Challenge 1
Sol has 20 beads.
She uses some beads to make these two necklaces.

How many beads does she have left?

Challenge 2
George is thinking of a 2 digit number.

What number is George thinking of?
Challenge 3

Two numbers, A and B, are marked on the number lines.

Find the sum of A and B.

Challenge 4

Max buys a shirt and a jacket.

The jacket costs £25 more than the shirt.
The total cost of the shirt and jacket is £87.
How much does each item cost?
Challenge 5
The mass of 1 cube and 4 cones is 110 g.

The mass of 1 cube and 2 cones is 72 g.

What is the mass of 1 cube?

Challenge 6
A plank of wood is 4.6 metres long.

These three lengths of wood are cut from the plank.

1.45 m  88 cm  1630 mm

What is the length of the wood left?
Challenge 7

A factory makes these wooden cubes.

They are packed into large boxes.

How many wooden cubes can be packed into one large box?

Challenge 8

Amrit, Beth and Caroline sell cookies.

Amrit sells \( \frac{1}{4} \) of the cookies.
Beth sells 30\% of the remaining cookies. Beth sells 12 cookies.
Caroline sells the rest.

How many cookies do they sell altogether?
Challenge 9

\( \frac{1}{5} \) of the length of rope A is equal to \( \frac{1}{5} \) of the length of rope B.

Rope A is 42 cm longer than rope B.

How long is rope A?

Challenge 10

A blue square is placed inside a large yellow square.

The centre of the squares are aligned one over the other.

The area of the blue square is 36% of the area of the yellow square.

Find the distance marked \( y \).
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!