

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  $600\text{ cm}^2$
- Find the height of a cuboid whose base area is  $180\text{ cm}^2$  and volume is  $900\text{ cm}^3$ ?
- 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  $1926\text{ cm}^2$ , 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  $\text{m}^2$ ;
  - carpeting its floor at the rate of Rs.25 per  $\text{m}^2$ .
- 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 =  $2880\text{cm}^3$  & TSA =  $1368\text{cm}^2$   
b) volume =  $4.2\text{m}^3$  & TSA =  $31.84\text{m}^2$
- 300
- 10cm
- Height=5cm
- a) 4 times      b) 8 times
- a) volume      b) surface area      c) volume
- $11\text{m}^2$
- $l = 21\text{cm}, b = 18\text{cm}$  and  $h = 15\text{cm}, V = 5670\text{cm}^3$
- a) Rs 50889.60      b) Rs. 112500
- $208\text{m}^2$