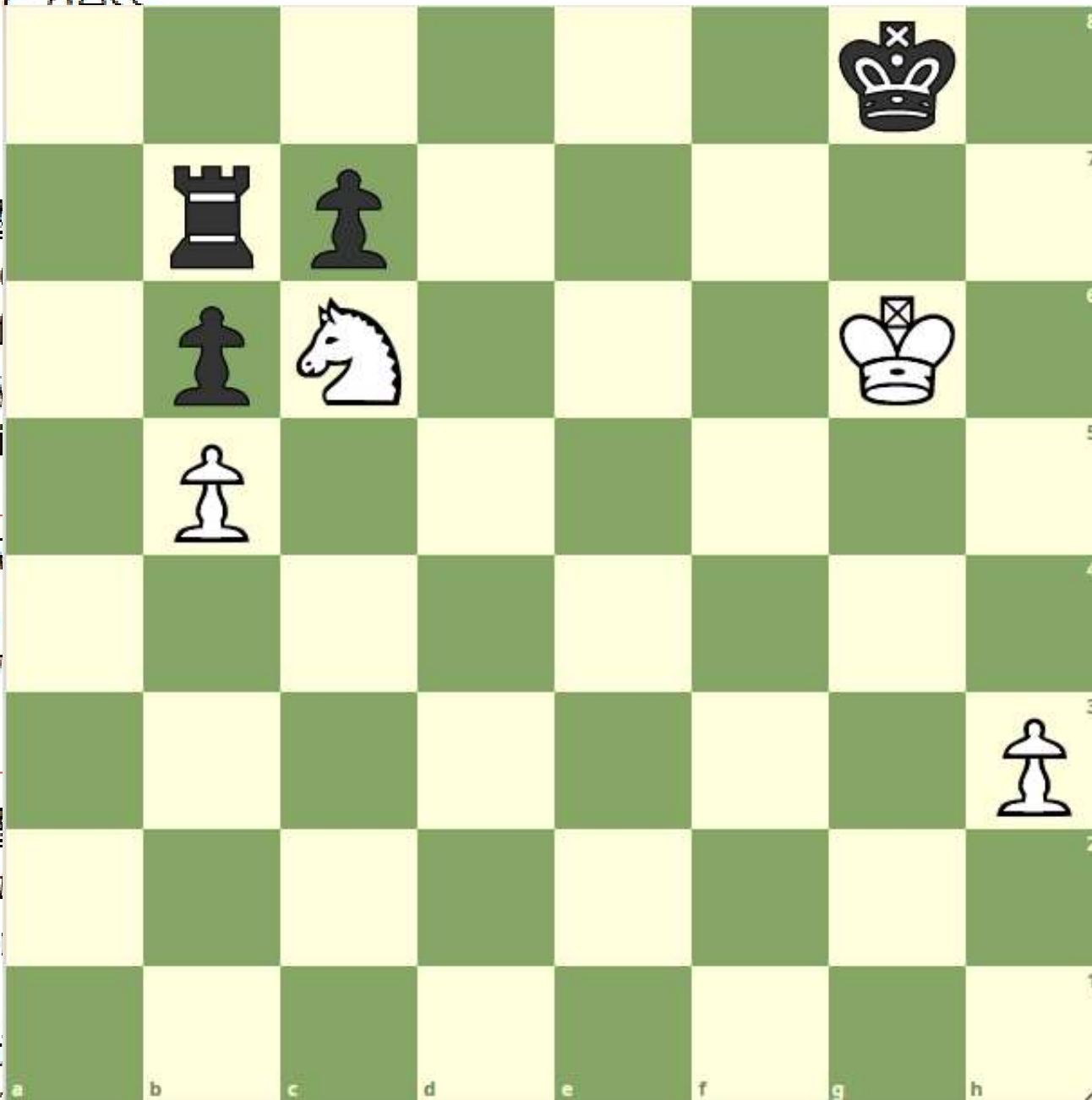
Day 14:

