THIRD SPACE LEARNING

HELLO!

Today we are going to learn to revise ratio and proportion

Use the space under each question to show your working out.

Arithmetic Warm Up
Percentages

THIRD SPACE LEARNING

1. 50% of 270 =

2. 25% of 4600 =

3. 30% of 520 =

4. 95% of 380 =

THIRD SPACE LEARNING

Revision on ratio and proportion

Today we are going to revise how to:

- to write, multiply and divide ratios
- to scale in proportion and use scale factors
- to solve problems using ratio and proportion

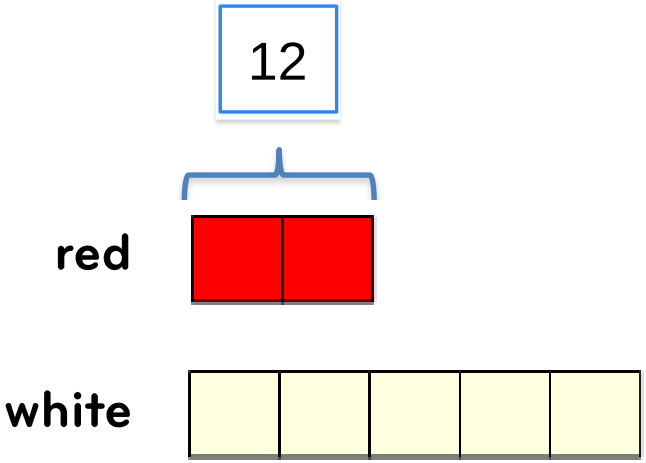
Revision: Ratios

Write a ratio to describe this set of beads.

The numbers in a ratio follow the same order as the words.

The ratio of red to white beads is ☐ : ☐

If we continue this pattern of beads, how many white beads will there be if there are 12 red? We can use a drawing to model this!



So, there will be ☐

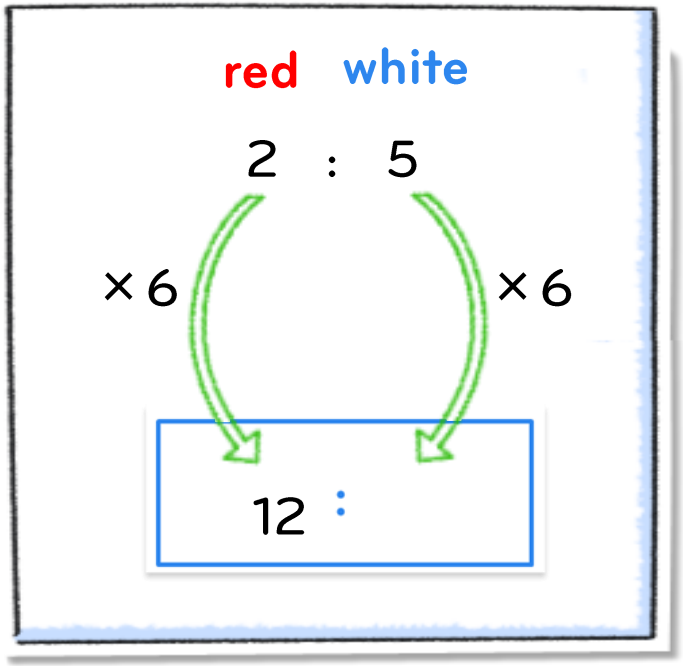
white beads in this pattern.

Revision: Ratios using multiplication

We can also solve this using multiplication.

The ratio of red beads to white beads is 2 : 5.

If there are 12 red beads in this pattern, how many white beads will there be?



How does this relate back to the diagram we used earlier?

