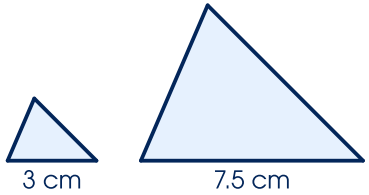
GCSE HIGHER · REVISION MAT 3

Similar shapes

1 The triangles are similar. Find x.

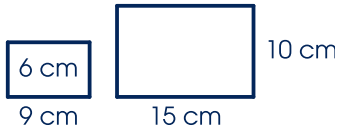


The short side of the small triangle is 2 cm. Find the matching side, x, of the large one.

2 Find the scale factor when a length of 8 cm is enlarged to 20 cm.

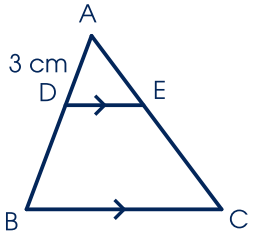
3 Is a 6 cm by 9 cm rectangle similar to a 10 cm by 15 cm rectangle?

Explain.



4 DE is parallel to BC.

AD = 3 cm, AB = 9 cm, AE = 4 cm.



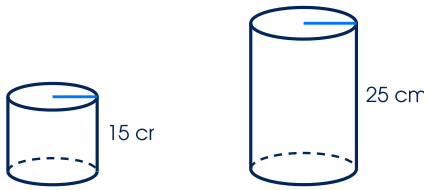
Find EC.

5 Show that a length scale factor of 4 gives a volume scale factor of 64.

6 Two similar bottles are 15 cm and 25 cm tall.

The large one holds 1.25 litres.

How much does the small one hold?



7 Explain why a triangle with sides 4, 6, 7 is not similar to one with sides 8, 12, 15.

8 Two similar triangles have areas 18 cm² and 50 cm².

The large one has perimeter 40 cm.

Find the perimeter of the small one.

Mr&Mrs MATHS

ANSWERS · REVISION MAT 3

Similar shapes

1 Scale factor 2.5

x = 5 cm

2 **2.5**

3 6 : 9 = 2 : 3 and 10 : 15 = 2 : 3

Yes

4 Scale factor 3, AC = 12 cm

EC = 8 cm

5 **$4^3 = 64$**

6 Length 3 : 5, volume 27 : 125

0.27 litres

7 **4, 6 double to 8, 12, but 7 doubles to 14, not 15.**

8 Area 9 : 25, length 3 : 5

24 cm

Mr&Mrs MATHS