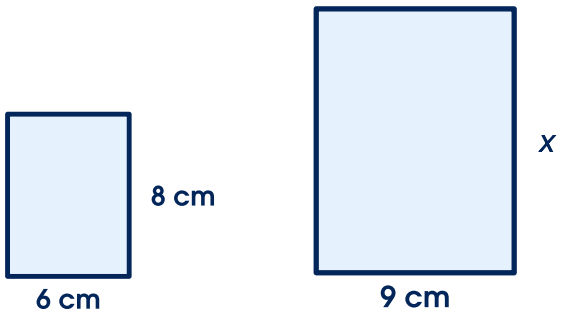
GCSE FOUNDATION · REVISION MAT 3

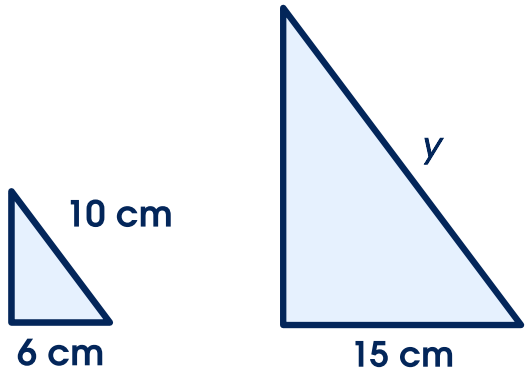
Similar shapes

1 These two rectangles are similar.



Work out the length x.

2 These two triangles are similar.



Work out the length y.

3 Rectangle P is 5 cm by 8 cm.
Rectangle Q is 7.5 cm by 12 cm.

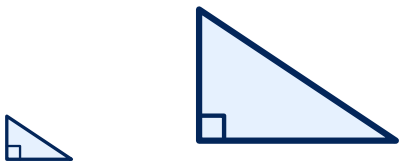
Are the rectangles similar? Explain your answer.

4 Triangle A has sides 6, 8, 10 cm.
Triangle B has sides 9, 12, 15 cm.

Show that the triangles are similar.

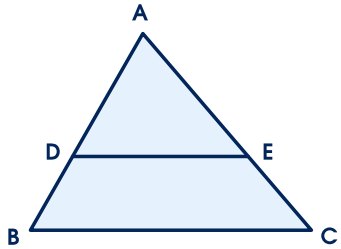
5 A stick 1 m tall casts a shadow 1.5 m long.

At the same time, a tree casts a shadow 9 m long.



How tall is the tree?

6 DE is parallel to BC.



AD = 5 cm, AB = 8 cm and DE = 7.5 cm.

Work out the length of BC.

1 Scale factor = 9 ÷ 6 = 1.5

x = 8 × 1.5 = **12 cm**

2 Scale factor = 15 ÷ 6 = 2.5

y = 10 × 2.5 = **25 cm**

3 7.5 ÷ 5 = 1.5

12 ÷ 8 = 1.5

Yes: the scale factors are the same.

ANSWERS · REVISION MAT 3

Similar shapes

4 9 ÷ 6 = 1.5

12 ÷ 8 = 1.5

15 ÷ 10 = 1.5

All sides are multiplied by **1.5**, so the triangles are similar ✓

5 Scale factor = 9 ÷ 1.5 = 6

Height = 1 × 6 = **6 m**

6 Triangles ADE and ABC are similar.

Scale factor = 8 ÷ 5 = 1.6

BC = 7.5 × 1.6 = **12 cm**