Worksheet 2

Class 9ᵗʰ   Ch: Surface area and Volume.   **MM. 40   Time: 1hr30min**

1. The sum of length breadth and height of a cuboid is 19m and the length of its diagonal is 11m. The outer surface area of the cuboid is to be covered with square tiles of side 25cm. How many tiles are required when there is no wastage.

2. The diameter of a road roller is 140 cm and it's length is 2.2m. It makes 400 complete revolutions to move once over to level a stretch of levelled in m². Find the area of the stretch.

3. A corn cob shaped like a right circular cone, has the radius of its broadest end as 2.1 cm and length as 20cm. If each 1cm² of the surface of the cob carries and average of four grains. Find the number of grains on the entire cob.

4. A hemispherical dome, open at the base, is made from a sheet of fibre. If the radius of hemispherical dome is 40cm and 13/170 of the bire sheet actually used was wasted in making the dome. Find the cost of dome at the rate of Rs 35 /100cm².

5. A river 3.5m deep and 28 m wide is flowing at the rate of 2.4 km/h. How many litres of water will flow into the sea in 10 minutes.

6. A hollow metallic cylinder is made from a metallic sheet of 2.6 centimetre thickness. The outer radius of the cylinder is 3.8 cm and length is 50 centimetre. Find the volume of the metal.

7. A heap of wheat is the form of a cone of a vertical height 3 metres and volume 86.625 m³. The heap is to be covered by a sheet of canvas. Find the area of canvas which is just sufficient to cover the heap.

8. 64 solid metallic spheres, each of radius 0.15 centimetre are melted to form a single bigger sphere. Find the radius of the bigger sphere.

9. A lead pencil consists of a cylinder of wood with a solid cylinder of graphite filled in the interior. The diameter of the pencil is 7mm and the diameter of graphite is 1mm. If the length of the pencil is 14 centimetre, find the volume of wood and that of the graphite.

10. How many rice bags each carrying 196 m³ of rice can be emptied into a conical tent of base radius 8.4m and height 87.5m ?