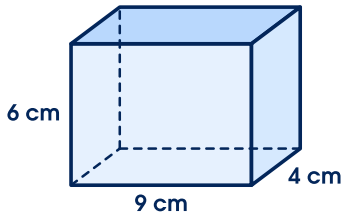
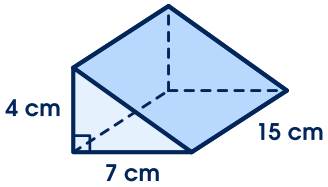
GCSE FOUNDATION · REVISION MAT 5

Volume of prisms

1 Work out the volume of this cuboid.



2 Work out the volume of this triangular prism.

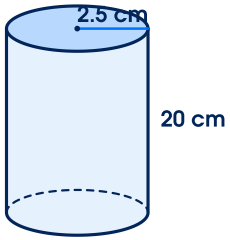


3 A cylinder has radius 6 cm and height 5 cm.

Finn says the volume is $\pi \times 6 \times 5 = 94.2\ cm^3$

Explain the mistake Finn has made.

4 Show that the volume of this cylinder is 392.7 cm^3, correct to 1 decimal place.



5 A box is 20 cm by 12 cm by 8 cm.

How many cubes with edges 4 cm will fit exactly inside the box?

6 Tank A is a cuboid 90 cm long and 20 cm wide. It holds water to a depth of 25 cm.

All the water is poured into tank B, which is 75 cm long and 30 cm wide.

Work out the depth of water in tank B.

1 $9 \times 4 \times 6 =$ **$216\ cm^3$**

2 Cross-section $= \frac{1}{2} \times 7 \times 4 = 14\ cm^2$

Volume $= 14 \times 15 =$ **$210\ cm^3$**

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

$\pi \times 6^2 \times 5 =$ **$565.5\ cm^3$**

ANSWERS · REVISION MAT 5

Volume of prisms

4 $\pi \times 2.5^2 \times 20 = 392.699...$

$=$ **$392.7\ cm^3$** ✓

5 $5 \times 3 \times 2 =$ **30 cubes**

6 Volume $= 90 \times 20 \times 25 = 45\,000\ cm^3$

Depth $= 45\,000 \div (75 \times 30) =$ **20 cm**

Mr&Mrs MATHS