

Board – ICSE

Class –VIII

Topic – Surface Area, Volume and Capacity

- Find the volume and the total surface area of the cuboid having:
 - $l = 24\text{cm}$, $b = 16\text{cm}$ and $h = 7.5\text{cm}$
 - $l = 2410\text{m}$, $b = 35\text{cm}$ and $h = 1.2\text{m}$
- How many planks each measuring 5 m by 24 cm by 10 cm can be stored in a place 15 m long, 4 m wide and 60 cm deep?
- Find the side of a cube whose surface area is 600 cm^2
- Find the height of a cuboid whose base area is 180 cm^2 and volume is 900 cm^3 ?
- If each edge of a cube is doubled,
 - How many times will its surface area increase?
 - How many times will its volume increase?
- Given a cuboid tank, in which situation will you find surface area and in which situation volume.
 - To find how much water it can hold.
 - Number of cement bags required to plaster it.
 - To find the number of smaller tanks that can be filled with water from it.
- Rukhsar painted the outside of the cabinet of measure $1\text{ m} \times 2\text{ m} \times 1.5\text{ m}$. How much surface area did she cover if she painted all except the bottom of the cabinet?
- The length, breadth and height of the cuboid are in the ratio of 7:6:5. If the surface area of the cuboid is 1926 cm^2 , find its dimensions. Also find the volume of the cuboid.
- The dining-hall of a hotel is 75 m long; 60 m broad and 16 m high. It has five – doors 4 m by 3 m each and four windows 3 m by 1.6 m each. Find the cost of :
 - papering its walls at the rate of Rs.12 per m^2 ;
 - carpeting its floor at the rate of Rs.25 per m^2 .
- Find the area of metal-sheet required to make an open tank of length = 10 m, breadth = 7.5 m and depth = 3.8 m.

Answer

- a) volume = 2880cm^3 & TSA = 1368cm^2
b) volume = 4.2m^3 & TSA = 31.84m^2
- 300
- 10cm
- Height=5cm
- a) 4 times b) 8 times
- a) volume b) surface area c) volume
- 11m^2
- $l = 21\text{cm}, b = 18\text{cm}$ and $h = 15\text{cm}, V = 5670\text{cm}^3$
- a) Rs 50889.60 b) Rs. 112500
- 208m^2