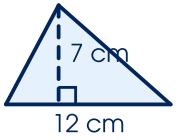
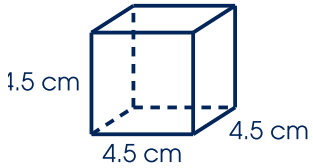
GCSE HIGHER · REVISION MAT 3

Area and volume of shapes and prisms

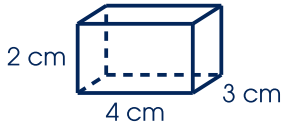
1 Find the area of a triangle with base 12 cm and height 7 cm.



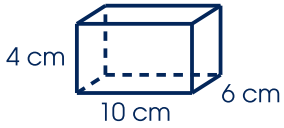
2 Find the volume of a cube of side 4.5 cm, to 1 d.p.



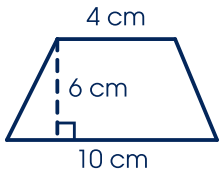
3 Show that a 2 cm × 3 cm × 4 cm cuboid has surface area 52 cm².



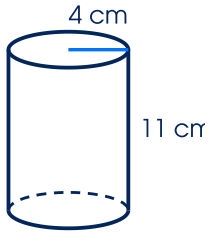
4 How many 2 cm cubes fit exactly into a 10 cm × 6 cm × 4 cm box?



5 Show that a trapezium with parallel sides 4 cm and 10 cm and height 6 cm has area 42 cm².

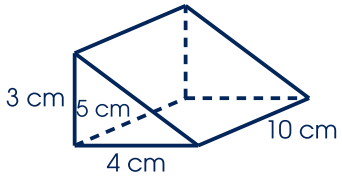


6 A label covers the curved surface of this can, with a 1 cm overlap.



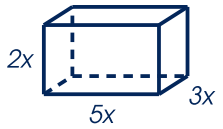
Find the area of the label.

7 Show that the surface area of this prism is 132 cm².



8 A cuboid has edges in the ratio 2 : 3 : 5 and volume 240 cm³.

Find its surface area.



Mr&Mrs MATHS

ANSWERS · REVISION MAT 3

Area and volume of shapes and prisms

1 **42 cm²**

2 4.5^3

91.1 cm³

3 $2(6 + 8 + 12)$

= 52

4 $5 \times 3 \times 2$

30

5 $\frac{1}{2}(4 + 10) \times 6$

= 42

6 Length $8\pi + 1 = 26.13$ cm

26.13 × 11 = 287.4 cm²

7 Ends: $2 \times 6 = 12$

Sides: $10(3 + 4 + 5) = 120$

132 cm²

8 $30k^3 = 240 \Rightarrow k = 2$

4, 6, 10 cm

248 cm²

Mr&Mrs MATHS