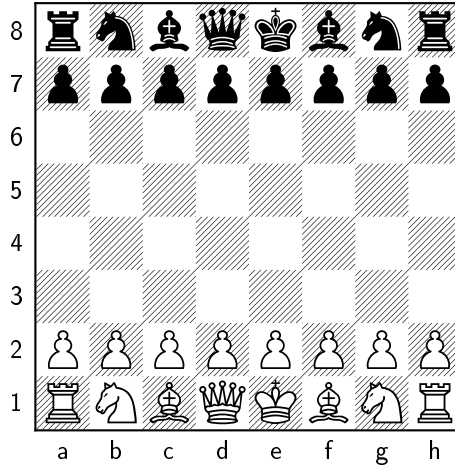


12 Days of ChrisMATH — Day 5

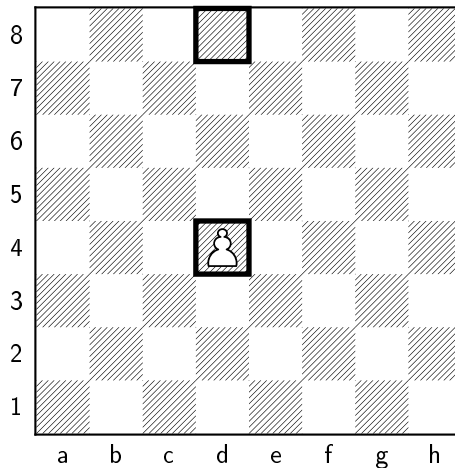
Level 1:

In chess a pawn has a value of 1, a knight is 3, a bishop is 3, a rook is 5 and a queen is 9. The king is not given a value. What is the sum of white's pieces at the beginning of the game?



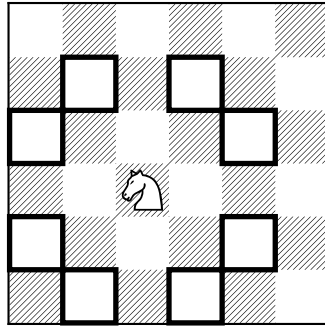
Level 2:

A chess pawn can move one square forward and when he captures he moves one square forward in a diagonal. Pawns never go backwards. Assuming that the pawn starts from the square d4, in how many ways can the pawn reach the square d8?



Level 3:

In one move, a chess knight travels 2 squares horizontally and 1 square vertically, or 1 square horizontally and 2 squares vertically.



Imagine a knight is on the bottom left square of a 2023×2024 chess board. What is the minimum number of moves required for the knight to travel to the top right square of the 2023×2024 board?