

Surname	
Other Names	
Candidate's Signature	

GCSE 9 - 1 Questions

Cylinders

Calculator Allowed

INSTRUCTIONS TO CANDIDATES

- Write your name in the space provided.
- Write your answers in the spaces provided in this question paper.
- Answer ALL questions.
- Any working should be clearly shown in the spaces provided since marks may be awarded for partially correct solutions.
- You should have a ruler, compass and protractor where required.

Total Marks :

1) Calculate the volume of a cylinder radius 4.5cm and height 10.3cm

State units of your answer

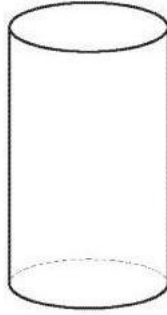


Diagram not drawn to scale

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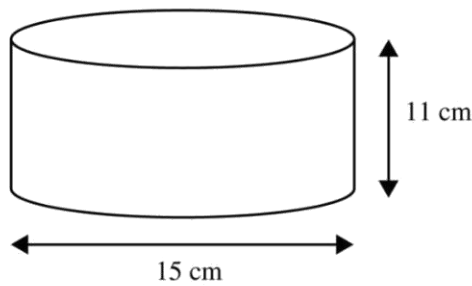
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2) Find the curved surface area of the cylinder shown.
Give your answer to an appropriate degree of accuracy.



Answer = _____ cm² [3]

- 3) A hollow cylinder is made with an internal radius of 4cm and an internal height of 10cm.

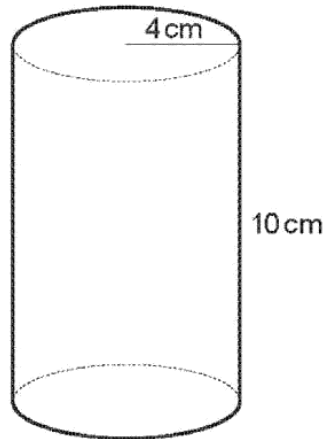


Diagram not drawn to scale

Carwyn says

“This cylinder holds approximately 5 litres of liquid”

By estimating π as 3, show whether Carwyn is correct or not. You must show working and give a reason for your answer.

[3]

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4) The circumference of the base of a cylindrical oil drum is 204 cm.

(a) Calculate the diameter of the drum.

Answer _____ cm [2]

The drum is 75 cm high.

(b) Calculate the volume of the drum.

Answer _____ cm³ [3]

5) Calculate the **curved surface area** of a cylinder of length 12 cm and diameter 8 cm.

Give your answer to an appropriate degree of accuracy.

Answer _____ cm² [3]

6) An empty cylindrical tank has a base radius of three metres and is four metres high.

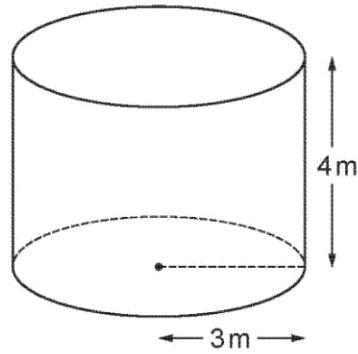


Diagram not drawn to scale

(a) Calculate the volume of this tank. [2]

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(b) Water is pumped into the tank at a constant rate of 1800 litres per minute. The pump stops automatically immediately before the tank overflows. For how many whole minutes is water pumped into the tank? [4]

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7) Nine litres of water was poured into an empty cylindrical can, whose base radius is 12 cm.

What is the height of the water in the can, correct to the nearest cm?

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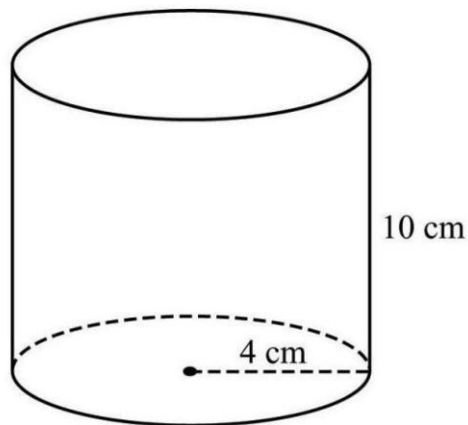
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[4]

8) Calculate the curved surface area of the cylinder.



Answer _____ cm² [2]