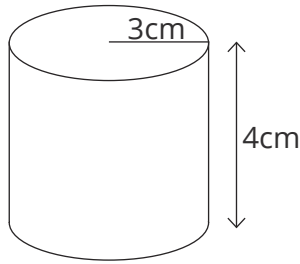


Your Turn

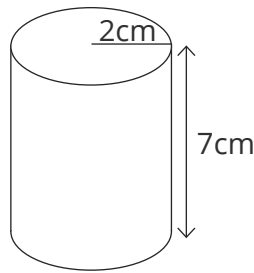
1. Calculate the volume of the cylinder, giving your answer correct to the nearest whole number.



$$\pi \times 3^2 \times 4 = 113.0973355...$$

$$113\text{cm}^3$$

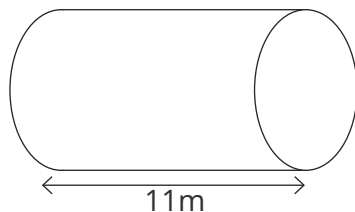
2. Calculate the volume of the cylinder, giving your answer correct to the nearest whole number.



$$\pi \times 2^2 \times 7 = 87.9645943...$$

$$88\text{cm}^3$$

3. The cylinder has a radius of 2.5m. Calculate the volume of the cylinder, giving your answer correct to 2 decimal places.

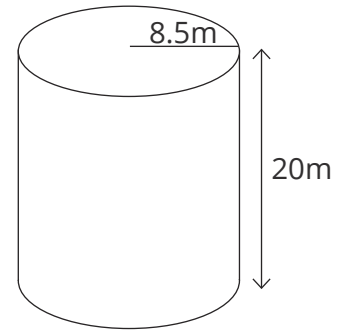


$$\pi \times 2.5^2 \times 11 = 215.9844949...$$

$$215.98\text{m}^3$$

Volume of a Cylinder **Answers**

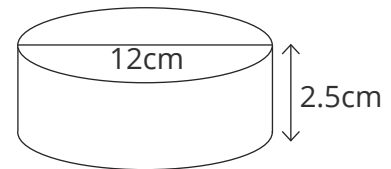
4. Calculate the volume of the cylinder, giving your answer correct to one decimal place.



$$\pi \times 8.5^2 \times 20 = 4539.601384...$$

$$4539.6\text{m}^3$$

5. Calculate the volume of the cylinder, giving your answer correct to 1 decimal place.

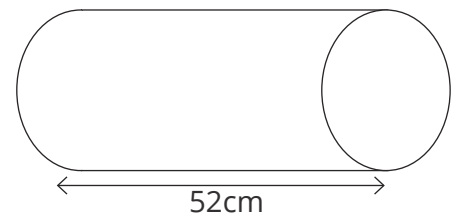


$$12 \div 2 = 6\text{cm}$$

$$\pi \times 6^2 \times 2.5 = 282.7433388...$$

$$282.7\text{cm}^3$$

6. A cylinder has a **diameter** of 22cm. Calculate the volume of the cylinder, giving your answer correct to the nearest whole number.

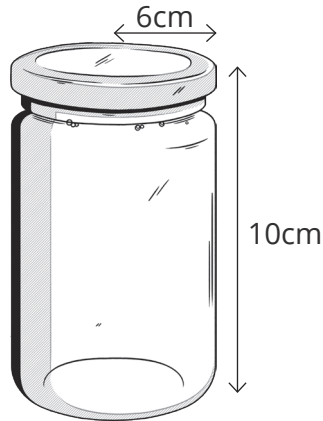


$$22 \div 2 = 11\text{cm}$$

$$\pi \times 11^2 \times 52 = 19\,766.90098...$$

$$19\,767\text{cm}^3$$

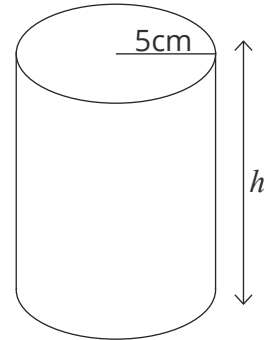
7. Honey comes in cylindrical jars with a radius of 6cm and a height of 10cm. How many cubic centimetres of honey (to the nearest cubic centimetre) will each jar hold?



$$\pi \times 6^2 \times 10 = 1130.973355...$$

1130cm³

8. The volume of the cylinder is 1000cm³. Calculate the height of the cylinder, giving your answer correct to the nearest centimetre.



$$\pi \times 5^2 = 78.53981634...$$

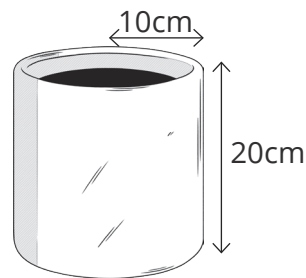
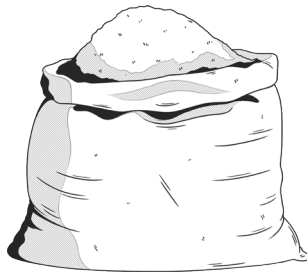
$$1000 \div 78.53981634... = 12.73239545...$$

13cm

Challenge

Rachel is filling cylindrical plant pots with soil. Each plant pot is completely filled. Bags of soil are sold in 100 litre bags. Rachel buys 1 bag. How many plant pots can she **completely** fill with the soil?

$$1 \text{ litre} = 1000\text{cm}^3$$



$$\pi \times 10^2 \times 20 = 6283.185307...$$

$$6283.185307...\text{cm}^3 = 6.283185307... \text{ litres}$$

$$100 \div 6.283185307... = 15.91549431...$$

15 plant pots