THIRD SPACE
LEARNING

HELLO!

Today we are going to revise scale and scale factors

Arithmetic Warm Up

1. Double 270 =

2. A third of 930 =

Revision on scale and scale factors

Today we are going to revise how to:

to scale in proportion and use scale factors

Revision: Proportion (scaling)

Scaling to help keep things in proportion

To make 3 smoothies, Amy needs 9 scoops of ice-cream and 24 strawberries.

If Amy needs to make 4 smoothies, how many scoops of ice-cream and strawberries would she need?

3 smoothies : 9 scoops ice-cream : 24 strawberries

3 : 9 : 24

4 smoothies

Trying to see what to multiply by here does not work immediately. So let us look at the next page

Question 1

✏️ Complete

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?

Using scale factors

3cm

A

cm

B
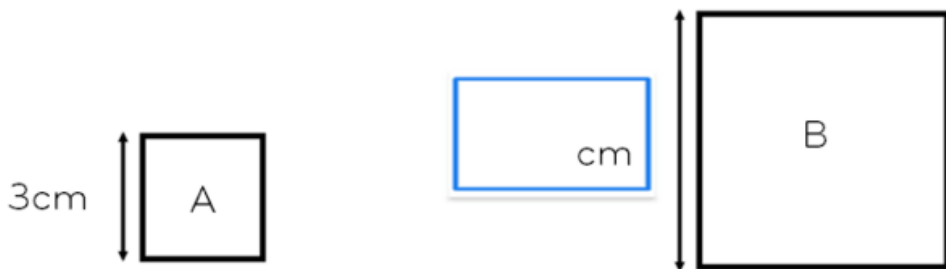
Square B is larger by a scale factor of 6 than square A.

How long should she draw her sides?

The size of the enlargement/reduction is known as the scale factor.

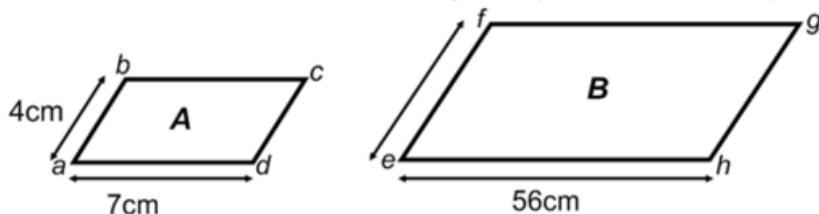$$\text{Scale factor} = \frac{\text{Big side}}{\text{Small side}}$$

Question 2

✏️ Complete

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

4cm

A

7cm

B

56cm

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

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

THIRD SPACE LEARNING

Let's review:

🎧 to scale in proportion and use scale factors

Draw a circle around the smiley face to show how you feel

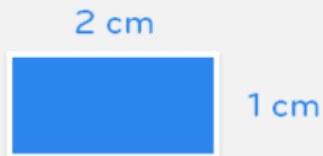**about what we've just been doing.**

Complete

To make 7 jars of marmalade, you need 21 oranges, 18 teaspoons of sugar and 2 cups of water. If you would like to make 4 jars of marmalade, how many oranges would you need?
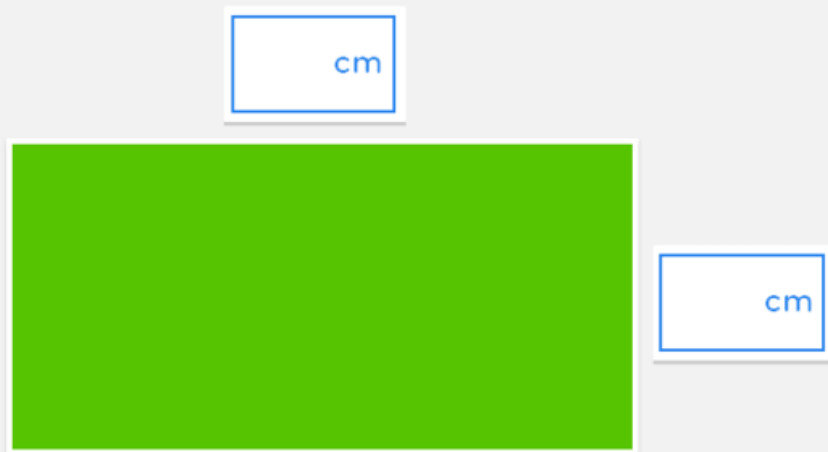
Drawing an enlargement

