

ACHIEVERS FOUNDATION

Surface Areas and Volumes

- Vertical cross-section of a right circular cylinder is always a
(a) rectangle (b) rhombus (c) square (d) trapezium
- The ratio of the volume and surface area of a sphere of unit radius without considering units is
(a) 4 : 3 (b) 3 : 4 (c) 1 : 3 (d) 3 : 1
- The number of surfaces in right cylinder is
(a) 4 (b) 3 (c) 2 (d) 1
- A rectangular sheet of metal, X cm by Y cm has a square of size Z cm cut from each corner. The sheet is then bent to form a tray of depth Z cm . The volume of the tray is
a) $Z(X-Z)(Y-Z) \text{ cm}^3$ b) $XYZ \text{ cm}^3$ c) $Z(x-2 Z) (Y- 2 Z) \text{ cm}^3$ d) none of these
- A metallic right circular cone of height 9 cm and base radius 7 cm is melted and recast into a cuboid whose two sides are 11 cm and 6 cm. Then the third side of the cuboid is
a) 5cm b) 6cm c) 7cm d) 10cm
- Two cylindrical jars have their diameters in the ratio :3 1, but height :1 3. Then the ratio of their volumes is
(a) 1 : 3 (b) 3 : 1 (c) 2 : 5 (d) 1 : 4
- Two circular cylinders of equal volume have their heights in the ratio 1 : 2 Ratio of their radii is
(a) $\sqrt{2} : 1$ (b) $1 : \sqrt{2}$ (c) 1 : 4 (d) 1 : 2
- The volumes of two cylinders are as :a b and their heights are as :c d. Find the ratio of their radius.
(a) ad/ bc (b) ad^2/bc^2 (c) $\sqrt{ad}/\sqrt{(bc)}$ (d) none of these
- How many metres of cloth 5 m wide, will be required to make a conical tent, if the radius of whose base is 7 m and height is 24 m?
(a) 120 m (b) 110 m (c) 100 m (d) 105 m
- If the height of a cone is doubled, then its volume is increased by
(a) 100% (b) 200% (c) 300% (d) 400%