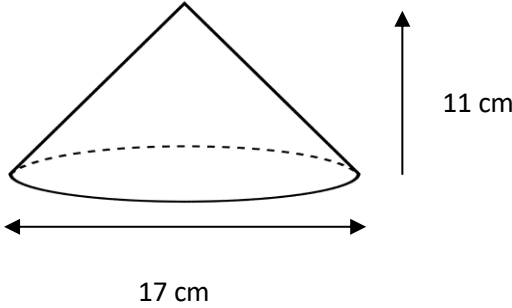
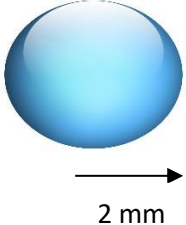
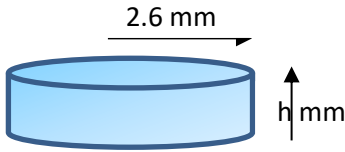
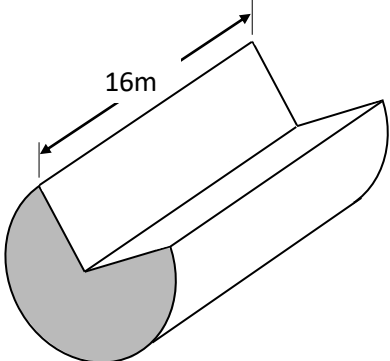
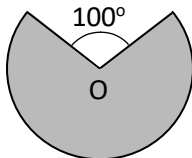
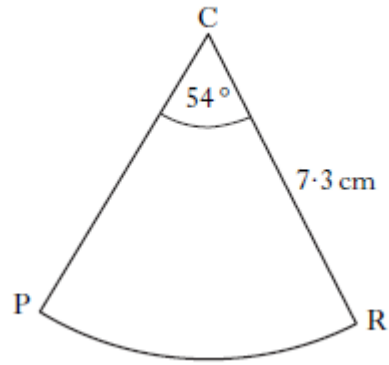


S3 Revision for the May Test - Geometry		
1	<p>The diagram below shows a cone with a diameter of 17 cm and a height of 11 cm.</p>  <p>Calculate the volume of this cone correct to 2 significant figures</p>	3
2	 <p>A pharmaceutical company makes a painkiller in the shape of a sphere with a radius of 2 mm. Calculate the volume of this sphere correct to 2 significant figures</p> <p>They decide to change their medicine to a cylindrical pill with a radius of 2.6 mm. Calculate the height of this cylinder</p> 	3
3	<p>A prism is formed by removing a section from a cylinder with a radius of 5 m.</p>   <p>(a) The section of the cylinder which is removed has a centre angle of <math>100^\circ</math>. Calculate the centre angle for the remaining sector</p> <p>(b) Hence calculate the volume of the prism</p>	1 4

4

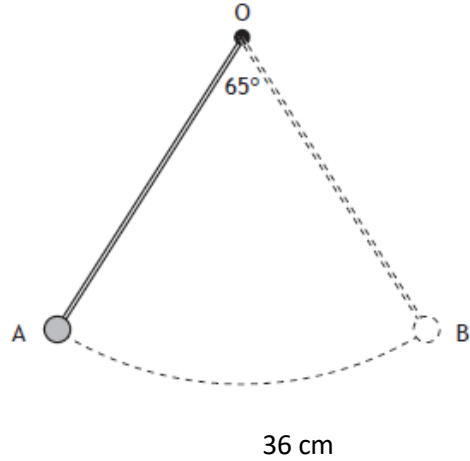


3

Calculate the length of the ARC PR

5

The diagram below shows the pendulum of a clock (OA).

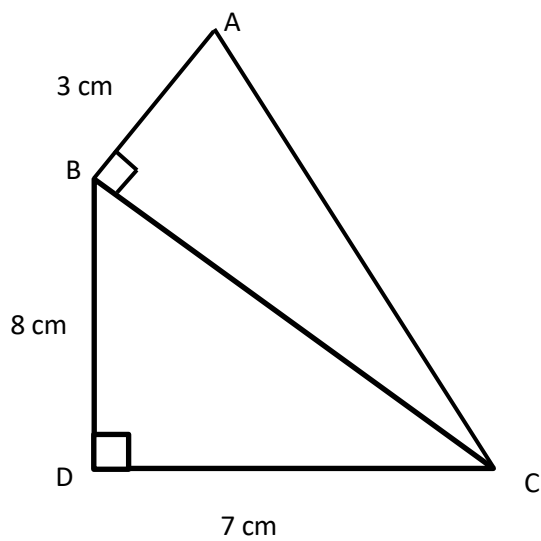


Given that the arc of the pendulum (AB) is 36 cm and the angle at the centre of the sector is  $65^\circ$ , calculate the length of the pendulum

4

6

Calculate the length of side AC



3

	Geometry – Answers
1	$Volume = \frac{1}{3} \times \pi \times 8.5^2 \times 11 = 832.260 \dots$ <b>830 cm<sup>3</sup></b>
2	$Volume\ Sphere = \frac{4}{3} \times \pi \times 2^3 = 33.51032 \dots$ <b>34 mm<sup>3</sup></b>  $Volume\ cylinder\ 34 = \pi \times 2.6^2 \times height$ height is <b>1.6 mm</b>
3	Area of the face of the prism $Area = \frac{260}{360} \times \pi \times 5^2 =$ <b>56.7 m<sup>2</sup></b> Volume of the prism $Volume = 56.7 \times 16 =$ <b>907.2m<sup>3</sup></b>
4	$ARC\ PR = \frac{54}{360} \times \pi \times 14.6 =$ <b>6.88 cm</b>
5	$ARC\ AB = \frac{65}{360} \times \pi \times 2 \times radius$ $36 = \frac{65}{360} \times \pi \times 2 \times radius$ radius is <b>31.7 cm</b>
6	By Pythagoras $BC^2 = DC^2 + BD^2$ $AC^2 = BC^2 + AB^2$ $BC^2 = 7^2 + 8^2$ $AC^2 = (\sqrt{113})^2 + 3^2$ $BC^2 = 113$ $AC^2 = 122$ $BC = \sqrt{113}$ $AC = \sqrt{122} =$ <b>11 cm</b>