



 A cylinder has a base diameter of 16cm and a height of 17cm. Calculate the volume of the cylinder, giving your answer correct to 3 sig figs.

[Volume of cylinder = $\pi r^2 h$]



A lead sinker is in the shape of a cone with a hemispherical base. The total height of the sinker is 12cm and the diameter of the base is 10cm Calculate the volume of lead needed to make the sinker. [Volume of sphere = $\frac{4}{3}\pi r^3$, Volume of cone = $\frac{1}{3}\pi r^2 h$]] (5)

<u>16cm</u>

- **3.** a) Calculate the volume of the largest sphere which will fit inside a cube of side 15cm. (2)
 - **b**) Calculate the volume of wasted space between the two. [Answer to nearest cm³] (3)
- 4. A pyramid has a square base of side 6cm and a vertical height of 9cm.Calculate the volume of the pyramid correct to 2 significant figures. (3)
- 5. A mug holds 600ml of tea.If its height is 14cm calculate the diameter of the mug



Total Marks: 20



Marks

(3)