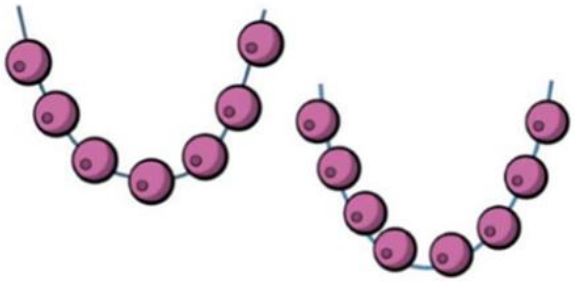
Challenge 1

Sal has 20 beads.

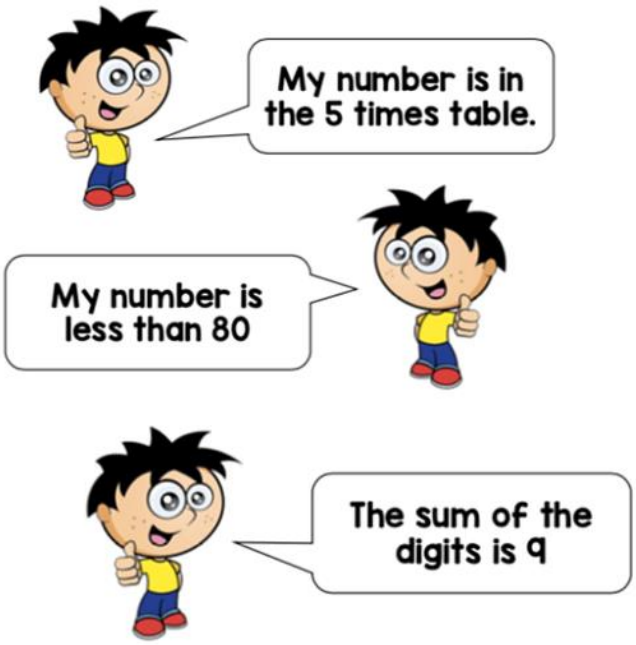
She uses some beads to make these two necklaces.



How many beads does she have left?

Challenge 2

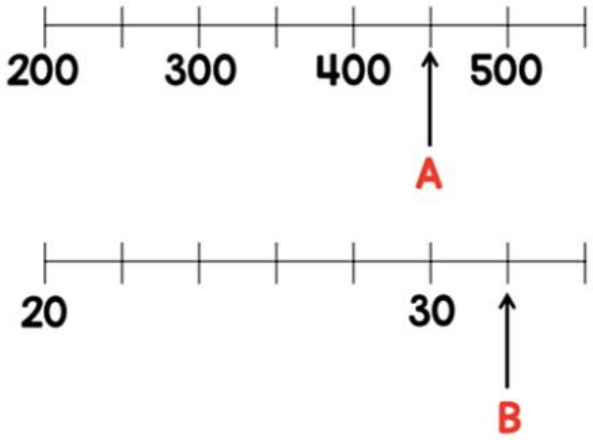
George is thinking of a 2 digit number.



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

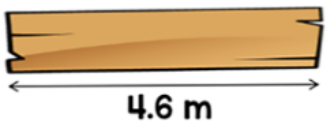
The mass of 1 cube and 4 cones is **110 g**.

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.



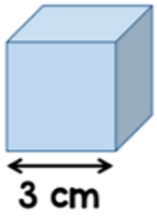
These three lengths of wood are cut from the plank.

1.45 m	88 cm	1630 mm

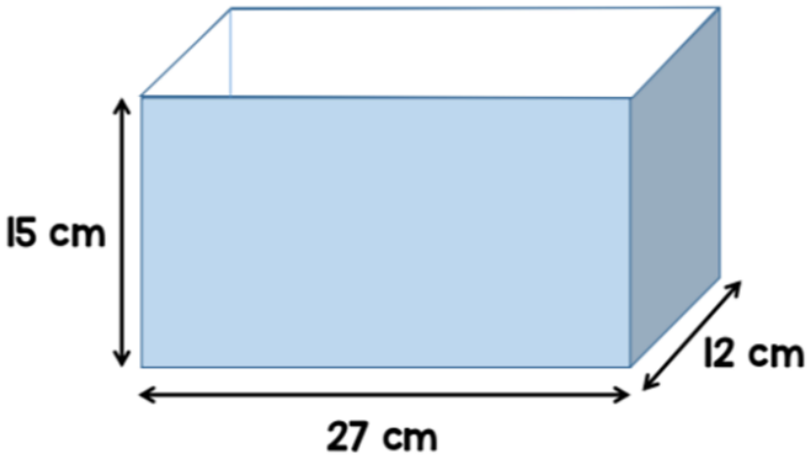
What is the length of the wood left?

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 $\frac{1}{6}$ 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

$\frac{1}{2}$ of the length of rope A is equal to $\frac{3}{5}$ of the length of rope B.

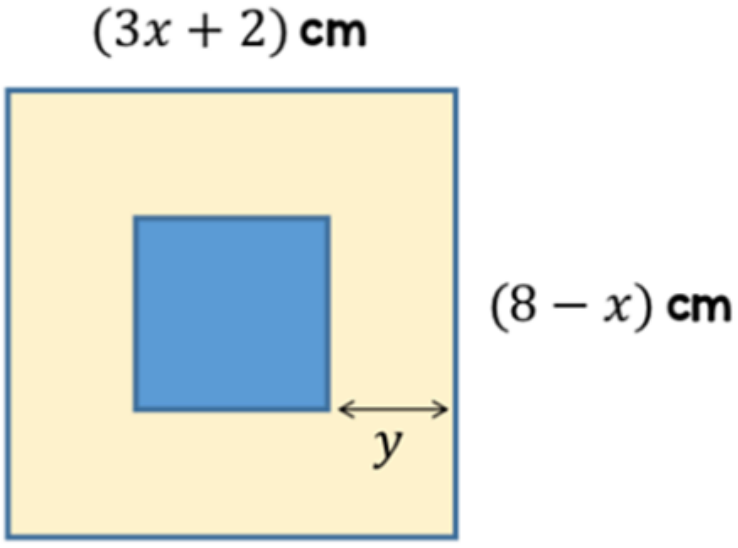
Rope A is **42 cm** longer than rope B.

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!