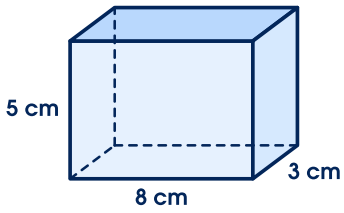
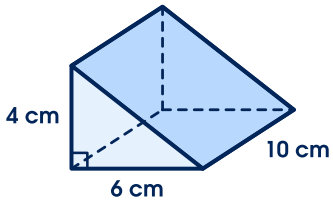
GCSE FOUNDATION · REVISION MAT 1

Volume of prisms

1 Work out the volume of this cuboid.



2 Work out the volume of this triangular prism.

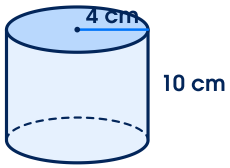


3 A cylinder has radius 3 cm and height 10 cm.

Ben says the volume is $\pi \times 3 \times 10 = 94.2\ cm^3$

Explain the mistake Ben has made.

4 Show that the volume of this cylinder is 502.7 cm^3, correct to 1 decimal place.



5 A box is 10 cm by 8 cm by 6 cm.

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

6 Tank A is a cuboid 50 cm long and 30 cm wide. It holds water to a depth of 20 cm.

All the water is poured into tank B, which is 40 cm long and 25 cm wide.

Work out the depth of water in tank B.

Mr&Mrs MATHS

ANSWERS · REVISION MAT 1

Volume of prisms

1 $8 \times 3 \times 5 =$ **$120\ cm^3$**

2 Cross-section $= \frac{1}{2} \times 6 \times 4 = 12\ cm^2$

Volume $= 12 \times 10 =$ **$120\ cm^3$**

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

$\pi \times 3^2 \times 10 =$ **$282.7\ cm^3$**

4 $\pi \times 4^2 \times 10 = 502.655...$

$=$ **$502.7\ cm^3$** ✓

5 $5 \times 4 \times 3 =$ **60 cubes**

6 Volume $= 50 \times 30 \times 20 = 30\,000\ cm^3$

Depth $= 30\,000 \div (40 \times 25) =$ **30 cm**

Mr&Mrs MATHS