



Starter:

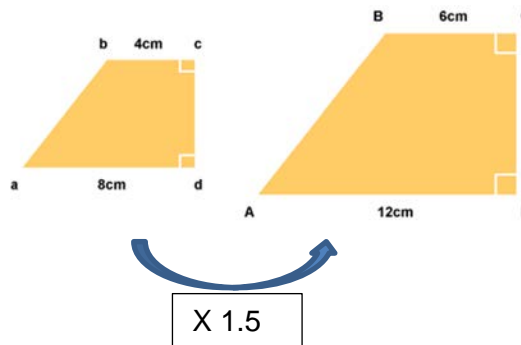
1) Share £150 in the ratio 2:3

2) Solve the equation:

$$\frac{y}{3} = \frac{12}{9}$$

Top tips!

Two shapes are similar if one shape is an enlargement of the other so that all the corresponding angles are equal.



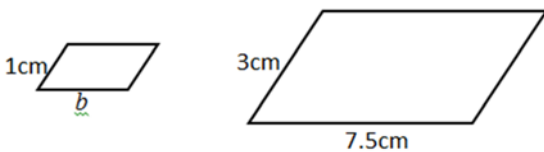
Scale factor:

$$\frac{AB}{ab} = \frac{BC}{bc} = \frac{CD}{cd} = \frac{AD}{ad}$$

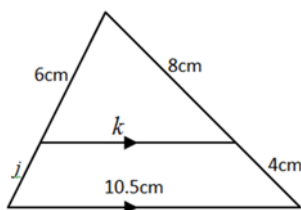
$$\frac{6}{4} = \frac{12}{8} = 1.5$$

Skills:

1. Calculate the length of b in the similar shapes below:



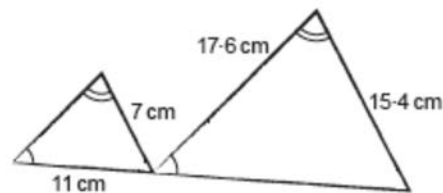
2. Draw the two triangle separately and then calculate the lengths of the unknown sides



Exam Question:

2014 June Link, Applications Unit 2 Higher Q10

Thutmose noticed that two different pyramids have 2 triangular faces that are **similar** when viewed from a distance. He used a photograph to sketch the 2 similar triangles, as shown below.



Calculate the missing lengths on the smaller and on the larger triangle. [4]

Starter:

1) Share £150 in the ratio 2:3

$$150 \div 5 = 30$$

$$2 \times 30 = \text{£}60$$

$$3 \times 30 = \text{£}90$$

2) Solve the equation:

$$\frac{y}{3} = \frac{12}{9}$$

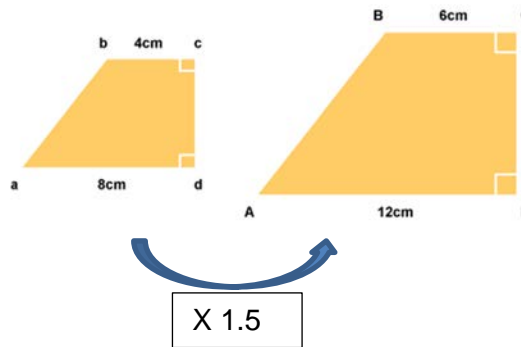
$$9y = 12 \times 3$$

$$9y = 36$$

$$y = 4$$

Top tips!

Two shapes are similar if one shape is an enlargement of the other so that all the corresponding angles are equal.



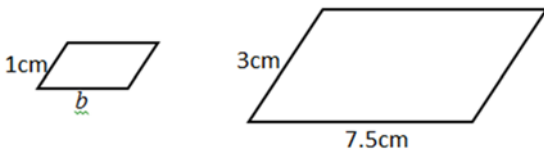
Scale factor:

$$\frac{AB}{ab} = \frac{BC}{bc} = \frac{CD}{cd} = \frac{AD}{ad}$$

$$\frac{6}{4} = \frac{12}{8} = 1.5$$

Skills:

1. Calculate the length of b in the similar shapes below:

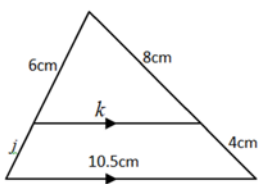


$$\frac{1}{3} = \frac{b}{7.5}$$

$$7.5 = 3b$$

$$b = 2.5$$

2. Draw the two triangle separately and then calculate the lengths of the unknown sides



$$\frac{8}{12} = \frac{k}{10.5}$$

$$84 = 12k$$

$$k = 7$$

$$6 \times 1.5 = 9$$

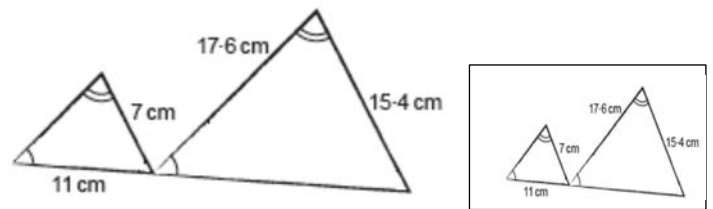
$$9 - 6 = 3\text{cm}$$

$$j = 3\text{cm}$$

Exam Question:

2014 June Link, Applications Unit 2 Higher Q10

Thutmose noticed that two different pyramids have 2 triangular faces that are **similar** when viewed from a distance. He used a photograph to sketch the 2 similar triangles, as shown below.



Calculate the missing lengths on the smaller and on the larger triangle. [4]

$$\frac{a}{17.6} = \frac{7}{15.4}$$

$$15.4a = 123.2$$

$$a = 8\text{cm}$$

$$\frac{11}{b} = \frac{7}{15.4}$$

$$169.4 = 7b$$

$$b = 24.2\text{cm}$$

Assessment for learning

Video / QR code

