

Suppose we have a 3 by 3 chess board instead of an 8 by 8 – which rectangles can we make?

(Squares are included as a special kind of rectangle.)

So for example we can include:

- a) How many rectangles can we make in total? [6 marks]
 - b) What about for a 2 by 2 board? [2 marks]
 - c) For a 1 by 1? [1 mark]
 - d) For a 4 by 4? [2 marks]
 - e) For a 5 by 5? [2 marks]
- f) Can you come up with a general rule for the total number of possible rectangles for an n by n board? [7 marks]