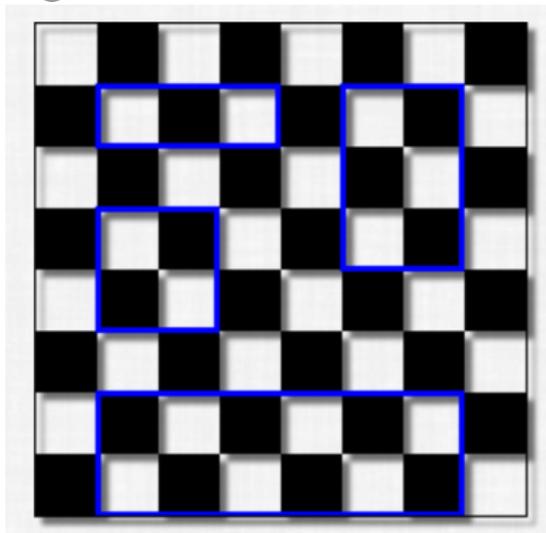


A puzzler about a chessboard

How many rectangles are there on an ordinary chess board?



Three possibilities are shown on the picture above

Answer

A rectangle is determined by the consecutive collection of squares it spans horizontally, and the collection of squares it spans vertically

There are 8 possibilities for a horizontal span of one square, 7 for a horizontal span of two squares, 6 for three squares, 5 for four, 4 for five, 3 for six, 2 for seven, and one possibility for a horizontal span of eight squares, for a total of $8 + 7 + 6 + 5 + 4 + 3 + 2 + 1 = 36$ possibilities for the horizontal span.

Similarly there are 36 possibilities for the horizontal span.

This leads to $36 \times 36 = 1296$ different rectangles.