

Volume of Cuboids and Prisms

For AQA GCSE Mathematics (8300) • Foundation tier

Name _____

Total marks: **26**

Answer **all** questions in the spaces provided. Show your working: marks are given for correct method. Diagrams are not drawn accurately.

- 1** A cuboid measures 5 cm by 3 cm by 2 cm.
Circle the volume of the cuboid.

[1 mark]

10 cm³

20 cm³

30 cm³

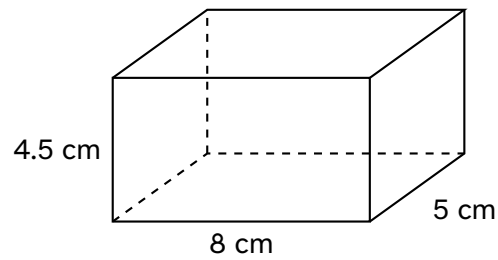
62 cm³

- 2** A cube has a volume of 64 cm³
Work out the length of one edge of the cube.

[1 mark]

Answer _____ cm

- 3 Here is a cuboid.



Not drawn accurately

Work out the volume of the cuboid.

[2 marks]

Answer _____ cm^3

- 4 A prism has a cross-section with area 24 cm^2
The prism is 15 cm long.
Work out the volume of the prism.

[2 marks]

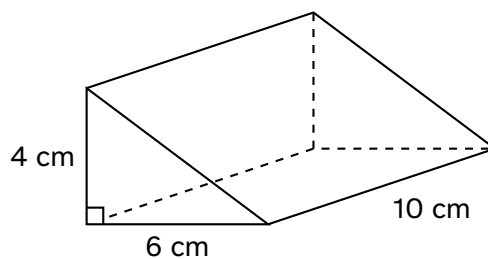
Answer _____ cm^3

- 5 How many cubes of edge 2 cm fit exactly into a box 10 cm by 6 cm by 4 cm?

[2 marks]

Answer _____

- 6 The cross-section of this prism is a right-angled triangle.



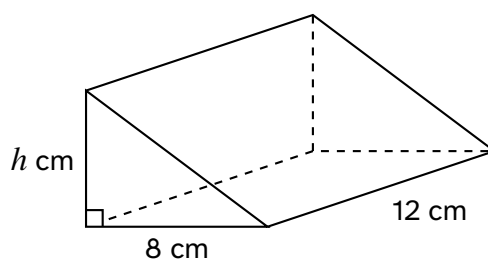
Not drawn accurately

Work out the volume of the prism.

[3 marks]

Answer _____ cm^3

- 7 A wooden doorstep is a prism.
Its cross-section is a right-angled triangle with base 8 cm and height h cm.
The length of the doorstep is 12 cm.
The volume of the doorstep is 240 cm^3



Not drawn accurately

Work out the value of h .

[3 marks]

$h =$ _____

- 8** A garden pond is in the shape of a cuboid.
The pond is 2 m long and 1.5 m wide.
The water in the pond is 40 cm deep.
A pump removes water from the pond at 25 litres per minute.
1 litre = 1000 cm³

How long will it take to empty the pond?

[4 marks]

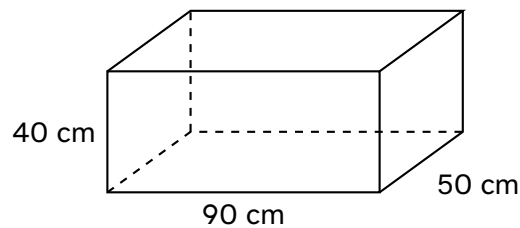
Answer _____ minutes

- 9** A cube has the same volume as a cuboid measuring 3 cm by 9 cm by 8 cm.
Work out the length of one edge of the cube.

[2 marks]

Answer _____ cm

- 10** Jo collects rainwater in a tank.
The tank is a cuboid and it is full of water.
Each evening Jo uses 5 full watering cans of water on her garden.
Each watering can holds 8 litres.
 $1000 \text{ cm}^3 = 1 \text{ litre}$



Not drawn accurately

- (a) For how many evenings can Jo water her garden before the tank runs out?
You must show your working.

[5 marks]

Answer _____ evenings

- (b) How many more litres of water would need to be in the tank at the start for Jo to water her garden for one more evening?

[1 mark]

Answer _____ litres