

Name:

Exam Style Questions

Volume of a Cylinder



Equipment needed: Calculator, pen

Guidance

1. Read each question carefully before you begin answering it.
2. Check your answers seem right.
3. Always show your workings

Video Tutorial

www.corbettmaths.com/contents

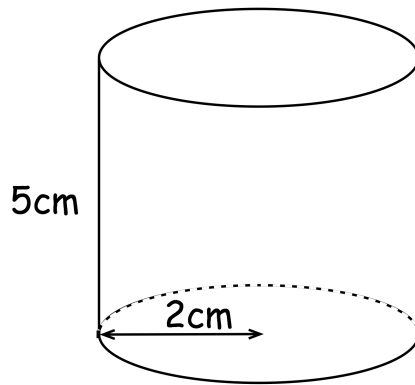
Video 357



Answers and Video Solutions



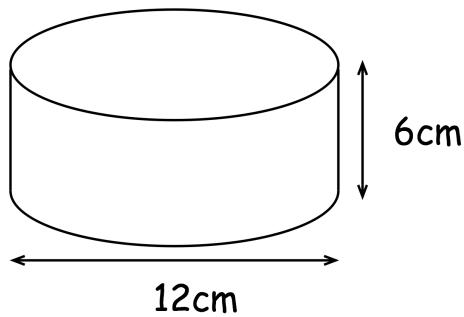
1. Below is a cylinder with radius 2cm and height 5cm.



Calculate the volume of the cylinder.

.....cm³
(3)

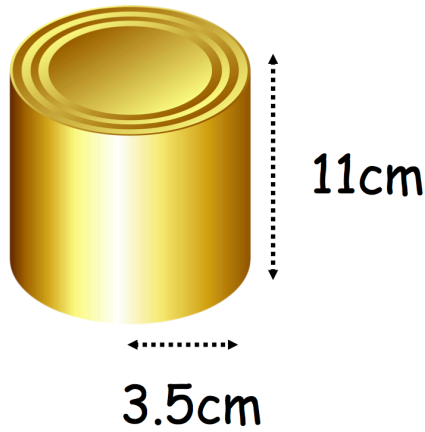
2. Shown below is a cylinder.



Calculate the volume.
Give your answer to 1 decimal place.

..... cm³
(3)

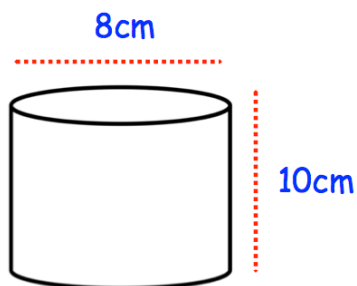
3. A can of baked beans is shown below.



Calculate the volume of the can.

..... cm³
(3)

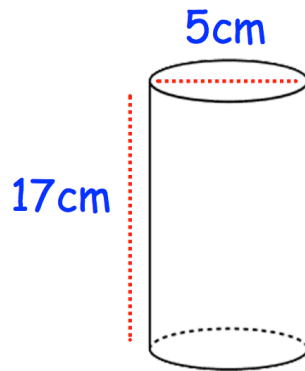
4. Below is a cylinder with diameter 8cm and height 10cm.



Find the volume of the cylinder.
Give your answer in terms of π

..... cm³
(3)

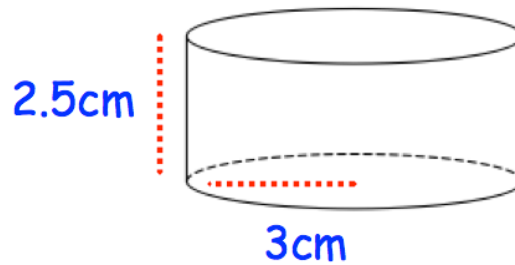
5. Shown below is a cylinder with diameter 5cm and height 17cm.



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

..... cm³
(3)

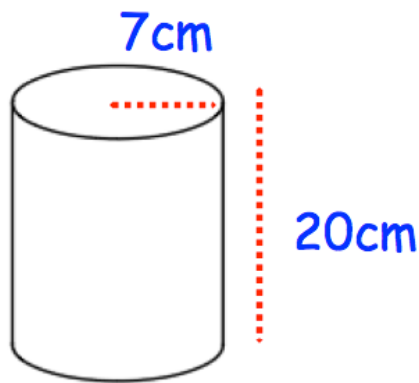
6.



Calculate the volume of the cylinder.
Give your answer in terms of π
State the units of your answer.

.....
(4)

7. Carl is filling flowerpots with soil.

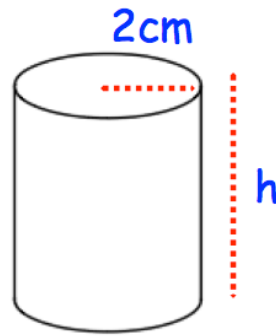


Each flowerpot is a cylinder with radius 7cm and height 20cm.
Carl has 50 litres of soil.

