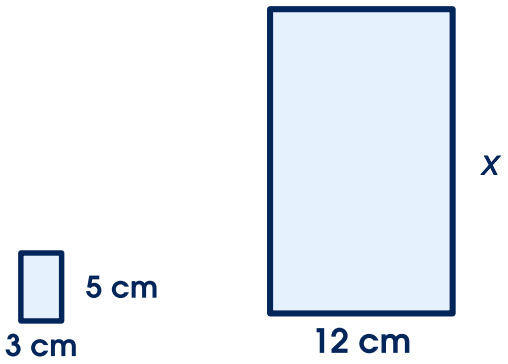
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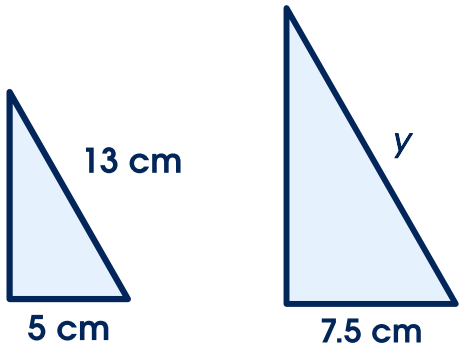
Similar shapes

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 3 cm by 5 cm.
Rectangle Q is 6 cm by 10 cm.

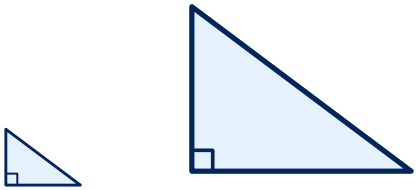
Are the rectangles similar? Explain your answer.

4 Triangle A has sides 5, 12, 13 cm.
Triangle B has sides 15, 36, 39 cm.

Show that the triangles are similar.

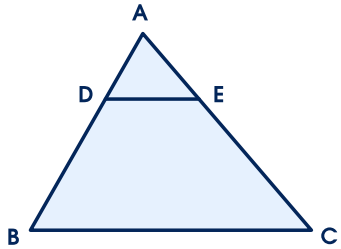
5 A stick 1.5 m tall casts a shadow 2 m long.

At the same time, a tree casts a shadow 12 m long.



How tall is the tree?

6 DE is parallel to BC.



AD = 3 cm, AB = 9 cm and DE = 5 cm.

Work out the length of BC.

Mr&Mrs MATHS

ANSWERS · REVISION MAT 2

Similar shapes

1 Scale factor = 12 ÷ 3 = 4

x = 5 × 4 = **20 cm**

2 Scale factor = 7.5 ÷ 5 = 1.5

y = 13 × 1.5 = **19.5 cm**

3 6 ÷ 3 = 2

10 ÷ 5 = 2

Yes: the scale factors are the same.

4 15 ÷ 5 = 3

36 ÷ 12 = 3

39 ÷ 13 = 3

All sides are multiplied by **3**,
so the triangles are similar ✓

5 Scale factor = 12 ÷ 2 = 6

Height = 1.5 × 6 = **9 m**

6 Triangles ADE and ABC are similar.

Scale factor = 9 ÷ 3 = 3

BC = 5 × 3 = **15 cm**