

Mathematics Assignment (Class-IX)

Chapter- 13 Surface Areas and Volumes

	1 MARKER QUESTIONS
1	Find the lateral surface and total surface area of a cube of edge 20 cm.
2	The volume of a committee room is 5670m cubic. Its length and breadth are 24m and 20m respectively. Find the height of the room.
3	The curved surface area of a right circular cylinder of height 14cm is 88cm square. Find the volume of cylinder.
4	The area of the bottom of a rectangular pit is 8.75 m square. If its depth is 1.8, determine its volume.
5	The length of the longest rod that can be placed in a room of dimensions 30m x 24m 18m is _____.
6	The volume of a cube whose one of the diagonals is 2.5 m is _____.
	2 MARKER QUESTIONS
7	Find the lateral surface area and total surface area of a cuboid of length 20cm, breadth 10cm, and height 40cm.
8	A pit of dimensions 2.5 m x 2.5 m x 4.5 m is dug at the rate of Rs. 15 per cubic metre. Find the cost of digging the pit.
9	How many square meters of canvas are required for a conical tent whose height is 3.5 m and the radius whose base is 12 m?
10	A cone and a hemisphere have equal bases and equal volumes. Find the ratio of their heights.
11	The volumes of two spheres are in the ratio 64:27. Find the ratio of their radii.
12	An ice-cream cone has the radius of base 2 cm. If its height is 10 cm, determine its volume.
	3 MARKER QUESTIONS
13	Wallpaper, 312 cm long and 25 cm wide is required to cover the walls of a room. Length of the room is 7 m and its breadth is twice its height. Determine the height of the room.
14	Find the volume of the largest right circular cone that can be cut off from a cube whose edge is 9 cm.
15	Four cubes each of side 5 cm are joined end to end. Find surface area of the resultant cuboid.
16	The diameter of a sphere is 42 cm. It is melted and drawn into a cylindrical wire of 28 cm diameter. Find the length of the wire.
17	How many spherical lead shots each 4.2 cm in diameter can be obtained from a rectangular solid of lead with dimensions 66 cm, 42 cm and 21 cm?

18	A hollow cylindrical pipe is 21 dm long. Its outer and inner diameters are 10 cm and 6 cm respectively. Find the volume of the copper used in making the pipe.
	4 MARKER QUESTIONS
19	The length of a cold storage is double its breadth. Its height is 3 meters. The area of four walls excluding a door of dimension 4 m x 2 m is 100 sqm. Find its volume.
20	Water flows out through a circular pipe whose internal diameter is 2 cm, at the rate of 6 meters per second into a cylindrical tank. The water is collected in a cylindrical vessel radius of whose base is 60 cm. Find the rise in the level of water in 30 minutes.
	HOTS
21	The length of a cold storage is double its breadth. Its height is 3 meters. The area of four walls excluding a door of dimension 4 m x 2 m is 100 sqm. Find its volume.
22	If V is the volume of a cuboid of dimensions a, b, c and S is its surface area, then prove that $\frac{1}{V} = \frac{2}{S} \left(\frac{1}{a} + \frac{1}{b} + \frac{1}{c} \right).$