How many flowerpots can be filled?

.....
(4)

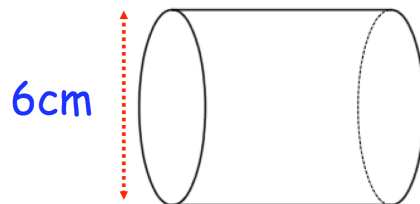
8. A cylinder has radius 2cm.



The volume of the cylinder is 100cm^3
Calculate the height of the cylinder.

..... cm
(3)

9. The cylinder below has a diameter of 6cm



The volume of the cylinder is $180\pi\text{cm}^3$

Work out the length of the cylinder.

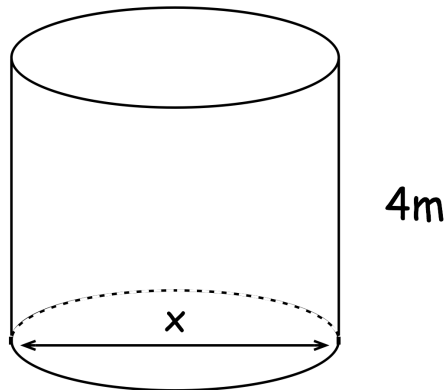
..... cm
(3)

10. A cylinder has a height of 15cm and a volume of 500cm^3
Calculate the radius of the cylinder.



..... cm
(3)

11. Shown below is a cylindrical water tank.
The height of the tank is 4 metres.

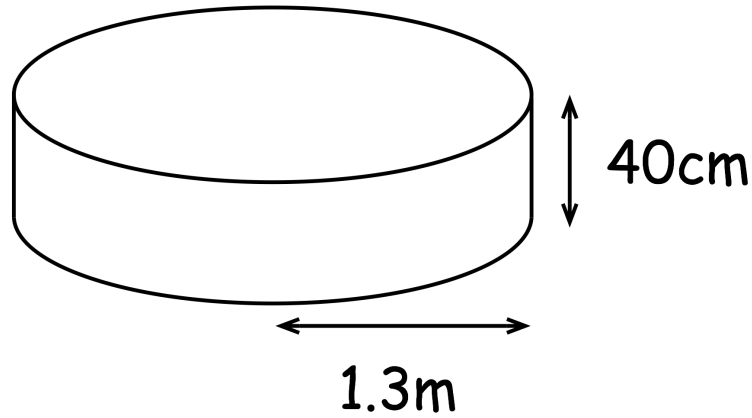


The volume of the tank is 6.4m^3

Find the diameter of the water tank.

..... m
(3)

12. Shown below is a paddling pool with radius 1.3m and depth 40cm

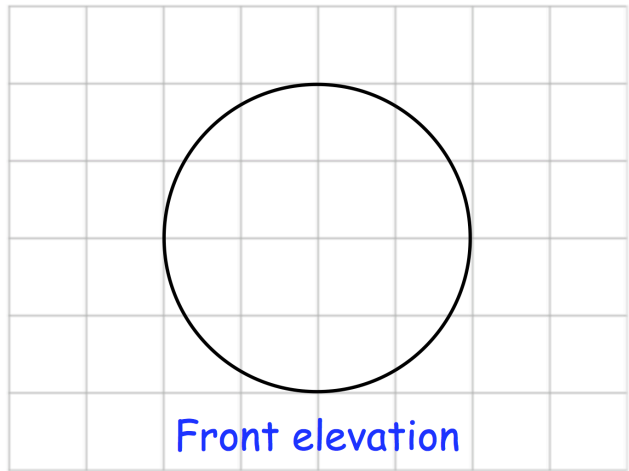


Felix is filling the paddling pool at a rate of 15 litres a minute.

Work out how long it takes to fill the paddling pool.
Give your answer to the nearest minute.

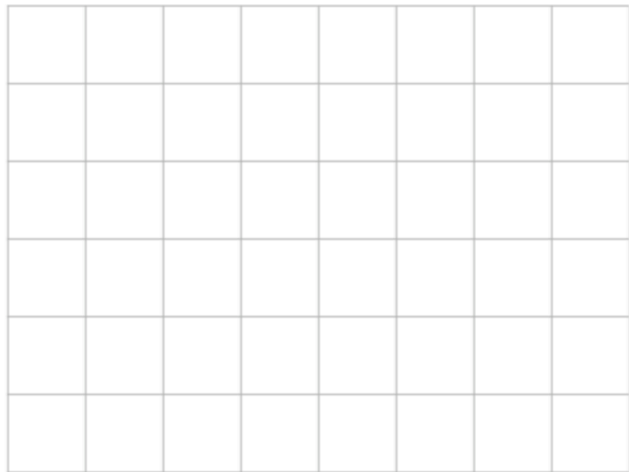
..... minutes
(4)

