National Institute of Open Schooling (NIOS)
Secondary Course
Lesson –21: Areas and Volumes of Solid Figures
Worksheet – 21

1. The length and breadth of a cuboidal tank are 8 meter and 5 meter respectively. It is full of water and contains 240 meter^3 of water. Find the depth of the water in the tank.

2. Three metal cubes whose edges measure 3cm, 4cm and 5 cm respectively are melted to form a new cube. Find the surface area of the new cube.

3. A rectangular sheet of paper 44cm × 18cm is rolled along its length and a cylinder is formed. Find the volume of the cylinder.

4. Radius of a wheel is 28 cm. Find how many complete revolutions it should make to cover a distance of 792 metres?

5. A solid cylinder with radius 8 cm and height 2cm is melted to form a solid cone of height 6 cm. find the diameter of the base of the cone.

6. The surface area of a sphere is same as the curved surface area of a cylinder of height 12cm and radius 6cm. Find the diameter of the sphere.

7. The radius and height of a right circular cylinder are 7 cm and 28 cm respectively. Find its:

    a. Curved surface area

    b. Total surface area

    c. Volume

8. The radius and height of a right circular cone are 5 cm and 12 cm respectively. Find its

    a. Curved surface area
    b. Total surface area
    c. Volume

9. A hollow sphere of internal and external radii 2 cm and 4 cm respectively is melted and recasted into a solid cone of base radius 4 cm. find the height of the cone.

10. A solid metal sphere of radius 6 cm is melted and recasted into smaller solid spheres of radius 2 cm each. Find the number of smaller spheres so formed.