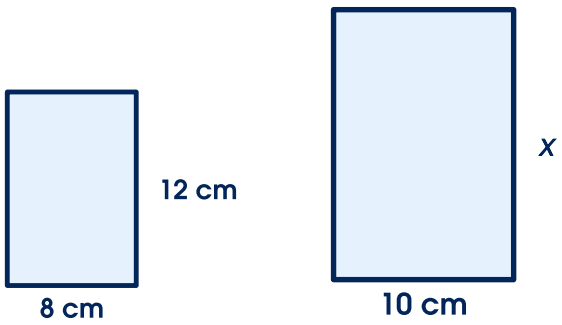
GCSE FOUNDATION · REVISION MAT 5

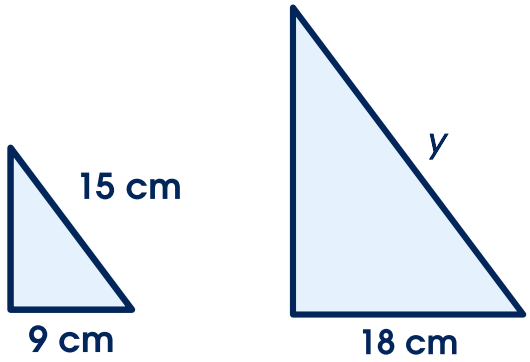
Similar shapes

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 6 cm by 9 cm.
Rectangle Q is 8 cm by 12 cm.

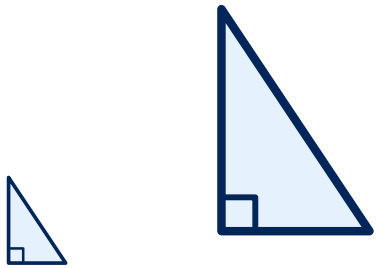
Are the rectangles similar? Explain your answer.

4 Triangle A has sides 8, 15, 17 cm.
Triangle B has sides 4, 7.5, 8.5 cm.

Show that the triangles are similar.

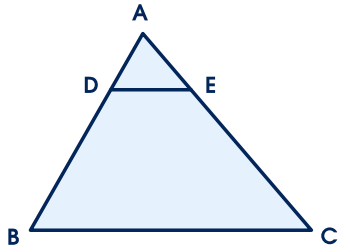
5 A stick 1.8 m tall casts a shadow 1.2 m long.

At the same time, a tree casts a shadow 5 m long.



How tall is the tree?

6 DE is parallel to BC.



AD = 2 cm, AB = 7 cm and DE = 3 cm.

Work out the length of BC.

ANSWERS · REVISION MAT 5

Similar shapes

1 Scale factor = 10 ÷ 8 = 1.25

x = 12 × 1.25 = **15 cm**

2 Scale factor = 18 ÷ 9 = 2

y = 15 × 2 = **30 cm**

3 8 ÷ 6 = 1.33333

12 ÷ 9 = 1.33333

Yes: the scale factors are the same.

4 4 ÷ 8 = 0.5

7.5 ÷ 15 = 0.5

8.5 ÷ 17 = 0.5

All sides are multiplied by **0.5**,
so the triangles are similar ✓

5 Scale factor = 5 ÷ 1.2 = 4.16667

Height = 1.8 × 4.16667 = **7.5 m**

6 Triangles ADE and ABC are similar.

Scale factor = 7 ÷ 2 = 3.5

BC = 3 × 3.5 = **10.5 cm**