

**Check out**

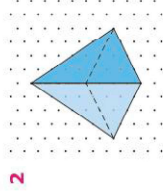
You should now be able to ...

✓ Recognise 3D shapes.	6	1
✓ Draw the plan and elevation of a 3D solid.	6	2 - 3
✓ Identify planes of symmetry.	6	4
✓ Calculate the surface area of a prism, and draw its net.	7	5 - 6
✓ Calculate the volume of a prism.	7	7 - 8

**Test it**

Questions

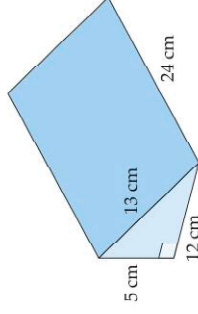
- How many
  - faces
  - edges
  - vertices
 does the prism have?



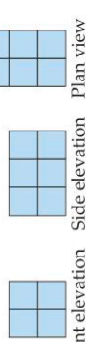
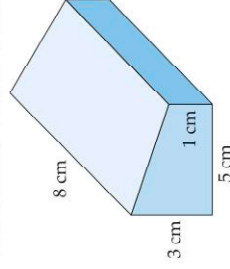
Sketch

- the front elevation
- the side elevation
- the plan view of this solid.
- What is the mathematical name of this solid?

- How many planes of symmetry does a cuboid have?
- Sketch a net of this prism, labelling the dimensions.



- Calculate the surface area of the prism.
- Calculate the surface area of a cube with side lengths 7 cm.
  - A cube has a surface area of  $864 \text{ cm}^2$ . What is its volume?
  - Calculate the volume of this prism.



Front elevation    Side elevation    Plan view

- Draw the shape on isometric paper.
- How many cubes are needed to make the shape?

**Language Meaning Example**

<b>Face</b>	A flat surface of a solid.	A cube has 6 faces, 12 edges and 8 vertices.
<b>Edge</b>	The line where two faces meet.	
<b>Vertex (plural 'vertices')</b>	A point where three or more edges meet.	
<b>Net</b>	A 2D shape that can be folded to form a 3D solid.	Here is a net of a cube. There are examples of plans and elevations on page 250.
<b>Front elevation</b>	The view of a solid from the front.	
<b>Side elevation</b>	The side view of a solid.	
<b>Plan view</b>	The bird's eye view of the solid (the view from above).	
<b>Prism</b>	A 3D solid with the same cross-section throughout its length.	Here is a triangular prism.

**What next?**

<b>Score</b>	0 - 3	Your knowledge of this topic is still developing. To improve look at Formative test: 3B-14; MyMaths: 1078, 1098, 1107, 1137 and 1139
	4 - 6	You are gaining a secure knowledge of this topic. To improve look at InvisiPen: 321, 322, 323, 324, 325, 326, 327 and 328
	7, 8	You have mastered this topic. Well done, you are ready to progress!