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 gives 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.

What is the distance between the first and last tree?
Challenge 5
Filip has these five digit cards.

\[
\begin{array}{c}
2 \\
3 \\
5 \\
7 \\
8 \\
\end{array}
\]

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 \(15,741\).

\[
\begin{array}{c}
\times \\
\hline
\end{array}
\begin{array}{c}
\hline
1 \\
5 \\
7 \\
4 \\
1 \\
\end{array}
\]

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.

<table>
<thead>
<tr>
<th>Coin</th>
<th>Number of Coins</th>
</tr>
</thead>
<tbody>
<tr>
<td>£2</td>
<td>4</td>
</tr>
<tr>
<td>£1</td>
<td>19</td>
</tr>
<tr>
<td>50p</td>
<td>26</td>
</tr>
<tr>
<td>20p</td>
<td>11</td>
</tr>
<tr>
<td>10p</td>
<td>33</td>
</tr>
<tr>
<td>5p</td>
<td>25</td>
</tr>
</tbody>
</table>

How many bags of crisps were sold?

Challenge 8

Here are three boxes.

![Boxes 1 2 3]

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.

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!