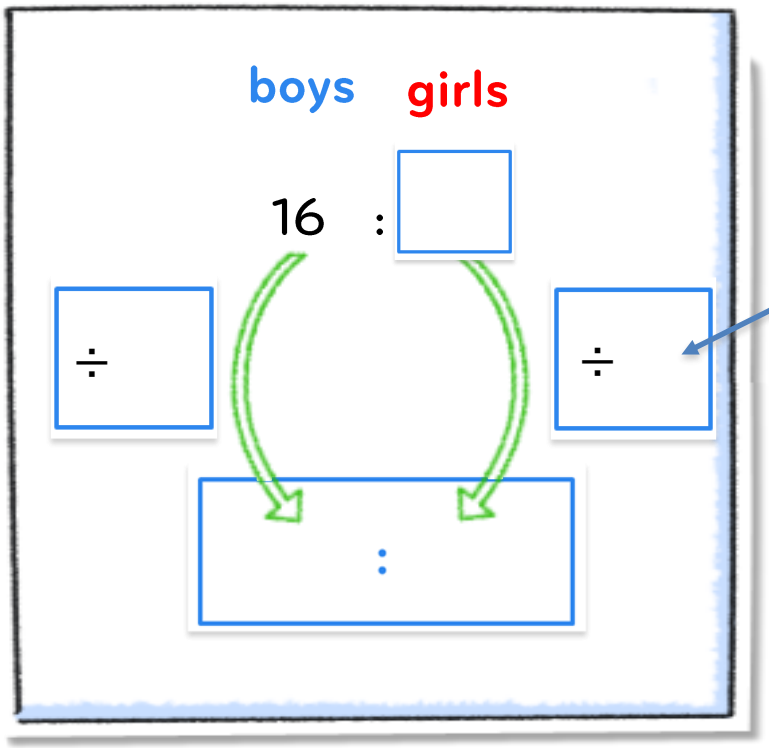
Revision: Ratios using division

We can also solve similar problems using division.

There are 28 children in a class.

a) There are 16 boys; how many girls are there?

b) What is the ratio of boys to girls written in its simplest form?



What is the highest common factor we can divide both the numbers by?

So, the ratio of boys to girls in this class is ☐ : ☐

THIRD SPACE LEARNING

Question 1

Complete

What do you notice?

What do you know?

19 David and his friends prepare a picnic.

Each person at the picnic will get:

3 sandwiches

2 bananas

1 packet of crisps

The children pack **45** sandwiches.

How many **bananas** do they pack?

Can you show your working out?

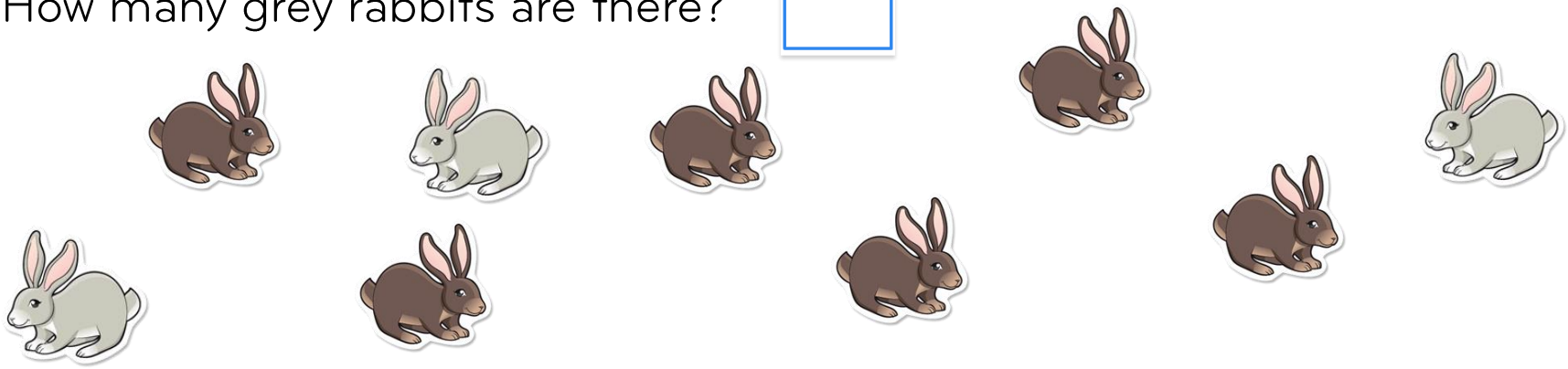
Show your **method**. You may get a mark.

bananas

How could you extend the question?

Revision: Proportion

How many grey rabbits are there? ☐



How many rabbits are there altogether? ☐

So, the <u>proportion</u> of grey rabbits <u>out of the total number</u> of rabbits is:

☐ **out of** ☐

What is the <u>ratio</u> of grey rabbits to brown rabbits? ☐ : ☐

Explain how you think ratio and proportion are different.

