

Family Challenge

Friday 10th July

Challenge 1

Sam has some red and yellow cubes.

She has 20 cubes in total.

She has 8 more yellow cubes than red ones.

How many red cubes does she have?



Challenge 2

Jon thinks of a number.



Half of his number is 12.

What is one third of Jon's number?

Challenge 3

A cup contains some coffee.

Sasha drinks $\frac{2}{5}$ of the coffee.

There is 120 ml of coffee left.

How much coffee was in the cup at the start?



Challenge 4

A cube weighs 87 g.



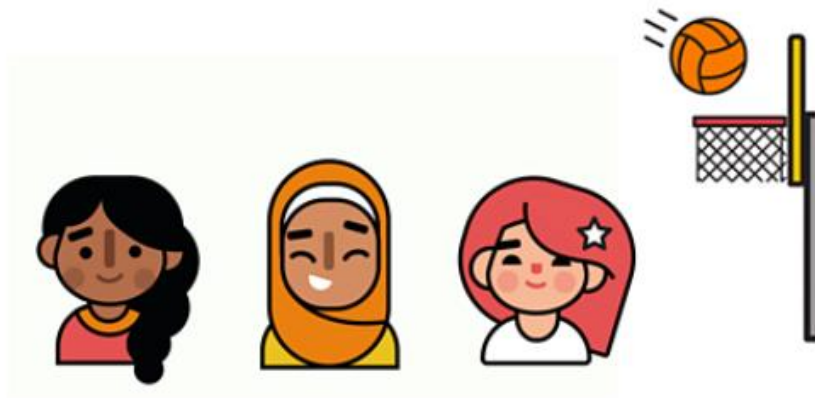
Two of the same cubes and a cone weigh 291 g.



How much does one cone weigh?

Challenge 5

Rani, Layla and Tash take part in a basketball competition.



- Rani scores 4 times as many baskets as Layla.
- Tash scores 8 baskets less than Rani.

They score 100 baskets in total.

How many baskets does Tash score?

Challenge 6

There are three times as many fiction books as non-fiction books in a library.

122 fiction books and 24 non-fiction books are loaned out.

There are now twice as many non-fiction books as fiction books.

How many books were in the library?



Challenge 7

Josh and Leon have £73 in total.

They each spend £5.

Josh now has 25% more than Leon.

How much more money did Josh have than Leon at the start?



Challenge 8

Corinne thought of two numbers.

The two numbers have a difference of 35.

Half of one number is equal to three times the other.

What is the sum of the two numbers?

Challenge 9

A farmer has 242 goats and sheep in total.

He sells half of the goats and buys 28 more sheep.

In the end he has three times as many sheep as goats.

How many sheep did he have to start with?



Challenge 10

There are 400 llamas and alpacas in total.

- $\frac{3}{4}$ of the llamas are sold at market.
- $\frac{1}{3}$ of the alpacas are sold at market.

There were 125 llamas and alpacas left in total.

How many llamas were sold at the market?

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!

