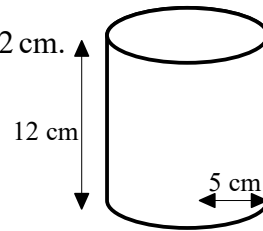
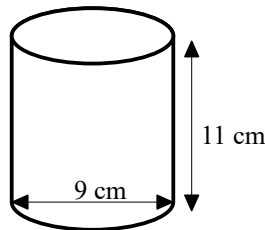


- 1 A cylinder has a radius of 5 cm and a height of 12 cm.
Work out the volume of the cylinder.
Give your answer in terms of π .



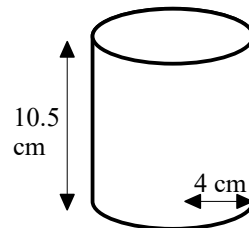
(3 marks)

- 2 A cylinder has a diameter of 9 cm and a height of 11 cm.
Work out the volume of the cylinder.
Give your answer correct to 1 decimal place.



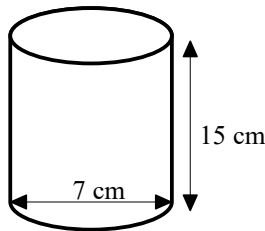
(3 marks)

- 3 A solid cylinder has a radius of 4 cm and a height of 10.5 cm.
Work out the total surface area of the cylinder.
Give your answer correct to 1 decimal place.



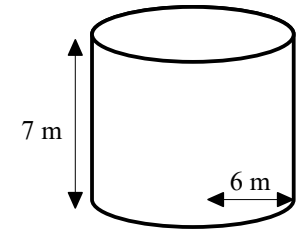
(3 marks)

- 4 A solid cylinder has a diameter of 7 cm and a height of 15 cm.
Work out the total surface area of the cylinder.
Give your answer correct to 3 significant figures.



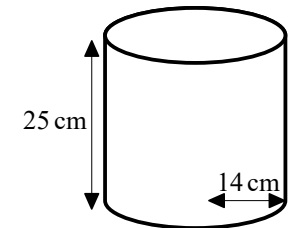
(3 marks)

- 5 A solid cylinder has a radius of 6 m and a height of 7 m.
Work out the total surface area of the cylinder.
Give your answer in terms of π .



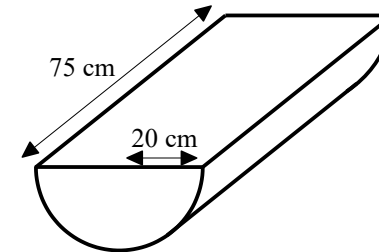
(4 marks)

- 6 A solid cylinder has a radius of 14 cm and a height of 25 cm.
Work out the volume of the cylinder.
Give your answer correct to 3 significant figures.



(4 marks)

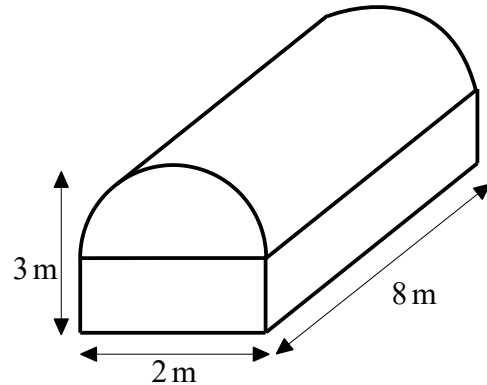
- 7 A solid cylinder is cut in half to form a semi-cylinder with a radius of 20 cm and a length of 75 cm.



- (a) Work out the volume of the semi-cylinder.
Give your answer correct to 3 significant figures. (3)
- (b) Work out the total surface area of the semi-cylinder.
Give your answer correct to 3 significant figures. (3)

(6 marks)

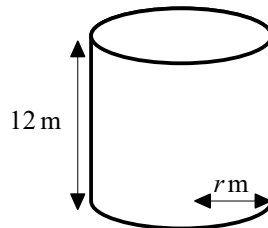
- 8 A solid is formed by placing a half cylinder on a rectangular prism. The solid has a width of 2 m, a total height of 3 m and a length of 8 m.



Work out the volume of the solid.
Give your answer correct to 3 significant figures.

(4 marks)

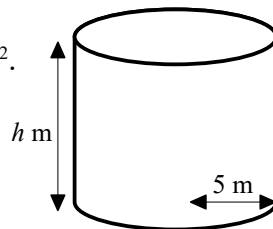
- 9 A solid cylinder has a radius of r m and a height of 12 m.
The volume of the cylinder is $507\pi \text{ m}^3$.
Find the value of r .



(4 marks)

- 10 A solid cylinder has a radius of 5 m and a height of h m.

The total surface area of the cylinder is $165\pi \text{ m}^2$.
Find the value of h .



(4 marks)

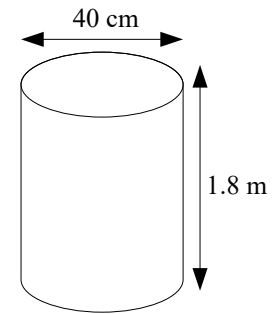
- 11 The diagram shows a cylindrical tank. The tank has a top and a bottom.

5 of these tanks are going to be painted.
Each tank has a diameter of 40 cm and a height of 1.8 m.

Each pot of paint can cover 4 m^2 .

How many pots of paint are needed to paint the 5 tanks?

(4 marks)



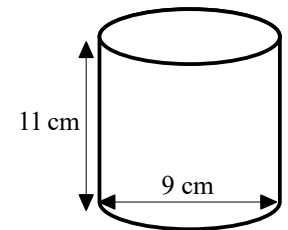
- 12 A cylinder has a diameter of 9 cm and a height of 11 cm.

(a) Work out the volume of the cylinder.
Give your answer correct to 1 decimal place.

(b) The volume of another cylinder is 1500 cm^3 .
Michael says that 1500 cm^3 is the same as 15 m^3 .

Is Michael correct?

You must give a reason for your answer.



(4 marks)

- 13 The diagram shows an empty tank in the shape of a cylinder.

The cylinder has radius 12 cm and height 45 cm.

Water flows into the tank at a rate of 1.8 litres per minute.

Calculate the number of minutes it will take to completely fill the tank.

Give your answer correct to the nearest minute.

(4 marks)

