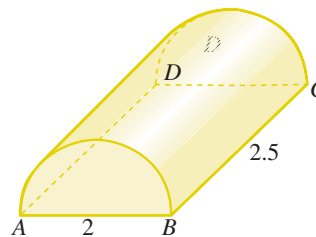




### Further Practice

5. Find the height of a cylinder if its
  - (a) volume =  $63\pi \text{ cm}^3$ , base radius = 3 cm,
  - (b) volume =  $100 \text{ cm}^3$ , base radius = 2 cm.
  
6. Find the base radius of a cylinder if its
  - (a) volume =  $150\pi \text{ cm}^3$ , height = 6 cm,
  - (b) volume =  $400 \text{ cm}^3$ , height = 8 cm.
  
7. Find the circumference of a solid cylinder if its
  - (a) curved surface area =  $660 \text{ cm}^2$ , height = 10 cm,
  - (b) curved surface area =  $1200 \text{ cm}^2$ , height = 15 cm.
  
8. A metal cylinder of base radius 6 cm and height 5 cm is melted and recast into a cylindrical metal bar of base radius 2 cm. Find
  - (a) the length of the bar formed,
  - (b) the ratio of the total surface area of the original cylinder to that of the bar.
  
9. A rectangular tray of dimensions 15 cm by 10 cm by 4 cm is full of water. The water is poured into an empty cylindrical jar of internal radius 5 cm. Find the depth of water in the jar.
  
10. The figure shows a half solid cylinder of base diameter 2 cm and height 2.5 cm.
  - (a) Find its volume.
  - (b) Draw a net of the solid.
  - (c) Find its total surface area.



### Maths@Work

11. A measuring cylinder of internal diameter 5 cm is partially filled with water. When a stone is placed in the cylinder as shown, the water level rises by 3 cm. Find
  - (a) the volume of the stone,
  - (b) the increase in the contact area between the water and the measuring cylinder.