Here is a rectangle:

2 cm

1 cm

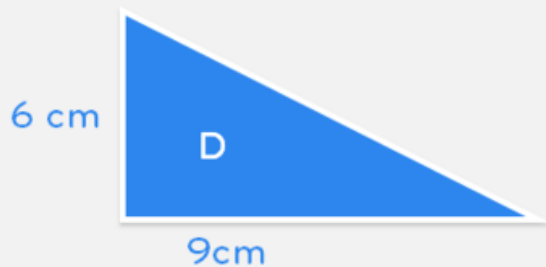To enlarge the rectangle by scale factor 3, you multiply the length and width by 3. Here is the enlargement:

Write on the lengths.

cm

cm

Similar shapes

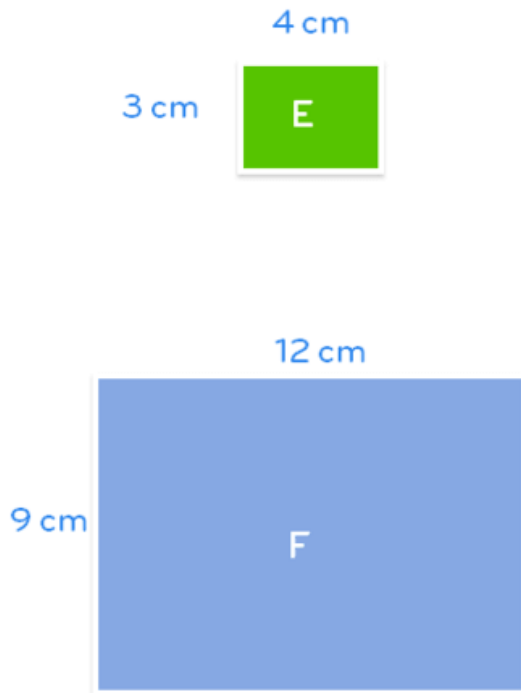Two shapes are **similar** when one is an enlargement of the other.

These two triangles are similar.

2 cm

C

3 cm

6 cm

D

9cm

What is the scale factor of the enlargement?

Similar shapes

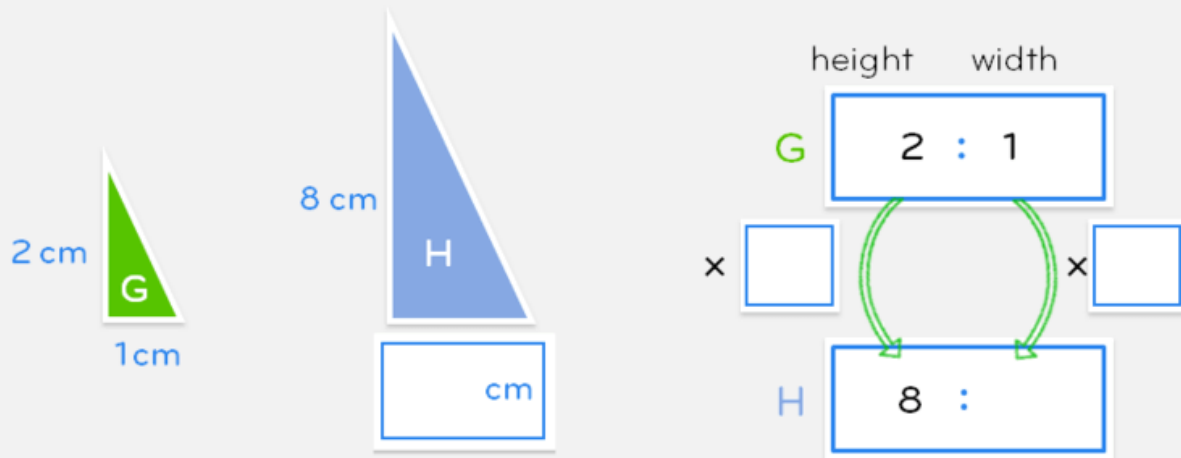When two shapes are similar, their sides are in the same ratio.

