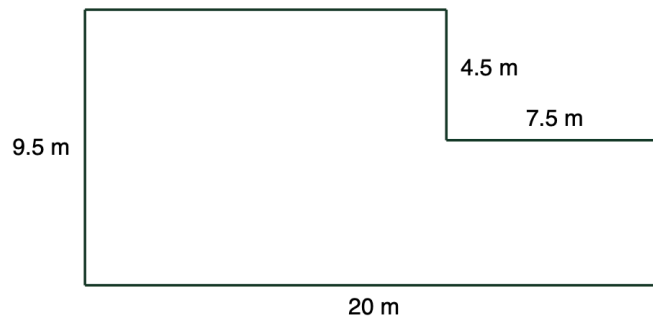


## Question 1

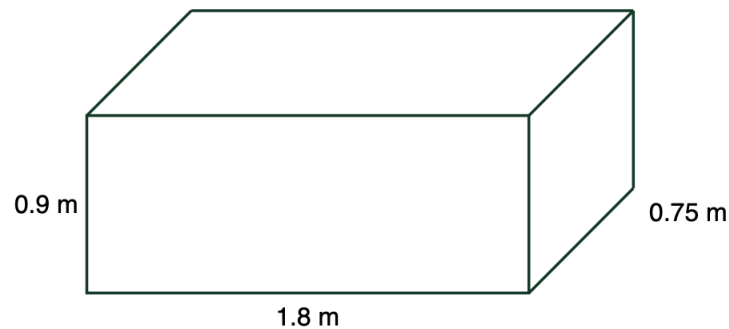


A council is putting a fence around the outside edge of the L-shaped play area shown. The diagram is not drawn to scale.

- (a) Work out the two missing side lengths.
- (b) Work out the perimeter of the play area.
- (c) Fencing costs £28.50 per metre. Work out the total cost of the fencing.
- (d) The council has a budget of £1,800. Is the budget enough? Show how you know.

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## Question 2

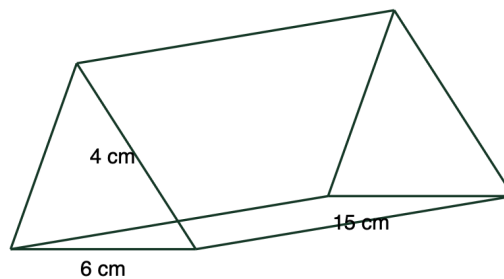


A rectangular water tank has the dimensions shown. Use  $V = \text{length} \times \text{width} \times \text{height}$ .

- (a) Work out the volume in cubic metres.
- (b) Use  $1 \text{ m}^3 = 1,000 \text{ litres}$  to find the capacity.
- (c) The tank is 80% full. Work out how many litres it contains.

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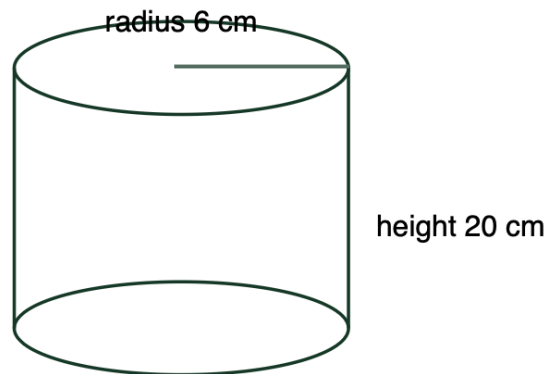
### Question 3



A packaging company makes boxes in the shape of a triangular prism. The triangular cross-section has base 6 cm, perpendicular height 4 cm, and the prism is 15 cm long.

- (a) Work out the area of the triangular cross-section.
- (b) Work out the volume.
- (c) Find the total volume of 24 identical boxes.

### Question 4



A cylindrical container has radius 6 cm and height 20 cm.

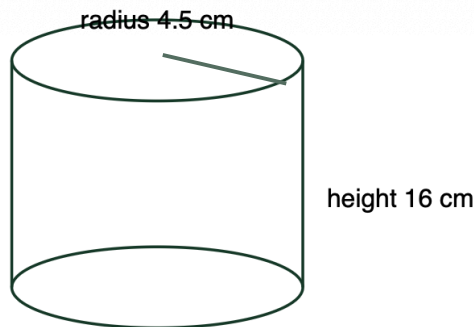
- (a) Work out its volume to the nearest  $\text{cm}^3$ .
- (b) It is filled to 75% of capacity. Find the volume of liquid.
- (c) Give the amount in litres. Use  $1,000 \text{ cm}^3 = 1 \text{ litre}$ .

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# Topics 46 - 50: Exam Style



## Question 5



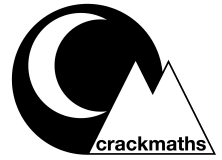
A company makes closed cylindrical tins with radius 4.5 cm and height 16 cm.

The total surface area is the area of the two circular ends plus the curved surface.

- (a) Work out the total area of the two circular ends.
- (b) Work out the curved surface area using circumference  $\times$  height.
- (c) Work out the total surface area of one tin to the nearest  $\text{cm}^2$ .
- (d) The company makes 150 tins. Find the total metal area in  $\text{m}^2$ . Use  $10,000 \text{ cm}^2 = 1 \text{ m}^2$ .

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## Topics 46 - 50: Exam Style



### Question 6

A cylindrical storage drum has diameter 80 cm and height 1.2 m.

- (a) Convert the diameter to metres and state the radius in metres.
- (b) Work out the volume in  $\text{m}^3$ .
- (c) Use  $1 \text{ m}^3 = 1,000$  litres to find its capacity.
- (d) It contains 420 litres. Work out the percentage of capacity filled to 1 decimal place.