



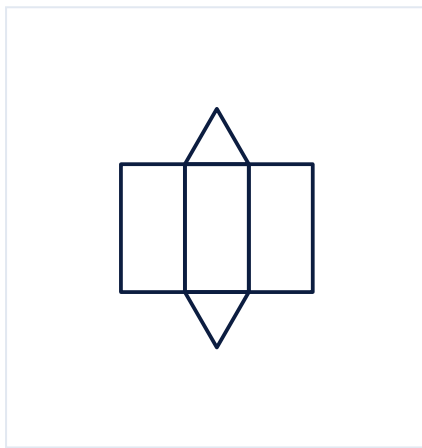
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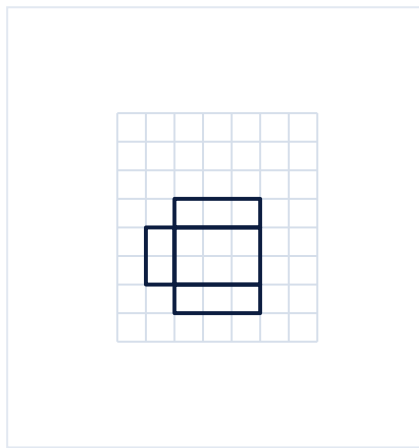
Score: _____ / 42

1

- a. Diagram **a** shows the net of a 3D solid. Write down the name of the solid.
- b. Diagram **b** shows part of the net of a cuboid that measures 3 cm by 2 cm by 1 cm, drawn on a centimetre grid. Two faces are missing. On the grid, draw the two missing faces to complete the net.



a



b

(3 marks)

Answer _____

2

- A cuboid measures 5 cm by 3 cm by 2 cm.
- Work out the total surface area of the cuboid.
- State the units of your answer.

(3 marks)

Answer _____

- 3 The cross-section of a prism is a trapezium.

The parallel sides of the trapezium are 6 cm and 10 cm, and the perpendicular distance between them is 4 cm.

The length of the prism is 15 cm.

Work out the volume of the prism.

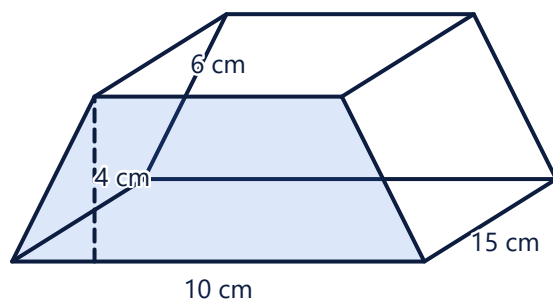


Diagram NOT accurately drawn

(3 marks)

Answer _____

- 4 A cylinder has a radius of 5 cm and a height of 12 cm.

Work out the volume of the cylinder.

Give your answer correct to 3 significant figures.

(3 marks)

Answer _____

5

A garden pond is a cuboid 2.5 m long, 1.2 m wide and 0.6 m deep.

The pond is filled with water from a hose. Water flows from the hose at 15 litres per minute.

Work out how long it takes to fill the pond. Give your answer in hours.

