Codeyoung

Advanced_Grade-9_Surface Areas and Volume

Cone and Cylinder

1. A cone, a hemisphere and a cylinder stand on the same base and have equal height. Find the ratio of their curved Surface Areas.

2. A right angled ΔABC with sides 3 cm, 4 cm and 5 cm is revolved about the fixed side of 4 cm. Find the volume of the solid generated. Also, find the total surface area of the solid.

3. A right triangle ABC with sides 5 cm, 12 cm and 13 cm is revolved about the side 5 cm. Find the volume of the solid so obtained. If, it is revolved about the side 12 cm, what would be the ratio of volumes of two solids obtained in two cases?

4. Calculate the curved surface area of a cone whose radius of base and height are in the ratio 5: 12 and its volume is 2512 cu. Cm

5. A metal pipe is 77 cm long. The inner diameter of a cross-section is 4 cm, the outer diameter being 4.4 cm. Find its:
   (i) inner curved surface area
   (ii) outer curved surface area
   (iii) total surface area

6. A solid cylinder has total surface area 462 cm^2. Its curved area is one third of its total surface area Find:
   (i) its radius.
   (ii) its height.
   (iv) its volume.

7. What length of tarpaulin 3 m wide will be required to make conical tent of height 8 m and base radius 6 m ? Assume that the extra length of material that will be required for stitching margins and wastage in cutting is approximately 20 cm

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8. Twenty-seven solid iron spheres, each of radius r and surface area S are melted to form a sphere with surface area S'. Find the
   (i) radius R' of the new sphere,
   (ii) ratio of S' and S.

9. What length of tarpaulin 3 m wide will be required to make conical tent of height 8 m and base radius 6 m ? Assume that the extra length of material that will be required for stitching margins and wastage in cutting is approximately 20 cm

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