

Family Challenge

Friday 19th June

Challenge 1

Rani has 38p.

I have 10p more
than Rani.



I have 20p less
than Eva.

How much money does Eva have?

Challenge 2

If

$$\triangle \times \triangle = 25$$

and

$$\bigcirc \times \bigcirc = 100$$

Work out the value of

$$\triangle \times \bigcirc$$

Challenge 3

A sequence is made up of three 2-digit numbers.

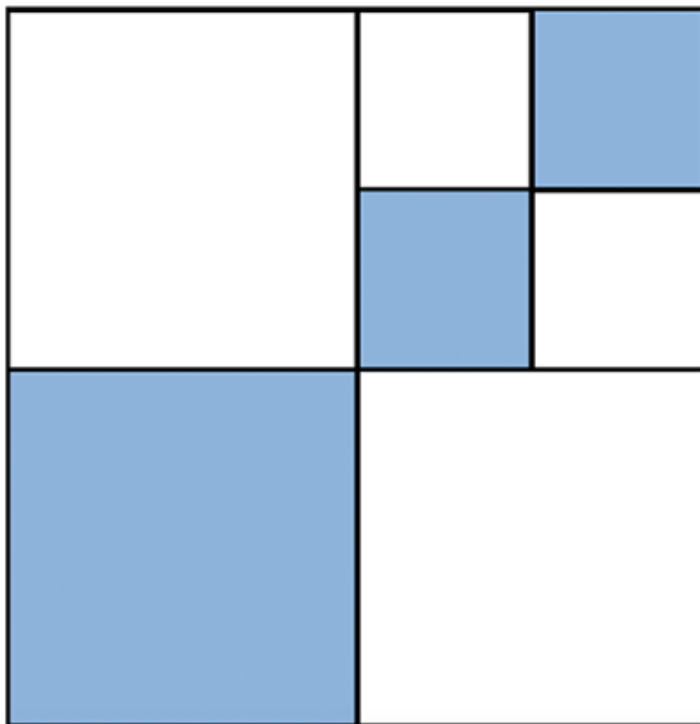
The sequence increases by eight each time. These are the digits that make up the three numbers.



Work out the numbers in the sequence.

Challenge 4

A square is divided into smaller squares.



What fraction of the square is shaded?

Challenge 5

The mass of an empty jar is 470 g.



6 marbles are placed in the jar.



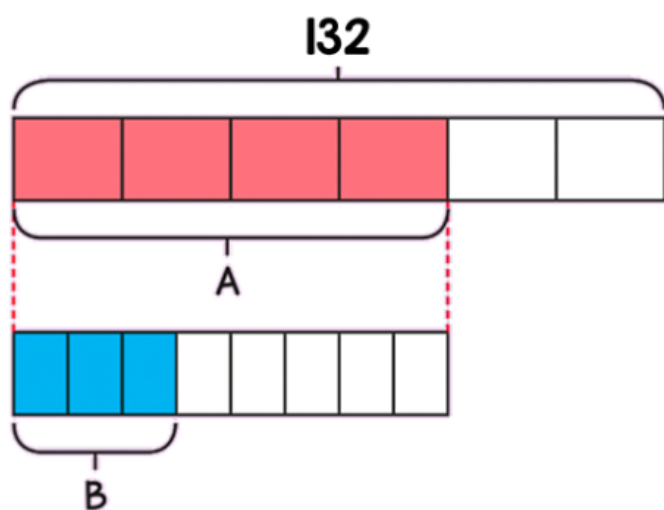
The total mass of the jar and marbles is now 1.1 kg.

Two of the marbles are removed.

What is the mass of the jar and marbles now?

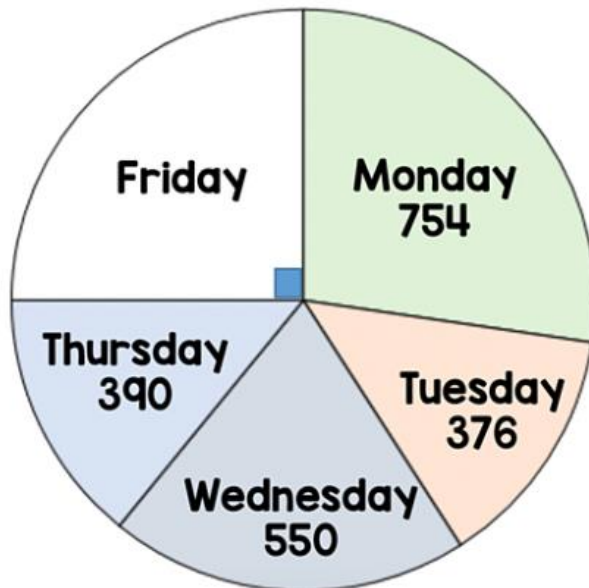
Challenge 6

Work out the value of B.



Challenge 7

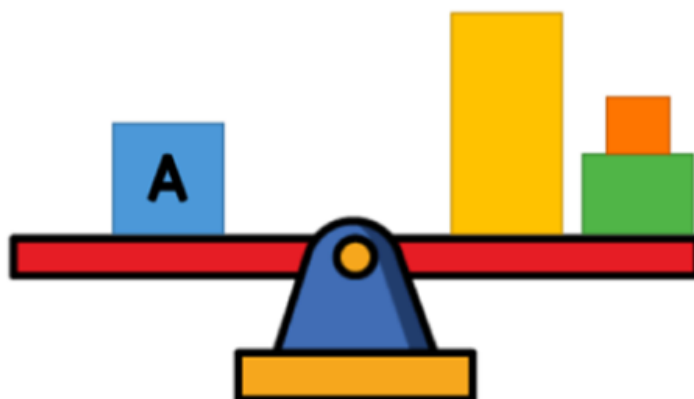
The pie chart shows the number of visitors to a museum each day.



How many people visited on Friday?

Challenge 8

Four blocks are balanced on a scale.



The mass of A is 220 g.

What is the mean mass of all the blocks?

Challenge 9

Here is rectangle A.



Rectangle B is $\frac{1}{5}$ longer than A



Rectangle C is $\frac{1}{5}$ longer than B



The total length of all three rectangles is 133 cm.

How much longer is rectangle C than B?

Challenge 10

At 12pm there are 855 people in the zoo.

By 5pm $\frac{4}{5}$ of the children have left and $\frac{3}{4}$ of the adults have left.

There are now 36 more children than adults in the zoo.

How many adults were in the zoo at 12pm?

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!

