

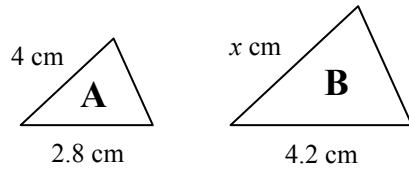


SIMILAR SHAPES

LENGTHS, AREAS AND VOLUMES

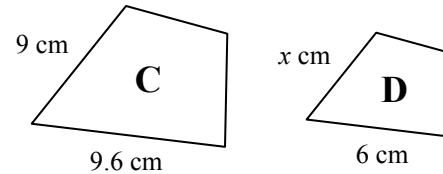
Ref: G460. **1R1**

A1 Shape **A** is similar to shape **B**



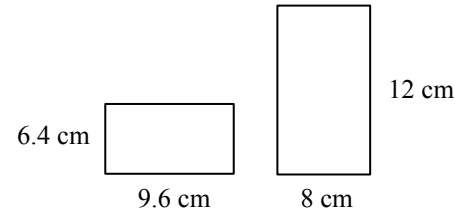
Work out the value of x .

A2 Shape **C** is similar to shape **D**

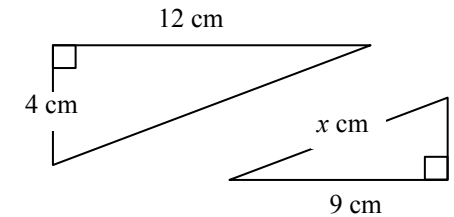


Work out the value of x .

A3 Do some calculations to work out if the rectangles are mathematically similar.

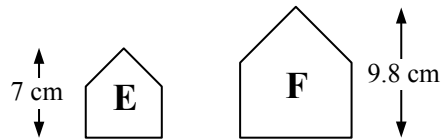


A4 The two triangles are similar



Work out the value of x .

B1 Shape **E** is similar to shape **F**
The area of **E** is 30 cm^2



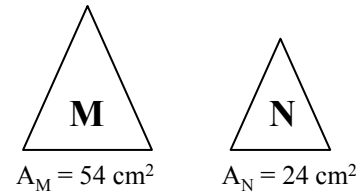
Calculate the area of **F**.

B2 Shape **G** is similar to shape **H**
The area of **G** is 210 cm^2



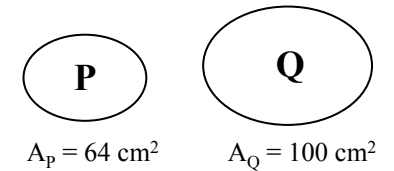
Calculate the area of **H**.

B3 Shape **M** is similar to shape **N**
The height of **M** is 12 cm.



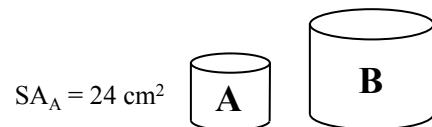
Calculate the height of **N**.

B4 Shape **P** is similar to shape **Q**
The width of **Q** is 14 cm.



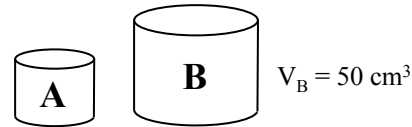
Find the width of **P**.

C1 Cylinders **A** and **B** are similar
Cylinder **B** is 1.6 times as high as cylinder **A**.



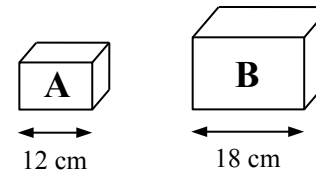
Calculate the surface area of **B**.

C2 Cylinders **A** and **B** are similar
Cylinder **B** is 1.4 times as high as cylinder **A**.



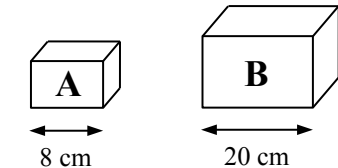
Calculate the volume of **A**.

C3 Cuboids **A** and **B** are similar
The volume of **A** is 250 cm^3 .



Calculate the volume of **B**.

C4 Cuboids **A** and **B** are similar
The surface area of **B** is 1000 cm^2 .



Calculate the surface area of **A**.



