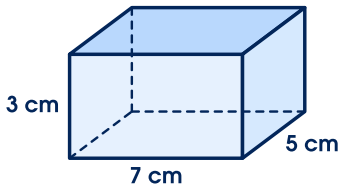
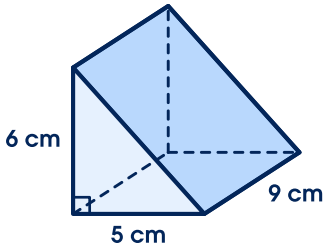
GCSE FOUNDATION · REVISION MAT 3

Volume of prisms

1 Work out the volume of this cuboid.



2 Work out the volume of this triangular prism.

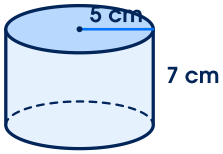


3 A cylinder has radius 5 cm and height 8 cm.

Dev says the volume is $\pi \times 5 \times 8 = 125.7\ cm^3$

Explain the mistake Dev has made.

4 Show that the volume of this cylinder is 549.8 cm^3, correct to 1 decimal place.



5 A box is 15 cm by 10 cm by 5 cm.

How many cubes with edges 5 cm will fit exactly inside the box?

6 Tank A is a cuboid 80 cm long and 25 cm wide. It holds water to a depth of 18 cm.

All the water is poured into tank B, which is 60 cm long and 30 cm wide.

Work out the depth of water in tank B.

ANSWERS · REVISION MAT 3

Volume of prisms

1 $7 \times 5 \times 3 =$ **$105\ cm^3$**

2 Cross-section $= \frac{1}{2} \times 5 \times 6 = 15\ cm^2$

Volume $= 15 \times 9 =$ **$135\ cm^3$**

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

$\pi \times 5^2 \times 8 =$ **$628.3\ cm^3$**

4 $\pi \times 5^2 \times 7 = 549.779...$

$=$ **$549.8\ cm^3$** ✓

5 $3 \times 2 \times 1 =$ **6 cubes**

6 Volume $= 80 \times 25 \times 18 = 36\,000\ cm^3$

Depth $= 36\,000 \div (60 \times 30) =$ **20 cm**