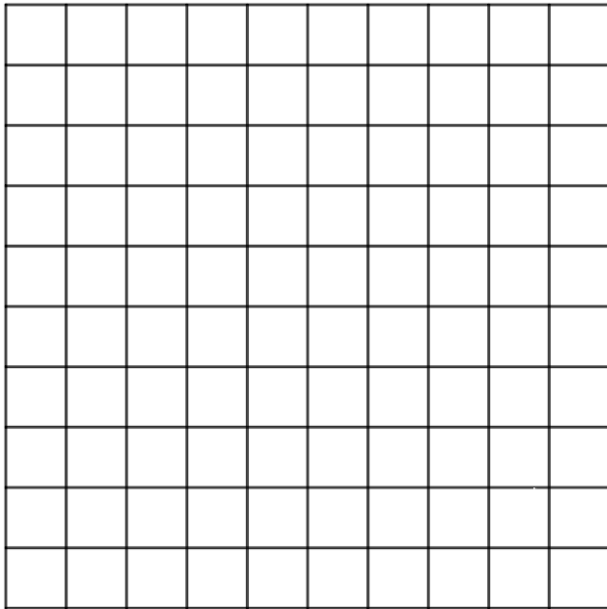


# Counting Squares

## Activity 1

How many squares can you see in this figure?



If you are not sure about the exact number, how many squares would you estimate there are?

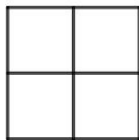
Answer:

## Activity 2

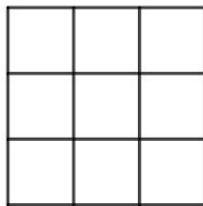
If we now have a 1x1 square, a 2x2 square, a 3x3 square and a 4x4 square, can we count the number of squares in each case?



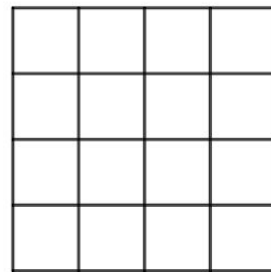
$1 \times 1$



$2 \times 2$



$3 \times 3$



$4 \times 4$

Answers:

1x1:

2x2:

3x3:

4x4:

### Activity 3

We now have the numbers of squares in a 1x1 square, in a 2x2 square, in a 3x3 square and a 4x4 square. Is there any pattern in your results? If you can find a pattern, explain it in one or two sentences. If you can't find a pattern it's not a problem, just say so.

Answer: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

### Activity 4

In order to help analyse the and understand the answer to these problems we can write them in an organised way. To be able to count effectively it is useful to count squares of different size separately. We can use a table to organise our results:

Problem size	1x1	2x2	3x3	4x4	Total
1x1					
2x2					
3x3					
4x4					

## Activity 5

If you didn't find a pattern before, can you find one now? If you found one now, can you try to think about why it might work? Write your conclusions below.

Answer: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## Activity 6

How many squares are there in the initial 10x10 square? Why? Can you tell me how you could find out how many squares there would be in a 20x20 square? How about a 100x100? Write down your conclusions below.

Answer: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_