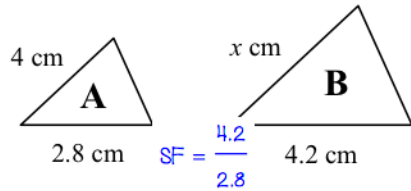
SIMILAR SHAPES

LENGTHS, AREAS AND VOLUMES

Scale Factor, $SF = \frac{L_1}{L_2}$ or $SF = \sqrt{\frac{A_1}{A_2}}$ or $SF = \sqrt[3]{\frac{V_1}{V_2}}$

Ref: G460. **1R1**

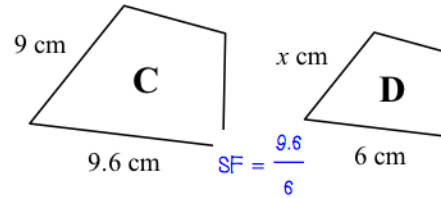
A1 Shape A is similar to shape B



Work out the value of x.

6 cm

A2 Shape C is similar to shape D

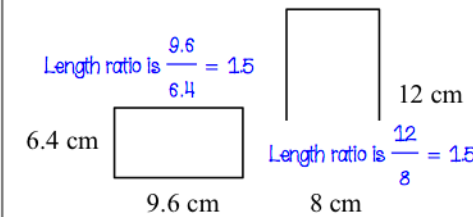


Work out the value of x.

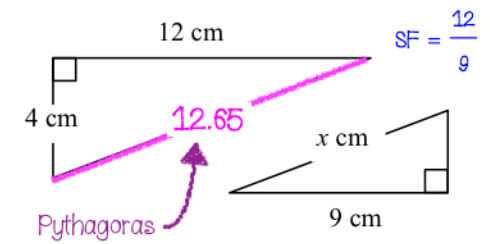
5.625 cm

A3

The lengths of the sides are in the same ratio, so the rectangles are similar.



A4 The two triangles are similar

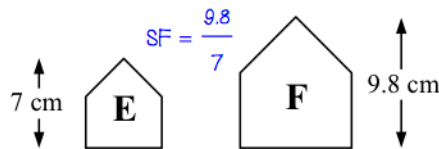


Work out the value of x.

9.49 cm

B1 Shape E is similar to shape F

The area of E is 30 cm^2

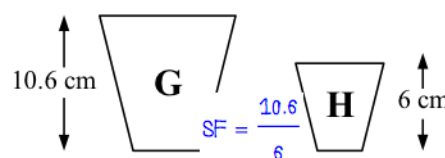


Calculate the area of F.

58.8 cm^2

B2 Shape G is similar to shape H

The area of G is 210 cm^2

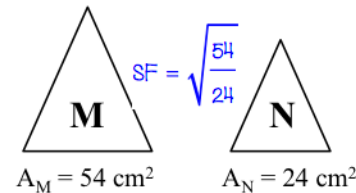


Calculate the area of H.

62.3 cm^2

B3 Shape M is similar to shape N

The height of M is 12 cm.

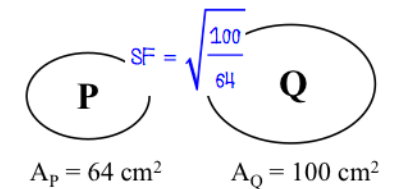


Calculate the height of N.

8 cm

B4 Shape P is similar to shape Q

The width of Q is 14 cm.

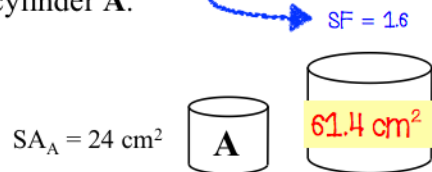


Find the width of P.

11.2 cm

C1 Cylinders A and B are similar

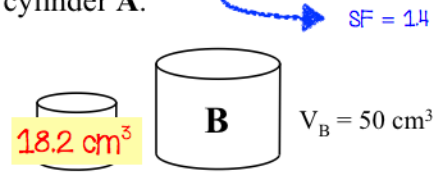
Cylinder B is 1.6 times as high as cylinder A.



Calculate the surface area of B.

C2 Cylinders A and B are similar

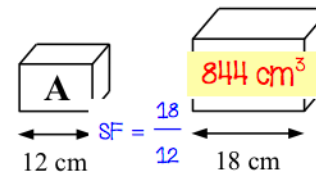
Cylinder B is 1.4 times as high as cylinder A.



Calculate the volume of A.

C3 Cuboids A and B are similar

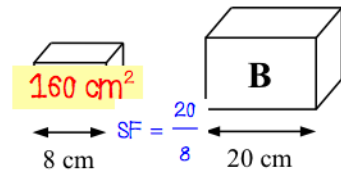
The volume of A is 250 cm^3 .



Calculate the volume of B.

C4 Cuboids A and B are similar

The surface area of B is 1000 cm^2 .



Calculate the surface area of A.