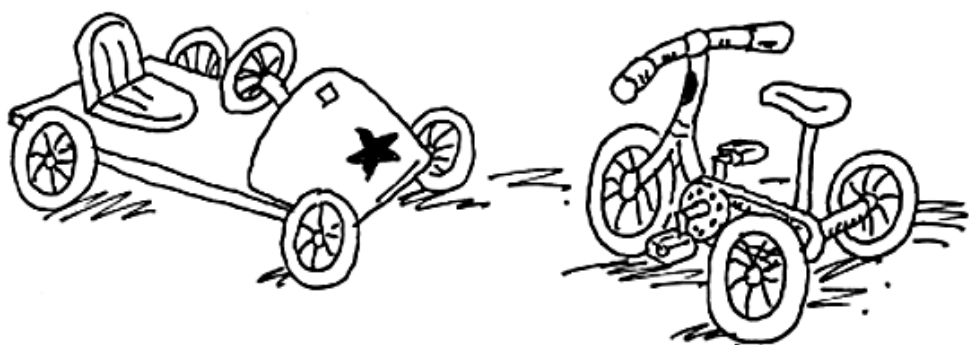# At the toy shop

The toy shop stocks tricycles and go-carts.
The tricycles have 3 wheels.
The go-carts have 5 wheels.

Suna counted the wheels.
He counted 37 altogether.

How many tricycles are there?
How many go-carts?

Find two ways to do it.

Odd Times Even

Choose any two numbers, such as 4 and 5. One must be even and the other odd.

Try multiplying them together. How could you show this?

Lewis used a number line:

Morven used Multilink cubes:

Athol used counters:

What do you notice about the answer?

Look closely at one of these models.

Can you see anything in it that would work in exactly the same way if you used the same model with a different pair of even and odd numbers?

Can you use your one example to prove what will happen every time you multiply an even number and an odd number together?

See if you can explain this to someone else. Are they convinced by your argument?

Once you can convince someone else, see if you can find a way to show us your argument. You might draw something or take a photo of things you have used to prove that your result is always true from your example.

Growing Garlic

Ben is on the allotment with his Mum.

They would like to grow some garlic and are deciding how to plant the garlic cloves.

Ben arranges the cloves into three rows and finds that he has one spare clove.

How many cloves might he have had to start with?

How many ways can you find to answer this?

Draw an array for each solution.

If you want even more of a challenge…

Ben plants cloves of garlic in two rows and has one clove left over. So he tries again.

He plants cloves in three rows and has one left over. So he tries again.

He plants cloves in four rows and has one left over. So he tries again.

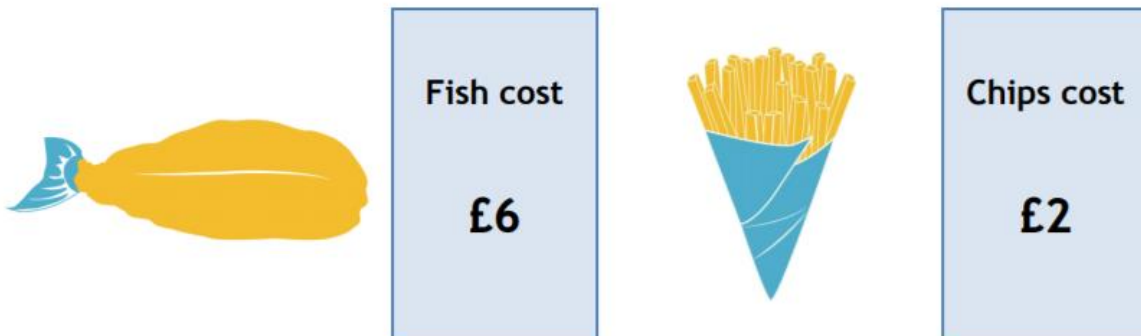He plants cloves in five rows and has one left over. So he tries again.

He plants cloves in six rows and has one left over.

We know that he has fewer than 100 garlic cloves.

How many did he have?

Fish and Chips

Work systematically and show your workings out.

	Fish cost		Chips cost
	£6		£2

a. How many different combinations of fish and chips can I buy for £12?

Fish (£6)			
Chips (£2)			
Total £12	£12	£12	£12

b. How many different combinations of fish and chips can I buy for £18?

Fish (£6)				
Chips (£2)				
Total £12	£18	£18	£18	£12

c. How many different combinations of fish and chips can I buy for £24?

Fish (£6)					
Chips (£2)					
Total £12	£24	£24	£24	£24	£24