

# Mensuration

1) Find the sum of length of the bases of a trapezium whose altitude is 17cm and whose area is  $0.85\text{m}^2$  .

(Ans. 10m)

2) The parallel sides of a trapezium are in the ratio 2:5 and the distance between the parallel sides is 10cm.If the area of the trapezium is  $350\text{cm}^2$ . Find the length of its parallel sides.

(Ans. 20cm, 50cm)

3) The area of the trapezium is  $143\text{cm}^2$  and its height is 11cm.If one of the parallel sides is longer than the others by 4cm.Find the two parallel sides.

(Ans. 11cm, 15cm)

4) Find the area of rhombus whose diagonals are 18cm and 6.4cm.

5) The cost price of 10 articles is equal to the selling price of 9 articles. Find the profit percent.

(Ans. 25%)

6) Rekha bought a saree for Rs1240 and sold it for Rs1147.Find her loss and loss percent.

(Ans.Loss=Rs.93, Loss%=7.5%)

7) By selling a book for Rs258, a bookseller gains 20%.For how much should he sell it to gain 30%?

(Ans. Rs279.50)

8) A dealer buys a wrist watch for Rs225 and spends Rs15 on its repairs.If he sells the same for Rs300.Find his profit percent.

(Ans. 25%)

9) Toshiba bought 100 hens for Rs8000 and sold 20 of these at a gain of 5%. At what gain percent she must sell the remaining hens so as to gain 20% on the whole?

(Ans. 23.75%)

10) If the selling price of 18 oranges is equal to the cost price of 16 oranges, find the loss percent.

(Ans.  $11\frac{1}{9}\%$ )

11) The diameter of a garden roller is 1.4m and it is 2m long. How much area will it cover in 5 revolution?

(Ans.  $44\text{m}^2$ )

12) The volume of a cylinder is  $448\pi\text{ cm}^3$  and height 7cm. Find its lateral surface area and total surface area.

(Ans.  $352\text{cm}^2, 754.28\text{cm}^2$ )

13) The radius and height of a cylinder are in the ratio 5:7 and its volume is  $550\text{cm}^3$ . Find its radius.

(Ans. 5cm)

14) A glass cylinder with diameter 20cm has water to a height of 9cm. A metal cube of 8cm edge is immersed in it completely. Calculate the height by which water will rise in the cylinder.

(Ans. 1.6cm)

15) The curved surface area of a cylindrical pillar is  $264\text{m}^2$  and its volume is  $924\text{m}^3$ . Find the diameter and height of pillar.

(Ans. 14m, 6m)

16) The area of a base of a right circular cylinder is  $616\text{cm}^2$  and its height is 2.5cm. Find the volume of the cylinder.

(Ans.  $15400\text{ cm}^3$ )

17) The inner diameter of a circular well is 3.5m. It is 10m deep. Find the cost of plastering its inner curved surface at Rs4 per square metre.

(Ans. Rs440)

18) Find the

- I. Curved surface area
- II. Total surface area
- III. Volume of right circular cylinder

whose height is 15cm and the radius of the base is 7m.

(Ans.  $660\text{cm}^2, 968\text{cm}^2, 2310\text{cm}^3$ )

19) A rectangular sheet of paper,  $44\text{cm} \times 20\text{cm}$  is rolled along its length to form a cylinder. Find the volume of the cylinder so formed.

(Ans.  $3080\text{cm}^3$ )

20) The radii of two cylinders are in the ratio 2:3 and their heights are in the ratio 5:3. Calculate the ratio of their volume and the ratio of their curved surfaces.

(Ans. 20:27, 10:9)

21) Two circular cylinders of equal volumes have their heights in the ratio 1:2. Find the ratio of their radii.

(Ans.  $\sqrt{2}:1$ )

22) The total surface area of a cube is  $54\text{m}^2$ . What is the length of its sides?

(Ans. 3cm)

23) Find the surface area of a cube whose edge is 11cm.

(Ans.  $726\text{cm}^2$ )

24) Find the area of cardboard reqd to make a closed box of length 25cm, breadth 0.5 m and height 15cm.

( Ans  $4750\text{cm}^2$  )

25) Find the volume of air in a room measuring 4m by 5m which is 3m high.

(Ans  $60\text{m}^3$ )

26) Which has the greater volume a box that measures 10cm by 6 cm by 4cm or one that measured 6cm by 6cm by 7 cm?

(Ans second by  $12\text{ m}^3$ )

27) The bottom of a tank measures  $25\text{m} \times 20\text{m}$ . Find its depth if it contains  $2000\text{m}^3$  water.

(Ans 4m)

28) Find the volume of a cube, one face of which has an area of  $64\text{cm}^2$ .

(Ans  $512\text{cm}^3$ )

29) A heap of wood is a pile 5 cm wide, 9cm long and 3cm high. What is the volume of heap of wood ?

(Ans  $135\text{cm}^3$ )

30) The volume of a soap cake is  $160\text{ cm}^3$ . Its length and width are 10cm and 5 cm. Find its height

(Ans= 3.2 cm)