Revision: Proportion (scaling)

Sometimes we need to use scaling to help keep things in proportion

To make 4 smoothies, Amy needs 6 scoops of ice-cream and 20 strawberries.

If Amy needs to make 6 smoothies,

a) How many scoops of ice-cream will she need?

scoops

b) How many strawberries does she need?

strawberries

Explain how you know.

THIRD SPACE LEARNING

Using scale factors

1. Beth draws a square that has sides of 3cm. She wants to draw another square that is larger by a scale factor of 6. How long should she draw her sides?

Did you know that the scale factor is really a ratio between two sets of measurements?

2. The ratio of length of sides of square A to length of sides of square B is :

THIRD SPACE LEARNING

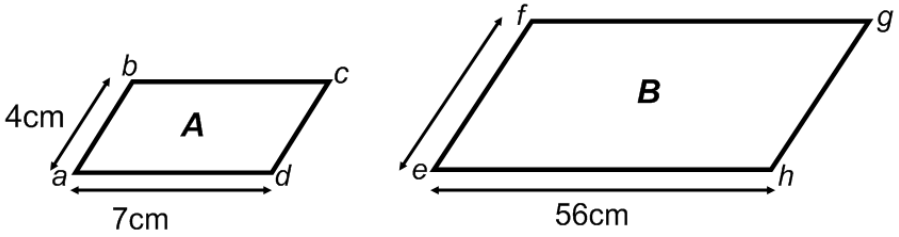
Question 2

Complete

What do you notice?

What do you know?

Here are two similar parallelograms (not drawn to scale).



1) What is the scale factor from Parallelogram A to Parallelogram B?

2) What is the length of the side *ef* ?

Can you show your working out?

How could you extend the question?

THIRD SPACE LEARNING

Question 3

Complete

What do you notice?

What do you know?

These are the prices of cheese in a shop.

Cheddar cheese 82p for 100 grams
Edam cheese 66p for 100 grams
Cottage cheese 45p for 100 grams

Mina buys **200g** of Cheddar cheese and **150g** of Edam cheese.

How much does she pay altogether?

Can you show your working out?

How could you extend the question?

THIRD SPACE LEARNING

Question 4

Complete

What do you notice?

What do you know?

These are the prices of cheese in a shop.

Cheddar cheese 82p for 100 grams
Edam cheese 66p for 100 grams
Cottage cheese 45p for 100 grams

Seb buys some cottage cheese for £1.35

How many grams of cottage cheese does he get?

Can you show your working out?

How could you extend the question?

THIRD SPACE LEARNING

Question 5

Complete

What do you notice?

What do you know?

Here are the ingredients for chocolate ice cream.

cream	400 ml
milk	500 ml
egg yolks	4
chocolate	120 g
sugar	100 g

Stefan has only 300ml of cream to make chocolate ice cream.

How much **chocolate** should he use?

Can you show your working out?

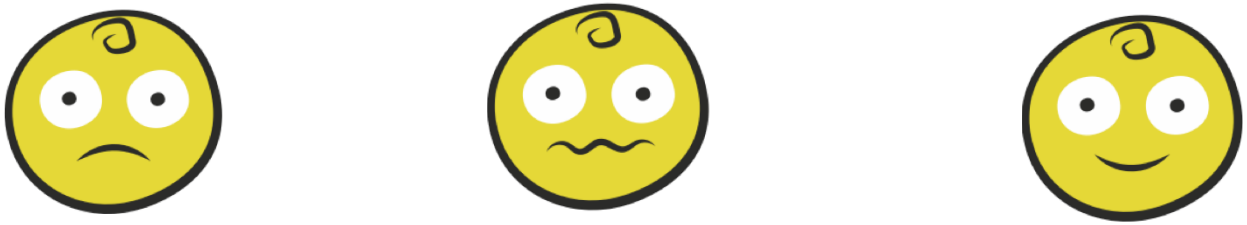
How could you extend the question?

THIRD SPACE LEARNING

Let's review:

- I can write, multiply and divide ratios
- I can scale in proportion and use scale factors
- I can solve problems using ratio and proportion

Draw a circle around the smiley face to show how you feel about what we've just been doing.



Is there something you would like to go over before we move on?