

Subject: - Mathematics

PRACTICE PAPER

CBSE-8th

Topic: - Surface Area & Volume

1. The area of the trapezium is 105 cm^2 and its height is 7 cm. If one of the parallel sides is longer than the other by 6 cm, find the two parallel sides? **Ans. $x = 12$**
2. The parallel sides of the trapezium are 20 cm and 10 cm. Its non - parallel sides are both equal, each being 13 cm. Find the area of the trapezium. **Ans. 180 cm^2**
3. A rectangular block of ice measures 40 cm by 25 cm by 15 cm. Calculate its weight in kg, if ice weighs $\frac{9}{10}$ of the weight of the same volume of water and 1 cm^3 of water weigh 1 gm. **Ans. 13.5 kg**
4. A water tank built by a municipality of a town to supply water to its 25000 inhabitants at 125 litres per day per person is 40 m long and 31.25 m broad. The tank, when it is full, can supply water for two days to the inhabitants of the town. Find the depth of the tank? **Ans. 5 m**
5. The paint in a certain container is sufficient to paint an area equal to 9.375 m^2 . How many bricks measuring 22.5 cm by 10 cm by 7.5 cm can be painted out of this container? **Ans. 100**
6. Length of a classroom is two times its height and its breadth are $1\frac{1}{2}$ times its height. The cost of white – washing the walls @ ₹1.60 per m^2 is ₹179.20. Find the cost of tiling the floor @ ₹6.75/ m^2 . **Ans. ₹324**
7. Find the number of bricks, each measuring $25 \text{ cm} \times 12.5 \text{ cm} \times 7.5 \text{ cm}$ required to construct a wall 6 m long 5 m high and 0.5 m thick, while the cement and sand mixture occupied $\frac{1}{20}$ of the volume of the wall? **Ans. 6080**
8. The external dimensions of a closed wooden box are 48 cm, 36 cm, 30 cm. The box is made of 1.5 cm thick wood. How many bricks of size $6 \text{ cm} \times 3 \text{ cm} \times 0.75 \text{ cm}$ can be put in this box? **Ans. 2970**
9. The dimensions of a rectangular box are in the ratio of 2 : 3 : 4 and the difference between the cost of covering it with sheet of paper @ ₹8/ m^2 and ₹9.50/ m^2 is ₹1248. Find the dimensions of the box. **Ans. 8 m, 12 m, 16 m.**

10. The radii of two right circular cylinders are in the ratio 2 : 3 and their heights are in the ratio 5 : 4. Calculate the ratio of their curved surface areas? **Ans. 5 : 6**

11. The sum of the radius of the base and heights of a solid cylinder is 37 m. If the total surface area of the solid cylinder is 1628m^2 . Find the circumference of its base. **Ans. 44 m, 4620 m^3**

12. The thickness of the metallic tube is 1 cm and the inner diameter of the tube is 12 cm. Find the weight if 1 m long tube, if the density of the metal be 7.8gm/cm^3 . **Ans. 31.869 kg.**

13. A solid cylinder has total surface area of 462 sq. cm. Its curved surface area is one – third of its total surface area. Find the volume of the cylinder. **Ans. 539 cm^3**

14. The volume and the curved surface area of a cylinder are 1650 cm^3 and 660 cm^2 respectively. Find the radius and height of the cylinder.

Ans. $r = 5\text{ cm}$, $h = 21\text{ cm}$