4 cm

3 cm **E**

12 cm

9 cm **F**

E and F are similar if 3 : 4

and 9 : 12 are equivalent.

	width		length
E	3	:	4

×   ×

| F | 9 | : | 12 |
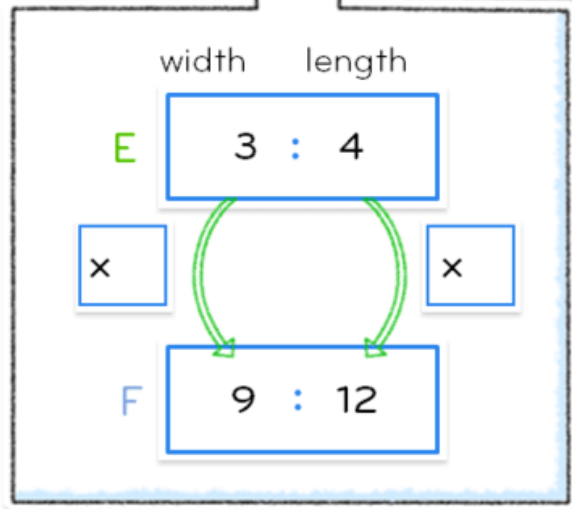
Practice time

You can use the scale factor to find missing lengths in similar shapes.

2 cm

1cm

G

8 cm

H

cm

height   width

G   2 : 1

× [ ]   × [ ]

H   8 :

Revision: Proportion (scaling)

Scaling to help keep things in proportion

3 smoothies : 9 scoops ice-cream : 24 strawberries

3 : 9 : 24

÷3

| 4 smoothies | : | scoops | | | strawberries | ÷3 |

÷3

1 : [ ] [ ]
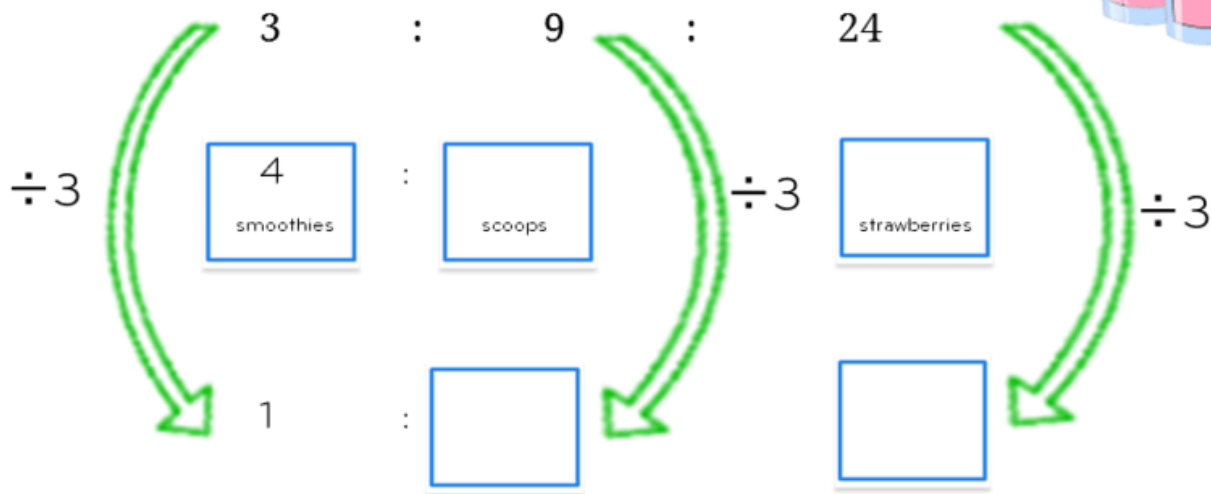
To make **4 smoothies**, Amy needs [Scoops ice-cream] and [strawberries]

Question 3

✏️ Complete

4 m

3 m

7 m
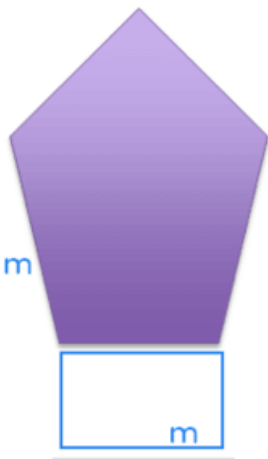
m

Pentagon A and B are similar. Find the missing number by working out the scale factor.

REMEMBER: Scale factor = $\dfrac{\text{Big side}}{\text{Small side}}$

You are revising scale and scale factors (Meeting Y6 expectations)