GCSE FOUNDATION · REVISION MAT 4

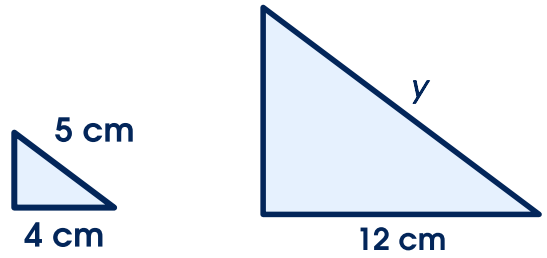
Similar shapes

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 2 cm by 7 cm.
Rectangle Q is 4 cm by 12 cm.

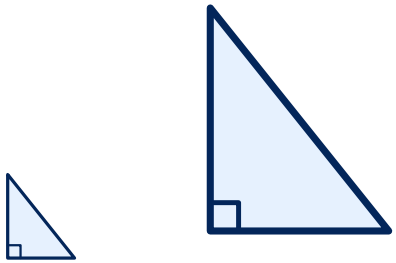
Are the rectangles similar? Explain your answer.

4 Triangle A has sides 7, 24, 25 cm.
Triangle B has sides 14, 48, 50 cm.

Show that the triangles are similar.

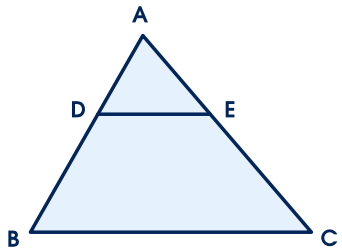
5 A stick 2 m tall casts a shadow 1.6 m long.

At the same time, a tree casts a shadow 7.2 m long.



How tall is the tree?

6 DE is parallel to BC.



AD = 6 cm, AB = 15 cm and DE = 4 cm.

Work out the length of BC.

Mr&Mrs MATHS

1 Scale factor = 15 ÷ 5 = 3

x = 2 × 3 = **6 cm**

2 Scale factor = 12 ÷ 4 = 3

y = 5 × 3 = **15 cm**

3 4 ÷ 2 = 2

12 ÷ 7 = 1.71429

No: the scale factors are different.

ANSWERS · REVISION MAT 4

Similar shapes

4 14 ÷ 7 = 2

48 ÷ 24 = 2

50 ÷ 25 = 2

All sides are multiplied by **2**,
so the triangles are similar ✓

5 Scale factor = 7.2 ÷ 1.6 = 4.5

Height = 2 × 4.5 = **9 m**

6 Triangles ADE and ABC are similar.

Scale factor = 15 ÷ 6 = 2.5

BC = 4 × 2.5 = **10 cm**

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