
Volumes and Surface Areas

(Note : $1000 \text{ cm}^3 = 1 \text{ l}$, $1 \text{ m}^3 = 1 \text{ kl}$)

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 4 m long, 2 m 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 $5 \text{ paise per sq.cm}$.
7. A cubic tank with length of edge as 2 m 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 @ $\text{Rs. } 12 \text{ per m}^2$. If the length of the pool is 16 m , breadth is 10 m and depth is 4 m , find the cost of painting.
10. The dimensions of a cuboid are 25 cm 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. $R = 7 \text{ cm}$, $h = \frac{7}{2} \text{ cm}$, $\text{Vol} = 539 \text{ cm}^3$
9. $\text{Rs. } 4416$ 10. 20 cm