

Area and Volume Unit Conversions

For Pearson Edexcel GCSE Mathematics (1MA1) • Foundation tier

Name _____

Total marks: **24**

Answer **all** questions in the spaces provided. Show your working: marks are given for correct method. You may use a calculator.

1 Change 6 m^2 into cm^2

..... cm^2
(1)

(Total for Question 1 is 1 mark)

2 Change 2.5 litres into cm^3

..... cm^3
(1)

(Total for Question 2 is 1 mark)

3 Change $25\,000 \text{ cm}^3$ into m^3

..... m^3
(1)

(Total for Question 3 is 1 mark)

4 A rectangle is 2.4 m long and 150 cm wide.

- (a) Work out the area of the rectangle.
Give your answer in m^2

..... m^2
(2)

- (b) Theo says,
‘The area of the rectangle is 360 cm^2
because $3.6 \text{ m}^2 \times 100 = 360 \text{ cm}^2$,’
Theo is wrong.
Explain why.

.....
.....
(1)

(Total for Question 4 is 3 marks)

5 A cube has a volume of 0.008 m^3

Work out the length of one edge of the cube.
Give your answer in centimetres.

..... cm
(2)

(Total for Question 5 is 2 marks)

- 6** A water trough for animals is in the shape of a cuboid.
The trough is 1.2 m long, 45 cm wide and 40 cm high.
The trough is empty.
Water flows into the trough at a rate of 9 litres per minute.
How many minutes does it take to fill the trough?

..... minutes
(4)

(Total for Question 6 is 4 marks)

- 7** Mia is going to paint a wall.
The wall is a rectangle 350 cm wide and 240 cm high.
She will paint 2 coats.
1 litre of paint covers 12 m^2
Paint is sold in tins of 750 ml.
How many tins of paint does Mia need?
You must show all your working.

.....
(4)

(Total for Question 7 is 4 marks)

- 8** Ffion is going to sow wildflower seed on a rectangular meadow 18 m by 12.5 m.
She needs 5 g of seed for each m^2
Wildflower seed is sold in packets of 0.25 kg.
How many packets of wildflower seed does Ffion need to buy?

.....
(4)

(Total for Question 8 is 4 marks)

- 9 Omar collects rainwater in a water butt.
The water butt is a cylinder with diameter 70 cm and height 110 cm.

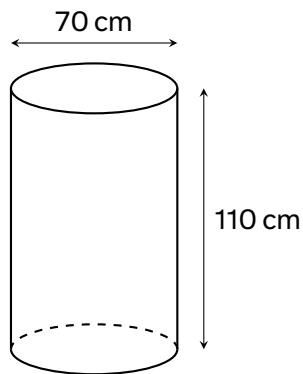


Diagram **NOT** accurately drawn

The water butt is full of rainwater.
Omar uses the water to fill a watering can.
The watering can holds 8 litres.
Omar says,
‘I can fill the watering can completely more than 50 times
from the full water butt.’

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

Is Omar correct?
You must show how you get your answer.

(4)

(Total for Question 9 is 4 marks)