66. White: ♔g3, ♕f6, ♖b2, ♗h3. Black: ♚g8, ♙f2, ♘g3, ♗f6, ♙e4. Can the white queen be safely moved to f6? Solution: No.

67. White: ♙f2, ♘g3, ♗f6, ♙e4. Black: ♔g8, ♙f2, ♘g3, ♗f6, ♙e4. How would you move? Solution: 1. ♙f2.

68. White: ♔g3, ♕f6, ♖b2, ♗h3. Black: ♚g8, ♙f2, ♘g3, ♗f6, ♙e4. What should white play? Solution: ♔g3.

69. Play out the game at the board: 1. ♔g3 ♚g8 2. ♕f6 ♙f2 3. ♖b2 ♘g3 4. ♗h3 ♗f6 5. ♙e4 ♙e4?? White to move.



70. White looking for a move. Black to move.

71. Black to move. Give a move.

72. White to move. How would you move?

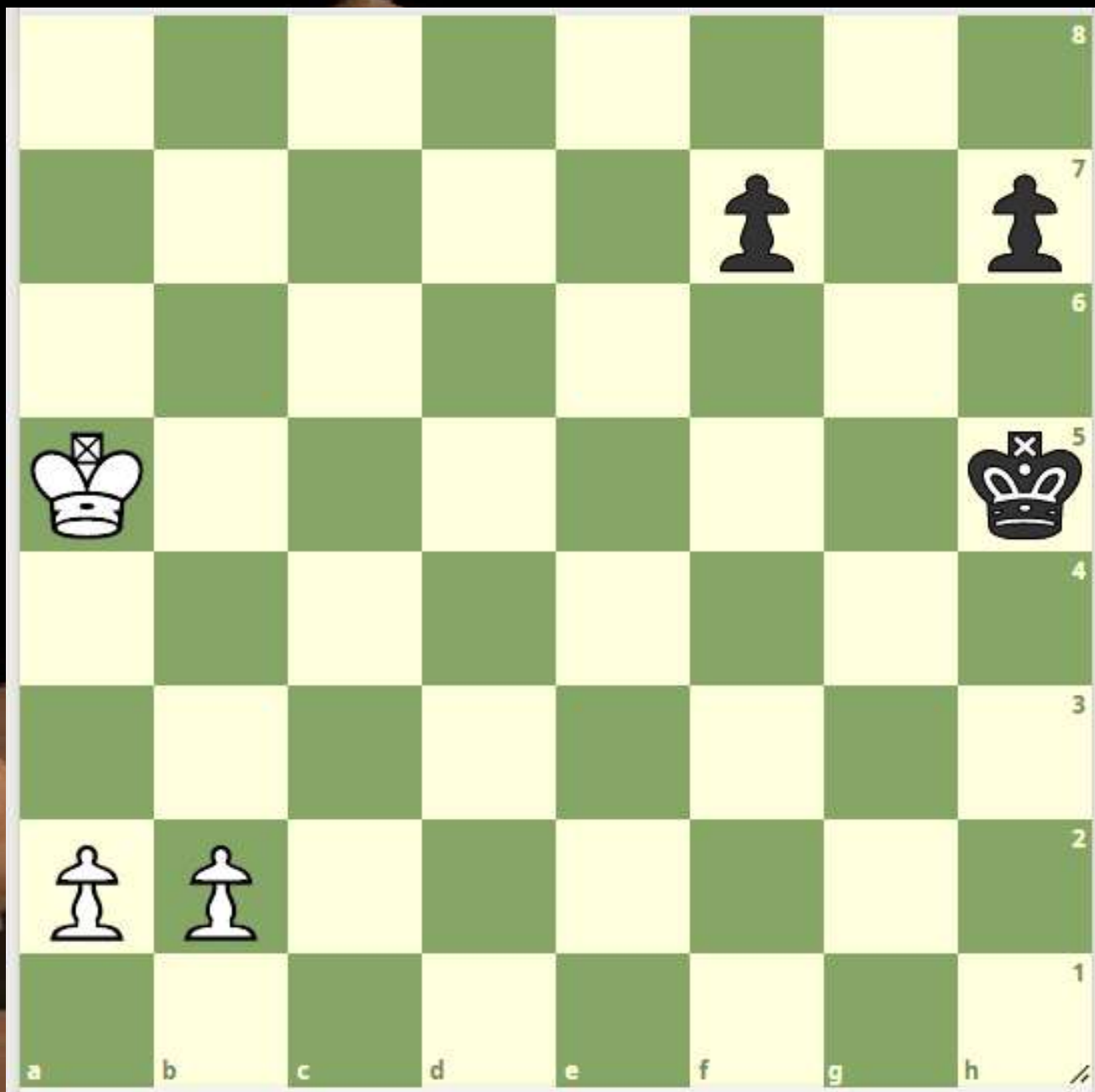
73. Black to move. What should you play? Solution: ♙f2, ♘g3.

74. White to move. Solution: ♔g3.

Visualisation: AdeG A



KK EG1





Visualisation tips

- ❖ **Fuzzy? Stop and start again**
- ❖ **Bookmarking positions**
- ❖ **Noticing captures to help fix a position**
- ❖ **Practice alongside tactics training**
- ❖ **Reading books without a board**
- ❖ **Blindfold chess?**