$$1 \text{ m}^3 = 1000 \text{ litres}$$

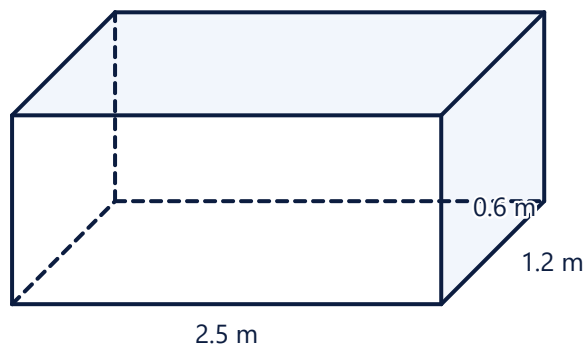


Diagram NOT accurately drawn

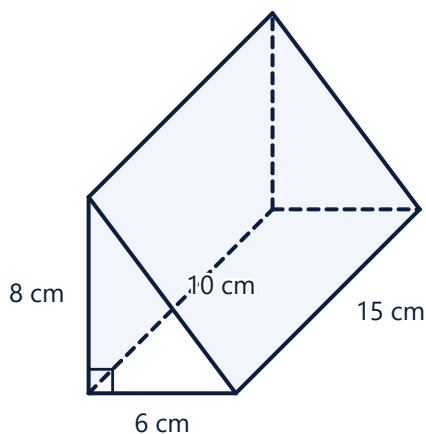
(3 marks)

Answer _____

6

The diagram shows a triangular prism. The cross-section is a right-angled triangle with sides 6 cm, 8 cm and 10 cm. The prism is 15 cm long.

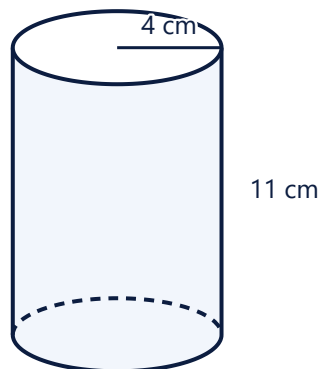
- Work out the volume of the prism.
- Work out the total surface area of the prism.



(4 marks)

Answer _____

- 7** A tin of beans is a closed cylinder with radius 4 cm and height 11 cm.
- A paper label covers the curved surface of the tin. Work out the area of the label.
 - Work out the total surface area of the tin.
- Give your answers correct to 1 decimal place.



(4 marks)

Answer _____

- 8** A cylindrical water butt has a radius of 25 cm and a height of 80 cm.
- Work out the number of litres of water the water butt holds when it is full.
- Give your answer to the nearest litre.

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

(4 marks)

Answer _____

- 9** A cube has a total surface area of 150 cm^2 .
- Show that the volume of the cube is 125 cm^3 .

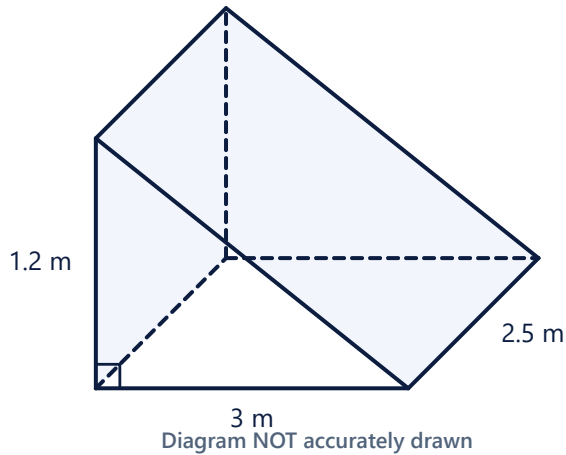
(4 marks)

Answer _____

- 10** A skate ramp is made of concrete. It is a triangular prism. The cross-section is a right-angled triangle with base 3 m and height 1.2 m. The ramp is 2.5 m wide.

Concrete costs £95 per m^3 .

Work out the cost of the concrete for the ramp.



(3 marks)

Answer _____

- 11** A closed wooden box is a cuboid measuring 40 cm by 25 cm by 20 cm.

Amira varnishes all 6 faces of each box.

One tin of varnish covers 5000 cm^2 .

Amira has 3 tins of varnish.

Work out the greatest number of boxes Amira can varnish completely.

(4 marks)

Answer _____

12

A hall has 8 cylindrical pillars.

Each pillar has a radius of 0.25 m and a height of 3 m.

Ben paints the curved surface of every pillar.

One tin of paint covers 8 m^2 .

Work out the number of tins of paint Ben must buy.

(4 marks)

Answer

End of questions | Total 42 marks