Volumes and Surface Areas

(Note : 1000 cm^3 = 1l , $1m^3$ = 1 kl)

1. Find the length of the edge of a cube whose S.A. is 864 cm^2.

2. The ratio of the volumes of two cubes is 8 : 27. Find the ratio of their surface areas.

3. Find the area covered by a Road-roller of width 80 cm, diameter 140 cm, in 40 revolutions.

4. The volume of cube is 343 cm^3. Find its T.S.A.

5. How many buckets of capacity 15 litre can be filled from a tank 4m long, 2m broad, 1.2 m high, full of water ?

6. A cylindrical tin of height 20 cm and base-radius 14 cm is open at the top. Find the cost of painting it from inside at the rate of 5 paise per sq.cm.

7. A cubic tank with length of edge as 2m is full of water. A family of 4 needs 1000 litres of water per day. For how long will the water in the tank last ?

8. A solid cylinder has t.s.a. 462 cm^2. Its c.s.a. is one- third of its t.s.a. Find its volume.

9. The four walls and the floor of a swimming pool are to be painted @ Rs. 12 per m^2. If the length of the pool is 16m, breadth is 10m and depth is 4m, find the cost of painting.

10. The dimensions of a cuboid are 25cm and 16 cm. Find the length of a cube (edge of the cube) Which has the same volume as this cuboid.

ANSWERS :

1. 12 cm 2. 4 : 9 3. 140.8 m^2 4. 294 cm^2 5. 640

6. 8 days 7. R = 7 cm, h = $\frac{7}{2}$ cm, Vol = 539 cm^3

9. Rs. 4416 10. 20 cm