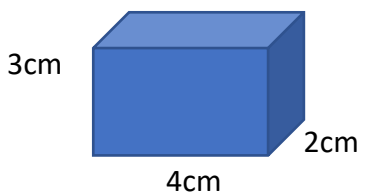


## Level 3 Maths Revision – Volume

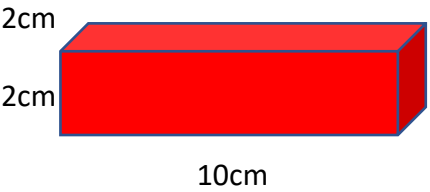
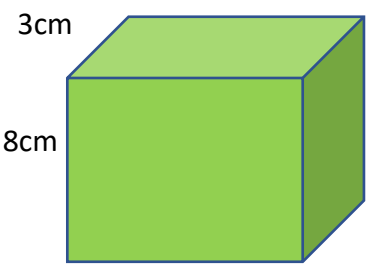
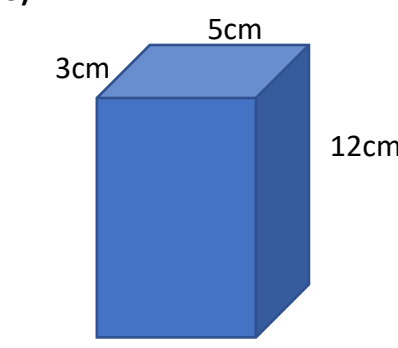
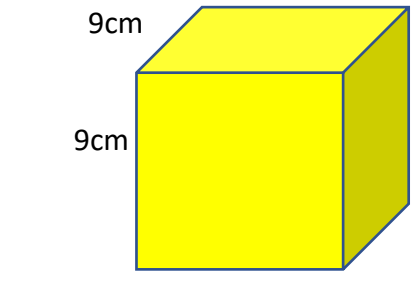
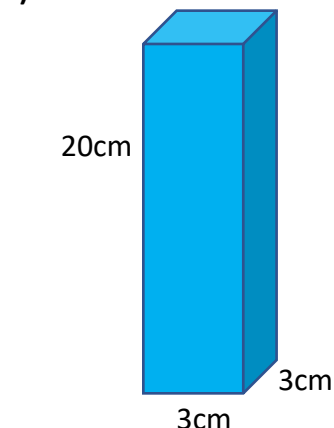
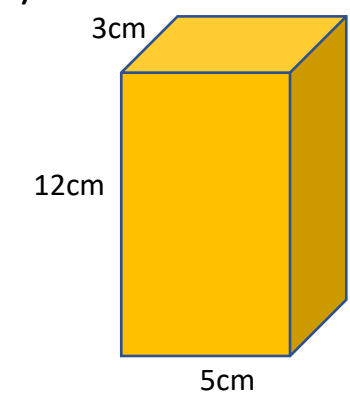
Reminder

Volume is the amount of space inside a 3D shape. It is usually measured in  $\text{cm}^3$  or  $\text{m}^3$ . We have learned to find the volume of cubes or cuboids.

Example

 <p>3cm 4cm 2cm</p>	<p>Volume = length <math>\times</math> breadth <math>\times</math> height = <math>4 \times 3 \times 2</math> = <math>24 \text{ cm}^3</math></p>
--	---

Now try these examples: -

<p>1)</p>  <p>2cm 2cm 10cm</p>	<p>2)</p>  <p>3cm 8cm 9cm</p>	<p>3)</p>  <p>5cm 3cm 12cm</p>
<p>4)</p>  <p>9cm 9cm 9cm</p>	<p>5)</p>  <p>20cm 3cm 3cm</p>	<p>6)</p>  <p>3cm 12cm 5cm</p>
<p>7) Which of these containers will hold more than 1 litre (<math>1\,000\text{cm}^3</math>)?</p> <p>Container A: 6cm by 6cm by 22cm Container B: 7cm by 7cm by 18cm Container C: 8cm by 8cm by 16 cm Container D: 9cm by 9cm by 14cm</p>		

8) A standard shipping container is 12.2m long, 2.4m high and 2.6m high. Calculate its volume, rounding your answer to one decimal place.



9) A builder is planning a new house. She gets the following information from a heating engineer.

Volume of room (m <sup>3</sup> )	Radiator size
below 25	small
25 - 30	medium
30 - 40	large
40 - 60	extra large



Which radiators should she order for these rooms?

- a) Lounge: 6m long, 4m wide and 2.5m high.
- b) Bedroom 1: 4.5m long, 3.5m wide, 2.5m high.
- c) Bedrooms 2: 3.5m long, 3m wide and 2.5m high.
- d) Kitchen: 4.5m long, 2.5m wide and 2.5m high.

10) An oil tank is 0.8m wide, 1.8m tall and 2.5m long.

- a) How many m<sup>3</sup> of oil are in the tank when it is half full?
- b) It takes 20 minutes to pump 1m<sup>3</sup> of oil into a tank. How long will it take to get this tank from half full to full?

