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Worksheet: Surface Areas and Volumes

1. Three cubes of a metal whose edges are in the ratio 3:4:5 are melted and converted into a single cube whose diagonal is 12 3 cm. Find the edges of the three cubes.

2. The perimeter of floor of rectangular hall is 250m. The cost of the white washing its four walls is Rs. 15000. The height of the room is

3. The length, breadth and height of a room is 5m, 4m and 3m. The cost of white washing its four walls at the rate of Rs. 7.50 per square meter is

4. The capacity of a cylindrical tank is 6160 cm³. Its base diameter is 28 m. What is the depth of this tank?

5. The diameter of a roller is 84 cm, and its length is 120 cm. It takes 500 complete revolutions to move once over and level a playground. What is the area of the playground in m²?

6. A cone of maximum size is carved out from a cube of edge 14 cm. Find the surface area of the cone and of the remaining solid left out after the cone carved out.

7. A cylindrical pillar has a diameter of 50 cm and a height of 3.5 m. What is the cost of painting its curved surface at the rate of Rs. 12.50 per m²?

8. A river 3 meters deep and 40 meters wide is flowing at the rate of 2 km per hour. How much water will fall into the sea in a minute?

9. A solid metallic sphere of radius 10.5 cm is melted and recast into a number of smaller cones, each of radius 3.5 cm and height 3 cm. Find the number of cones so formed.

10. A metal pipe is 77 cm long. The inner diameter of its cross-section is 4 cm and the outer diameter is 4.4 cm. What is its inner curved surface area?

11. Two cubes each of edge 12 cm are joined end to end. What is the surface area of the new cuboid formed?

12. A canal is 300 cm wide and 120 cm deep. The water in the canal is flowing with a speed of 20 km/h. How much area will it irrigate in 20 minutes if 8 cm of standing water is desired?