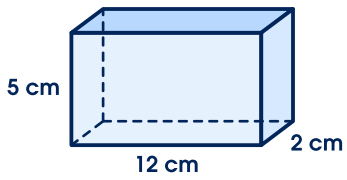
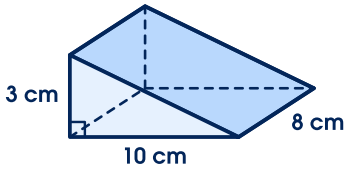
GCSE FOUNDATION · REVISION MAT 4

Volume of prisms

1 Work out the volume of this cuboid.



2 Work out the volume of this triangular prism.

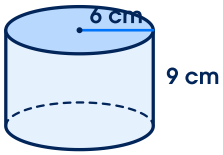


3 A cylinder has radius 2 cm and height 15 cm.

Ella says the volume is $\pi \times 2 \times 15 = 94.2\ cm^3$

Explain the mistake Ella has made.

4 Show that the volume of this cylinder is 1017.9 cm^3, correct to 1 decimal place.



5 A box is 8 cm by 6 cm by 4 cm.

How many cubes with edges 2 cm will fit exactly inside the box?

6 Tank A is a cuboid 40 cm long and 40 cm wide. It holds water to a depth of 30 cm.

All the water is poured into tank B, which is 64 cm long and 25 cm wide.

Work out the depth of water in tank B.

1 $12 \times 2 \times 5 =$ **$120\ cm^3$**

2 Cross-section $= \frac{1}{2} \times 10 \times 3 = 15\ cm^2$

Volume $= 15 \times 8 =$ **$120\ cm^3$**

3 The cross-section is a circle, area $= \pi r^2$, so the radius must be squared.

$\pi \times 2^2 \times 15 =$ **$188.5\ cm^3$**

ANSWERS · REVISION MAT 4

Volume of prisms

4 $\pi \times 6^2 \times 9 = 1017.876...$

$=$ **$1017.9\ cm^3$** ✓

5 $4 \times 3 \times 2 =$ **24 cubes**

6 Volume $= 40 \times 40 \times 30 = 48\ 000\ cm^3$

Depth $= 48\ 000 \div (64 \times 25) =$ **30 cm**

Mr&Mrs MATHS