

Cylinders

For AQA GCSE Mathematics (8300) • Foundation tier

Name _____

Total marks: **23**

Answer **all** questions in the spaces provided. Show your working: marks are given for correct method. You may use a calculator. Diagrams are not drawn accurately.

- 1** A cylinder has volume $72\pi \text{ cm}^3$ and radius 3 cm.
Circle the height of the cylinder.

[1 mark]

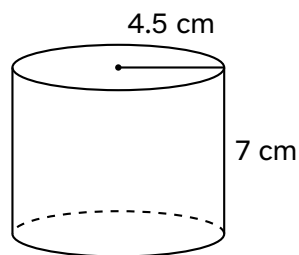
4 cm

8 cm

12 cm

24 cm

- 2** Here is a cylinder.



Not drawn accurately

Work out the volume of the cylinder.
Give your answer to 1 decimal place.

[2 marks]

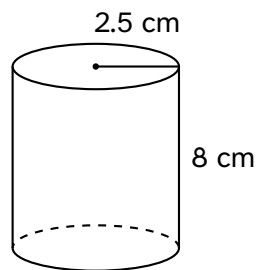
Answer _____ cm^3

- 3** A cylinder has radius 3 cm and height 5 cm.
Work out the volume of the cylinder.
Give your answer in terms of π .

[2 marks]

Answer _____ cm^3

- 4** A cylinder has radius 2.5 cm and height 8 cm.



Not drawn accurately

Work out the area of the curved surface of the cylinder.
Give your answer to 1 decimal place.

[2 marks]

Answer _____ cm^2

- 5 A cylinder has a volume of 1000 cm^3 and radius 5 cm.
Work out the height of the cylinder.
Give your answer to 1 decimal place.

[3 marks]

Answer _____ cm

- 6 A tin is a cylinder with radius 4 cm and height 11 cm.
 $1 \text{ ml} = 1 \text{ cm}^3$

Will the tin hold 500 ml of soup?

Tick a box.

You must show your working.

[3 marks]

☐ Yes

☐ No

- 7 A candle is a cylinder with radius 3.8 cm and height 11 cm.
Some of these candles are packed upright, in one layer, in a box.
The inside of the box is 30 cm long, 23 cm wide and 12 cm high.

Leah says,

"I can fit 12 of the candles in the box."

Is Leah correct?

Tick a box.

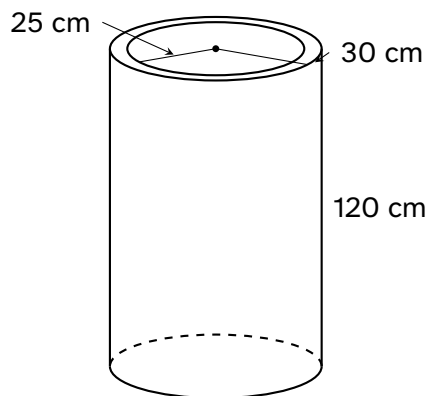
Show working to support your answer.

[2 marks]

☐ Yes

☐ No

- 8 A concrete pipe is a hollow cylinder.
The outer radius is 30 cm and the inner radius is 25 cm.
The pipe is 120 cm long.



Not drawn accurately

Work out the volume of concrete in the pipe.
Give your answer to the nearest cm^3

[4 marks]

Answer _____ cm^3

- 9 A cuboid tank 20 cm by 10 cm by 8 cm is full of water.
All the water is poured into an empty cylinder with radius 6 cm.
The water does not overflow.

Work out the depth of the water in the cylinder.
Give your answer to 1 decimal place.

[4 marks]

Answer _____ cm