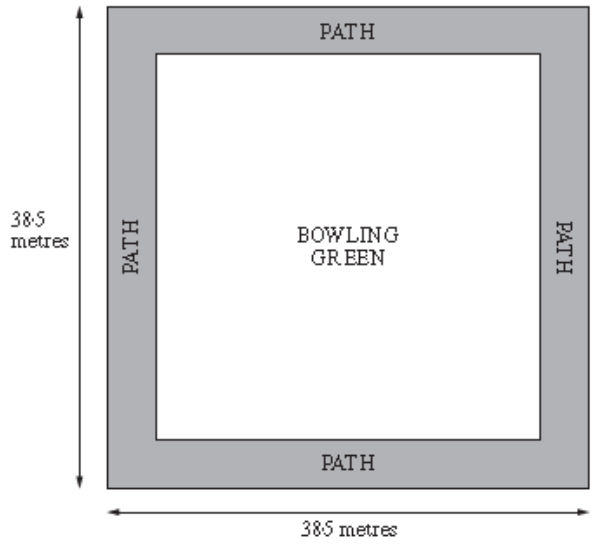
Area and Volume

1. The local council decided to lay a 1½ metre wide concrete path around their bowling green, as shown in the diagram.



a. Calculate the area of the bowling green. …… [2]

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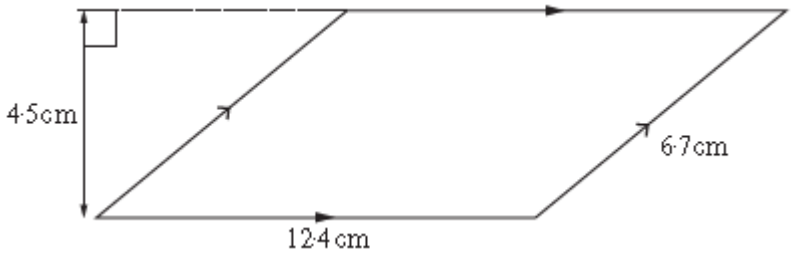
b. Calculate the area, in square metres, of the concrete path. ……..

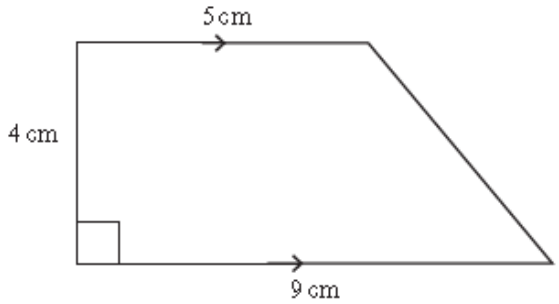
…… [3]

2.



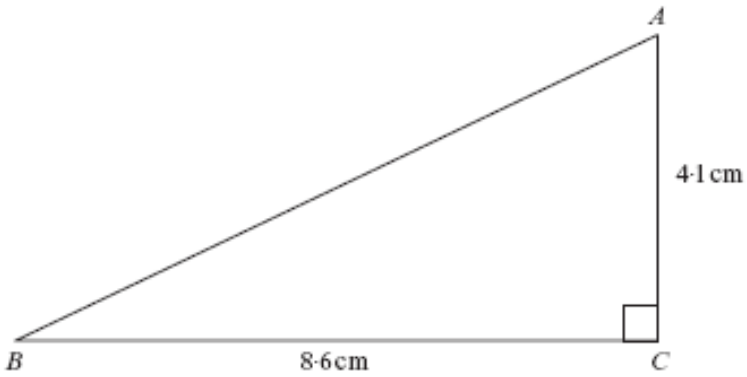
Calculate the area of the parallelogram. …… [2]

3.



Calculate the area of the trapezium. …… [3]

4.



a. Calculate the area of the triangle *ABC*. [2]

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b. Calculate the perimeter of the triangle *ABC*, giving your answer correct to 2 significant figures. [5]

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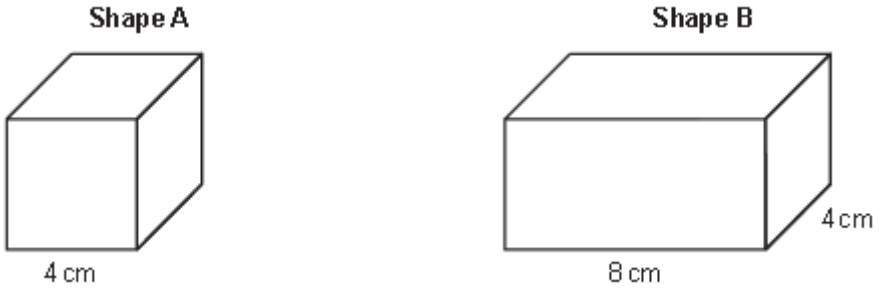
5. Shape A is a **cube**.
Shape B is a **cuboid**.
Both shape A and shape B have the same volume.
What is the height of shape B? [4]



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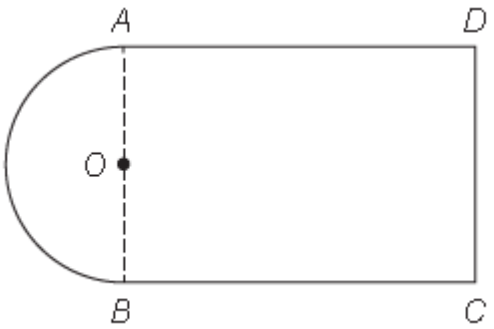
6. The shape below shows a semi circle attached to a rectangle



The radius of the semi circle is 6·1 cm and the length BC = 16·7 cm.
Calculate the area of the shape. [6]

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7. An advertising display in a shopping centre is made up of a number of cubes as shown below.

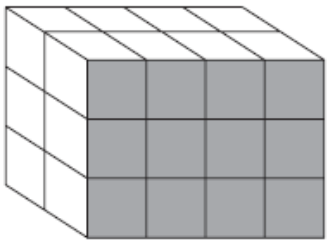


Diagram not drawn to scale

The length of one edge of each cube is 1 metre.
One face of the display is shaded.

What is the total volume of the display? ..... m^3 [1]

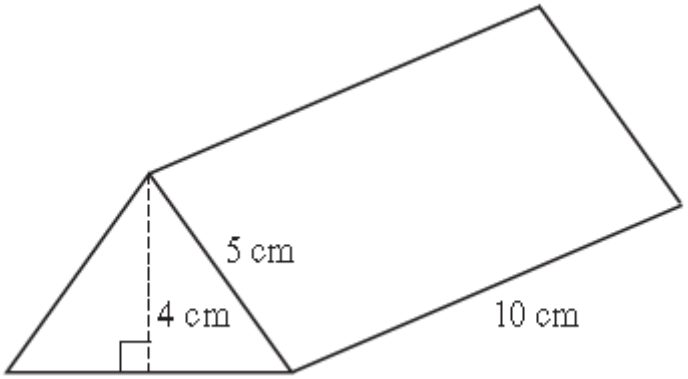
What is the area of the shaded face of the display? ..... m^2 [1]

A silver thread is attached around the perimeter of the shaded face of the display.

What is the length of this thread?

You must give the units of your answer. ..... [2]

8. A famous chocolate box is in the shape of a triangular prism.



a. Calculate the volume of the prism, giving the units of your answer. [3]

……..

……..

b. Calculate the surface area of the triangular prism, [5]

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9. Calculate the volume of a cylinder with a diameter of 4.6 cm and a height of 8.4 cm. [3]

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