

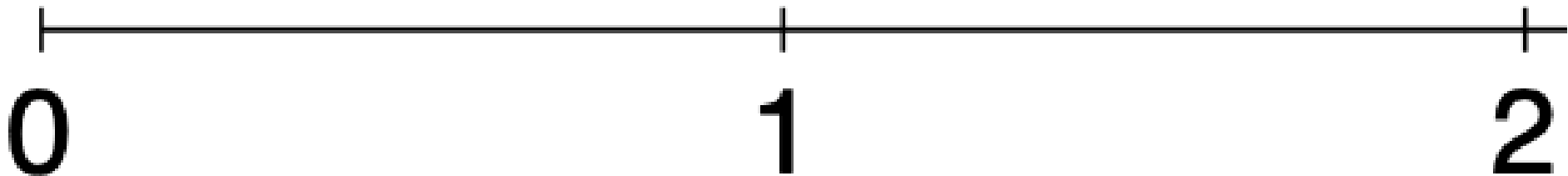
Maths Investigations – Week 4
Fractions

These investigations are to help you develop your problem-solving skills and your reasoning skills, you can do as many as you like. Please make sure you show your workings out, use jottings and anything else you might need to

Investigation 1: Counting in $\frac{1}{2}$ s on a number line.

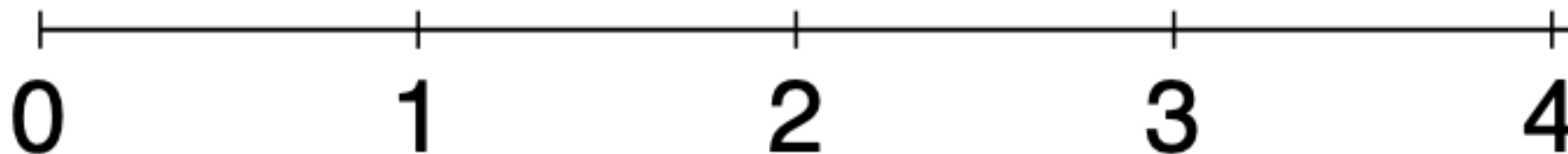
If you count in steps of $\frac{1}{2}$ on a number line starting from 0 how many steps will it take you to reach 2, 4 or 6? Use the number lines below to show your workings out by marking the $\frac{1}{2}$ s

How many steps of $\frac{1}{2}$ will it take you to get to 2? Mark these on the number line. Then finish the sentence below.



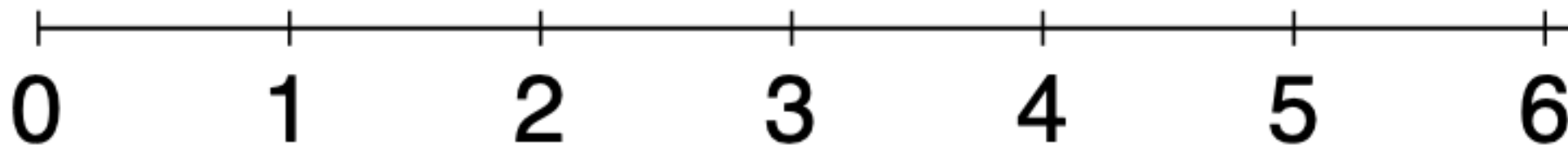
It will take ____ steps of $\frac{1}{2}$ to reach 2.

How many steps of $\frac{1}{2}$ will it take you to get to 4? Mark these on the number line. Then finish the sentence below.



It will take ____ steps of $\frac{1}{2}$ to reach 4.

How many steps of $\frac{1}{2}$ will it take you to get to 6? Mark these on the number line. Then finish the sentence below.



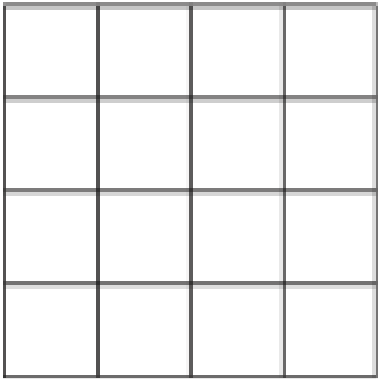
It will take ____ steps of $\frac{1}{2}$ to reach 6.

What do you notice about the steps required each time, can you use GMC to explain what happens?

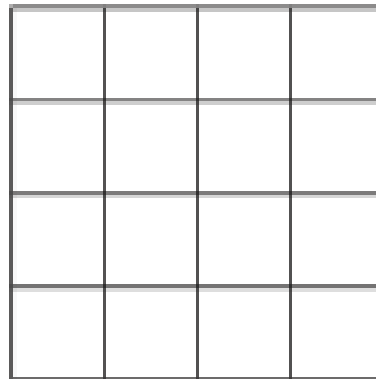
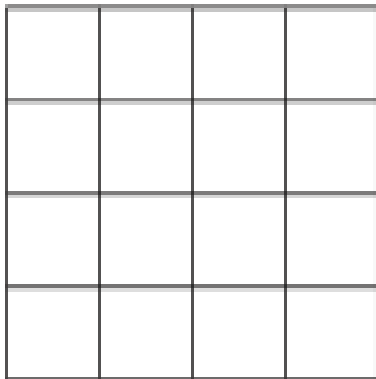
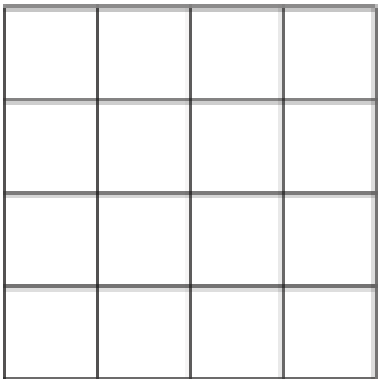
Investigation 2: How many ways are there to colour a $\frac{1}{4}$?

This investigation asks how many different ways are there to colour in a $\frac{1}{4}$ of this shape?

How many squares do you need to colour to show a $\frac{1}{4}$ of this shape?



Now can you show all me another 12 different possibilities of how to colour $\frac{1}{4}$ of the same shape!



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Reggie asks:

How many possibilities do you think there are to solve this question?