

SCORE

# Geometry

With Classified  
answer book

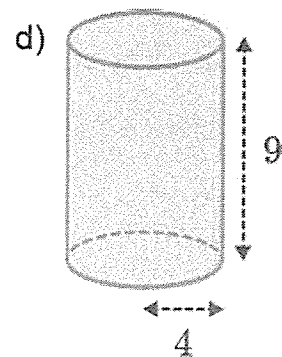
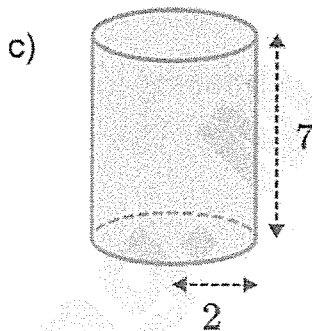
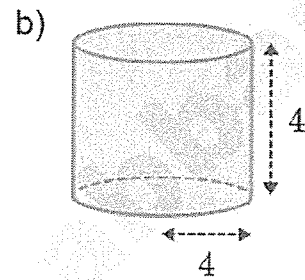
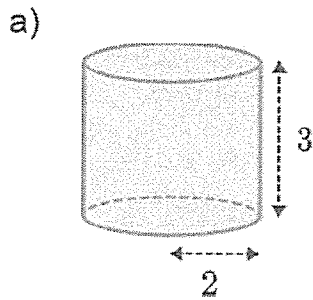
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## 20- Volume of a Cylinder

1. Work out the volume of the cylinders. All dimensions are in cm. Diagrams are NOT to scale. Give your answer correct to 2 d.p.



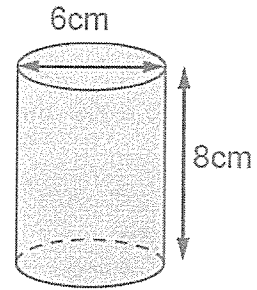
2. This is part of Timo's homework:

Question

Work out the volume of this cylinder.

Answer \_\_\_\_\_

$$\begin{aligned} V &= \pi r^2 h = \pi \times 6^2 \times 8 = \pi \times 36 \times 8 \\ &= 905 \text{ cm}^3 \text{ (3 s.f.)} \end{aligned}$$

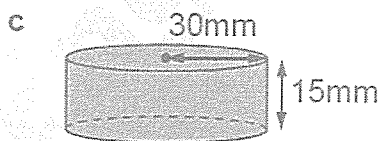
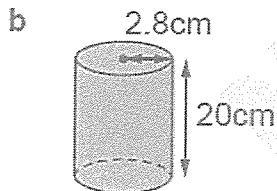
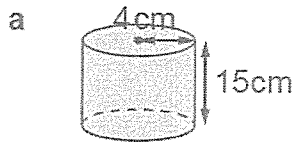


Timo has made a mistake in his solution.

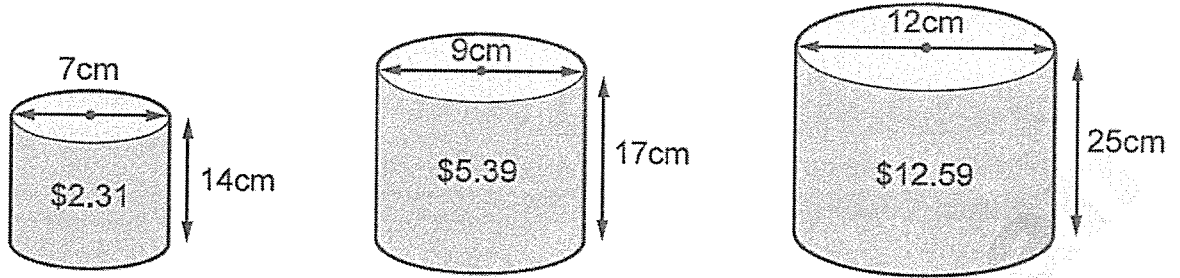
Explain the mistake that Timo has made and work out the correct answer.

3. Work out the volume of each cylinder.

Give your answers correct to one decimal place (1 d.p.).



4. A shop sells chocolate drink powder in three different-sized cylindrical tins.



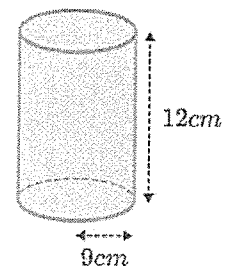
Which tin gives the best value for money?

Explain your answer and show all your working.

5. Billy is filling up flower pots with soil.

Each flower pot has a radius of 9cm and height of 12cm.

If Billy has 3 flower pots, how many litres of soil is needed to fill all the pots?

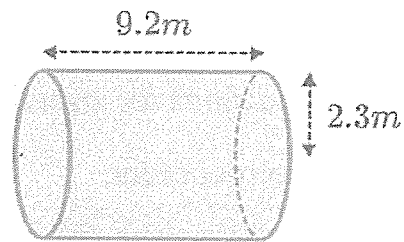


NOT to scale

6. (a) Here is a cylinder.

Work out its volume.

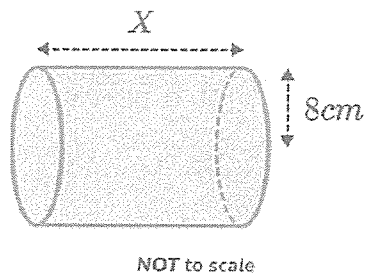
Leave your answer in terms of  $\pi$ .



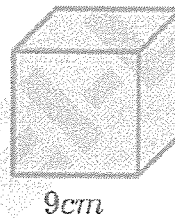
NOT to scale

(b) Give your answer to 3 significant figures.

7. The cube and cylinder below have the same volume.  
Work out the value of  $x$ .



NOT to scale



8. An oil drum has a radius of  $52\frac{1}{2}$  cm and height of  $87\frac{1}{2}$  cm.

Work out the volume of the oil drum to one decimal place.

