YugVanta

Class 10 Maths Part 2

7. Mensuration

SET B (Intermediate Level | Maharashtra Board)

1. The radius of a sphere increases from 7 cm to 14 cm. Find the ratio of their volumes.

2. A cylindrical tank has diameter 14 m and height 10 m. Find the capacity of the tank in liters.

3. The radius of the base of a cone is 6 cm and the height is 8 cm. Find the volume and total surface area of the cone.

4. A sphere and a cylinder have the same radius and height. Find the ratio of their volumes if the height is equal to the diameter of the base.

5. A cone is cut by a plane parallel to the base at half the height of the cone. Find the ratio of the volumes of the smaller cone and the frustum.

6. A hemispherical bowl is 21 cm in diameter. Find the surface area of the bowl.

7. The radius and height of a cylinder are in the ratio 2:3. If the total surface area is 462 cm², find the radius and height.

8. A metal sphere of radius 15 cm is melted and recast into small spheres each of radius 3 cm. Find the number of small spheres formed.

9. Find the radius of a sphere whose volume is equal to the volume of a cylinder with radius 7 cm and height 12 cm.

10. A cone has a base radius of 10 cm and slant height of 13 cm. Find the curved surface area and volume.

11. A sphere of radius 12 cm is melted and recast into cones with radius 6 cm and height 8 cm. Find how many cones are formed.

12. The height of a cone is tripled and the radius is doubled. Find the ratio of the new volume to the original volume.

13. A cube and a sphere have the same surface area. Find the ratio of their volumes.

14. The radius and height of a cylinder are 7 cm and 24 cm respectively. Find the length of the diagonal of the cylinder.

15. The curved surface area of a cone is 314 cm² and the slant height is 14 cm. Find the radius of the base and volume of the cone.

16. A frustum of a cone has radii of 6 cm and 3 cm and height 10 cm. Find its volume.

17. The diameter of a sphere is equal to the height of a cylinder, and both have the same volume. Find the ratio of the radius of the sphere to the radius of the cylinder.

18. A cylindrical container has height 28 cm and radius 7 cm. Find the total surface area and volume.

19. Find the height of a cone whose volume is 462 cm³ and radius of base is 7 cm.

20. A solid hemisphere is cut into two parts by a plane parallel to the base, so that the volume of the smaller part is one-eighth of the total volume. Find the height at which the cut is made from the base.