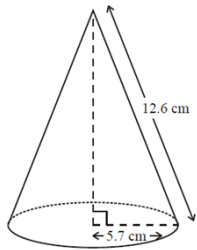


# Year 11 Mathematics Learning Journey: Unit 9 - Shape

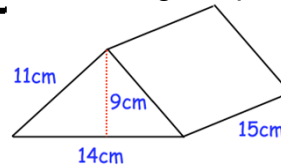


**Step 11: Volume and surface area of cones, spheres and pyramids**

Calculate the volume of the cone

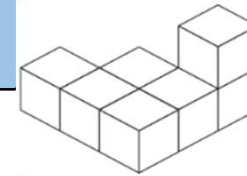
**Step 10: Volume and surface area of prisms**

Calculate the volume of the triangular prism



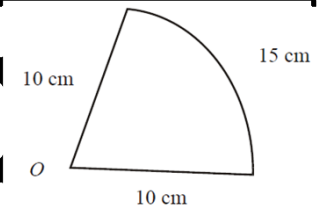
**Step 9: Plans and elevations**

Draw a plan of the solid.



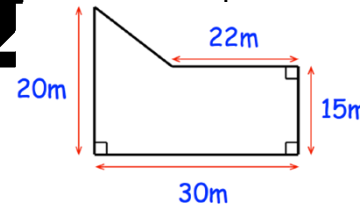
**Step 8: Arc length and sector area**

Calculate the area of the sector.



**Step 7: Compound shapes**

Calculate the area of the shape.



**Step 5: Scales and bearings**

Put an x in the middle of your page to represent an island. Letting 1cm = 1km, mark the position of a boat 3km from the island on a bearing of  $111^\circ$ .

**Step 6: Bearings with angle rules**

Oxford is on a bearing of  $330^\circ$  from Cambridge. Find the bearing of Cambridge from Oxford.

**Step 4: Bearings**

Is it possible to have a bearing of  $400^\circ$ ? Why or why not?

**Step 3: Scale diagrams**

Which is more detailed, a 1:25000 map or a 1:50000 map?

**Step 2: Angles on parallel lines**

What types of angles on parallel lines can you recall?

**Step 1: Angles in polygons**

Work out the size of an interior angle in a regular 10-sided polygon.

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