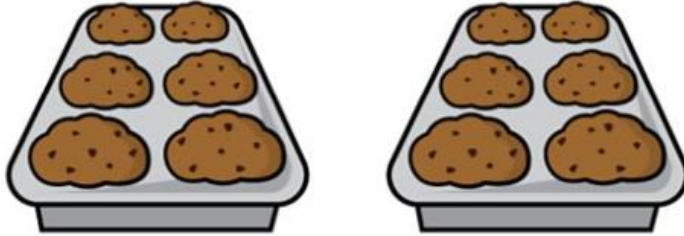## Challenge 1

Eric bakes these two trays of muffins.

He eats 2 muffins.
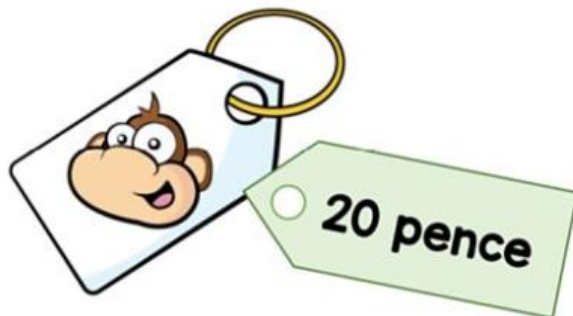
His dad eats 3 muffins.

His sister eats 4 muffins.

How many muffins does he have left?

Challenge 2

Lola buys this key ring.

Her mum givers a quarter of the money.

She pays for the rest herself.

How much does she pay herself?

Challenge 3

This year my age is a multiple of 4

Next year my age will be a multiple of 5

I'm older than 18, but younger than 42

How old is the teacher?
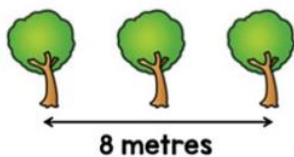
Challenge 4

Ten trees are planted in a row.

The trees are spaced out equally.

The distance between the fourth and sixth tree is 8 metres.

8 metres

What is the distance between the first and last tree?

Challenge 5

Filip has these five digit cards.

2 **3** **5** **7** **8**

He uses all of the cards to make a three-digit number and a two-digit number.

He multiplies the two numbers together and the answer is **15,741** .

$$
\begin{array}{r}
\boxed{}\,\boxed{}\,\boxed{} \\
\times \quad\;\; \boxed{}\,\boxed{} \\
\hline
1\;5\;7\;4\;1
\end{array}
$$

What are the two numbers Filip makes?

Challenge 6

Here are two identical rectangles.
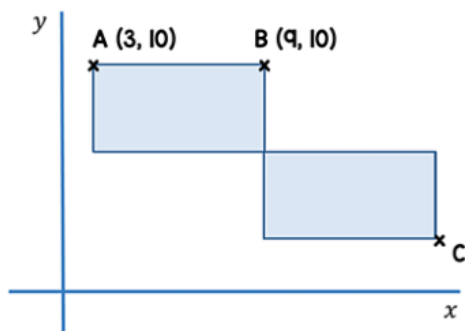
The length of each rectangle is double its width.

Work out the coordinates of point C.

Challenge 7

A college has a vending machine that only sells crisps.

Crisps cost 55p per bag.

The table shows the amount of different coins taken in one day.

Coin	Number of Coins
£2	4
£1	19
50p	26
20p	11
10p	33
5p	25

How many bags of crisps were sold?

Challenge 8

Here are three boxes.

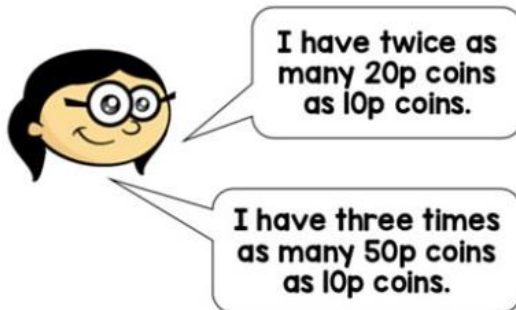Each box contains 60 counters.

The same number of counters are moved from box 1 and box 2 into box 3.

70% of the counters are now in box 3.

How many counters were moved from box 2 to box 3?

Challenge 9

Annie has some 10p, 20p and 50p coins in her money box.

I have twice as many 20p coins as 10p coins.

I have three times as many 50p coins as 10p coins.

In total she has **£54** in her money box.

How many **20p** coins does she have?

Challenge 10

In this rectangle, the width is 4 cm less than the length.

Two of these rectangles are put together to make this shape.

The perimeter of this shape is **94 cm** .

What is the area of one of the rectangles?

As a rough guide of difficulty level:

- **Challenge 1 and 2** are suitable for ages 5 to 7.

- **Challenge 3 to 6** are suitable for ages 7 to 11.

- **Challenge 7 to 10** are suitable for ages 11 to 15.

We want everyone to get involved with challenge day, so work together to solve as many as you can and share your solutions!