Surface areas and volumes: worksheet -4

1. If the radii of two cylinders are equal and their heights are H and h then their volumes are in the ratio of _ _ _ _ _ _ _ _. ( )

   (a) H : h (b) $H^2 : h^2$ (c) $H^3 : h^3$ (d) $\sqrt{H} : \sqrt{h}$

2. If the radii of two cylinders are equal, then the ratio of their heights will be equal to _ _ _ _ _ _ _ _ _ _ _ _ _ . ( )

   (a) $LSA_1 : LSA_2$ (b) $V_1 : V_2$

   (c) $LSA_1 : LSA_2$ and $V_1 : V_2$ (d) None

3. If $2 \pi RH = 2 \pi rh$ then _ _ _ _ _ _ _ _ _ _ _ _ _ . ( )

   (a) Radii and heights are in the inverse ratio.

   (b) Radii and volume are in the inverse ratio.

   (c) Volume and curved surface area are in the inverse ratio.

   (d) LSA and TSA are in the inverse ratio.

4. If $\pi R^2 H = \pi r^2 h$, then _ _ _ _ _ _ _ _ _ _ _ _ _ . ( )

   (a) $R^2 : r^2 = h : H$ (b) $R^2 : r^2 = H : r$ (c) $H^2 : h^2 = r^2 : R^2$ (d) $h^2 : H^2 = r^2 : R^2$

5. The horizontal cross section of a cylinder is _ _ _ _ _ _. ( )

   (a) Circular (b) Square (c) Rectangle (d) Triangle

6. The vertical cross section of a cylinder is (if d = h) _ _ _. ( )

   (a) Circular (b) Square (c) Rectangle (d) Triangle

7. Find curved surface area, total surface area and volume of the cylinder if its radius is 14 cms and height is 20 cms.

8. The base circumference of a cylinder is 220 cms and height of the cylinder is 63 cms. Find its curved surface area, total surface area and volume.