13. Here is the front elevation of a cylinder on a centimetre square grid.



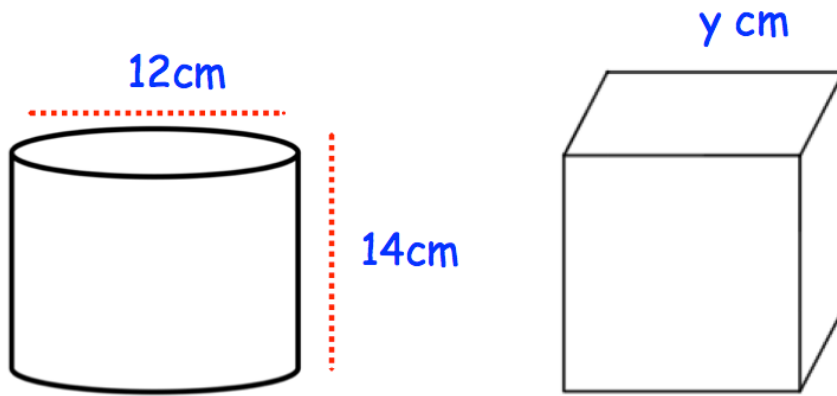
The volume of the cylinder is $12\pi \text{ cm}^3$

Draw the side elevation of the cylinder.



(4)

14.



A cylinder has diameter 12cm and height 14cm.

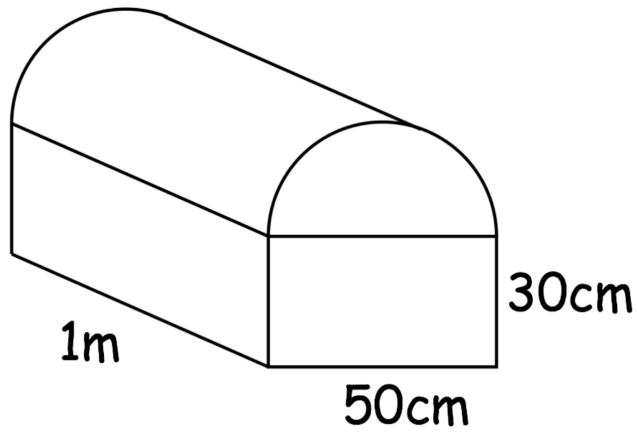
A cube has side length y cm.

The cylinder and cube has the same volume.

Find y .

..... cm
(4)

15.



Shown above is a prism that is 1m long.

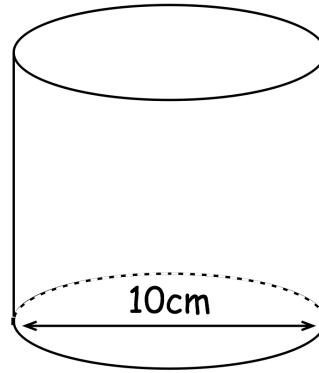
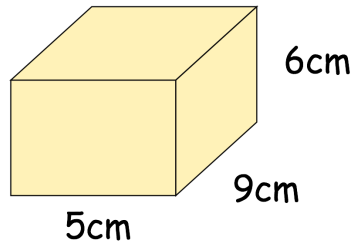
The cross-section of the prism is a semi-circle above a rectangle.

Calculate the volume of the prism.

Give your answer correct to 1 decimal place.

..... cm³
(4)

16.



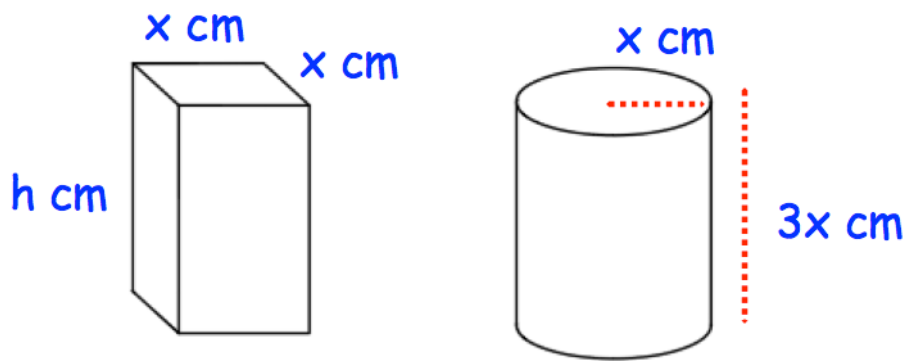
A cuboid is full of liquid.

Some of the liquid is poured from the cuboid into the cylinder.
The height, h , of the liquid in both containers is the same.

Work out h .

..... cm
(4)

17.



The volume of the cuboid and the cylinder are equal.

Find h in terms of x .

Give your answer in its simplest form.

..... cm
(3)