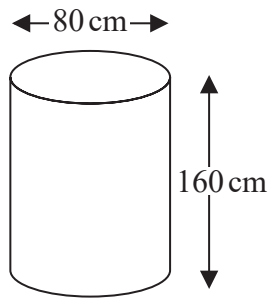


Cylinders

November 2022 Paper 3

24 Karina has 4 tanks on her tractor.

Each tank is a cylinder with diameter 80 cm and height 160 cm.



The 4 tanks are to be filled completely with a mixture of fertiliser and water.

The fertiliser has to be mixed with water in the ratio 1 : 100 by volume.

Karina has 32 litres of fertiliser.

1 litre = 1000 cm³

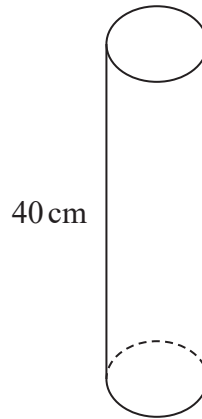
Has Karina enough fertiliser for the 4 tanks?

You must show how you get your answer.

(Total for Question 24 is 4 marks)

June 2023 Paper 1

27 The diagram shows a solid cylinder on a horizontal floor.



$$\text{pressure} = \frac{\text{force}}{\text{area}}$$

The cylinder has a
volume of 1200 cm^3
height of 40 cm.

The cylinder exerts a force of 90 newtons on the floor.

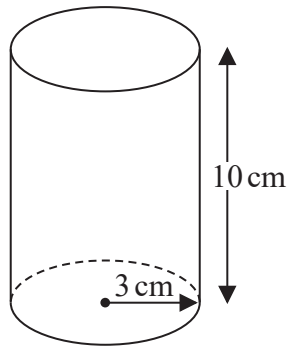
Work out the pressure on the floor due to the cylinder.

..... newtons/cm²

(Total for Question 27 is 3 marks)

November 2024 Paper 2

28 The diagram shows a solid cylinder with base radius 3 cm and height 10 cm.



The cylinder is made from steel.

It has a mass of 2250 g.

Work out the density of the steel.

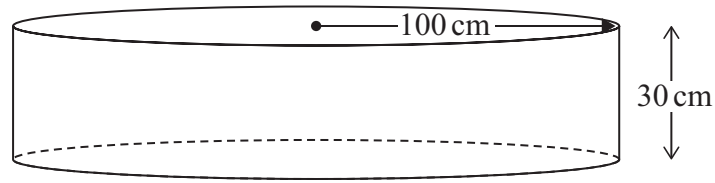
Give your answer correct to 3 significant figures.

..... g/cm³

(Total for Question 28 is 3 marks)

June 2024 Paper 3

28 A paddling pool is in the shape of a cylinder.



The pool has radius 100 cm.

The pool has depth 30 cm.

The pool is empty.

It is then filled with water at a rate of 250 cm^3 per second.

Work out the number of minutes it takes to fill the pool completely.

Give your answer correct to the nearest minute.

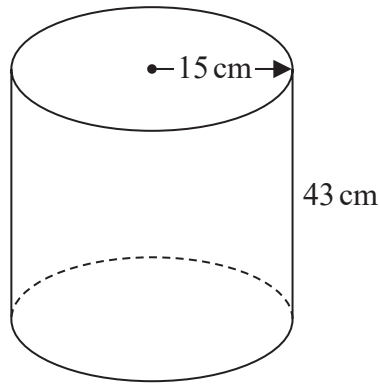
You must show all your working.

..... minutes

(Total for Question 28 is 4 marks)

November 2023 Paper 2

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



The cylinder has radius 15 cm and height 43 cm.

Water flows into the tank at a rate of 0.47 litres per minute.

Calculate the number of minutes it will take to completely fill the tank.
Give your answer correct to the nearest minute.

..... minutes

(Total for Question 28 is 4 marks)
