

(9) :- 2D FIGURES :-

(1)

1. ABCD is a square of 20m. What is the area of the least-sized square that can be inscribed in it with its vertices on the sides of ABCD?

- (a) 120 m^2 (b) 100 m^2 (c) 200 m^2 (d) 250 m^2

2. What is the radius of the circle whose area is equal to the sum of the areas of two circles whose radii are 20cm and 21cm?

- (a) 27 cm (b) 28 cm (c) 29 cm (d) 25 cm

3. The perimeter of a rectangle and a square is 80cm each. If the difference between their areas is 100 cm. Find the sides of the rectangle.

- (a) 30 cm; 10 cm (b) 40 cm; 15 cm
(c) 25 cm; 10 cm (d) 20 cm; 30 cm

4. A circular path runs round a circular garden. If the difference between the circumference of the outer and inner circle is 88 m. Find the width of the path?

- (a) 14 m (b) 15 m (c) 18 m (d) 13 m

5. The radius of a circle is 4m. What is the radius of another circle whose area is 16 times of that first?

- (a) 16 m (b) 64 m (c) 256 m (d) 400 m

6. If the area of a circle is 616 cm^2 ; whose diameter is equal to radius of a semicircle. Find the perimeter of the semi-circle?

- (a) 184 cm (b) 154 cm (c) 144 cm (d) 164 cm

{0} :- 2D FIGURES :- {2}

7. One side of rectangular ground is 8m and its diagonal is 17m. Find the area of the ground?

- (a) 150 m^2 (b) 140 m^2 (c) 130 m^2 (d) 120 m^2

8. The side of a square shaped garden is $8\sqrt{2}$. Find the maximum possible distance between any two corners.

- (a) 18m (b) 15m (c) 16m (d) 14m

9. A rectangular ground 16m long and 10m breadth. It has a gravel path 2.5m wide all around it on the outside. What is the area of the path?

- (a) 159 m^2 (b) 155 m^2 (c) 187 m^2 (d) 183 m^2

10. If the side of the square is increased by 30%; then how much % does its area get increased?

- (a) 59% (b) 69% (c) 79% (d) 49%

11. A ladder is resting with one end in contact with the top of the wall of height 15m and the other end of the ground is at a distance 8m from the wall. The length of the ladder is?

- (a) 17m (b) 18m (c) 16m (d) 10m

12. The perimeter of a square is equal to twice the perimeter of a rectangle of length 10cm and breadth 4cm. What is the circumference of a semi-circle whose diameter is equal to the side of the square?

- (a) 38cm (b) 23cm (c) 46cm (d) 36cm

(1) :- 2D FIGURES :-

15. The length of a rectangle is $\frac{3}{5}$ th of the side of a square. The radius of a circle is equal to the side of the square. The circumference of the circle is 132 cm. What is the area of the rectangle; if the breadth of the rectangle is 15 cm?

- (a) 112 cm² (b) 149 cm² (c) 189 cm² (d) 160 cm²

14. Smallest side of a right angled triangle is 13 cm less than the side of a square of perimeter 72 cm. Second largest side of the right angled triangle is 2 cm less than length of the rectangle of area 112 cm² and breadth 8 cm. What is the largest side of the right angled triangle?

- (a) 20 cm (b) 12 cm (c) 10 cm (d) 13 cm

15. A park is in the form of a square one of whose side is 50 m. The area of the park excluding the circular lawn in the centre of the park is 1884 m². The radius of the circular lawn is?

- (a) 21 m (b) 31 m (c) 41 m (d) 14 m

16. The perimeter of a rectangle and a square 160 cm each. If the difference between their areas is 600 cm². Find the area of the rectangle.

- (a) 800 cm² (b) 500 cm² (c) 1000 cm² (d) 600 cm²

17. The length of a plot four times its breadth. A playground measuring 100 sq.m occupies one fourth of the total area of a plot. What is the length of the plot in meter?

- (a) 20 (b) 50 (c) 60 (d) 80

(Q) :- 2D FIGURES :- <1>

18. A Circular Wire of radius 56 cm is cut and bent in the form of a rectangle whose sides are in the ratio of 6:5. The smaller side of the rectangle is:

- (a) 70 cm (b) 75 cm (c) 80 cm (d) 85 cm

19. The Circumference of a circle is twice the perimeter of a rectangle. The area of the circle is 5544 sq. cm. What is the area of the rectangle if the ~~length~~^{breadth} of the rectangle is 30 cm?

- (a) 850 sq. cm (b) 990 sq. cm (c) 1080 sq. cm (d) 1150 sq. cm

20. A rectangular field to be fenced on three sides leaving a side of 30 feet uncovered. If the area of the field is 720 sq. ft; how many feet of fencing will be required?

- (a) 65 (b) 78 (c) 82 (d) 89

21. The perimeter of a rectangular field is 120 m and the difference between its two adjacent sides is 40 m. The sides of the square field whose area is equal to this rectangular field is?

- (a) $15\sqrt{3}$ m (b) $10\sqrt{3}$ m (c) $15\sqrt{5}$ m (d) $10\sqrt{5}$ m

22. Two roads each 10 m wide have been made running perpendicularly to each other inside a rectangular field of dimension 90 m x 50 m. What is the cost of spreading pebbles over them at the rate of ₹ 8 per m²?

- (b) ₹ 15,400 (c) ₹ 17,500 (d) ₹ 20,600

(9) :- 2D FIGURES :-

(5)

23. If the length of a rectangular field is increased by 20% and the breadth is reduced by 20%; the area of the rectangle will be 192 m^2 . What is the area of original rectangle?

- (a) 100 m^2 (b) 150 m^2 (c) 175 m^2 (d) 200 m^2

24. The ratio of the outer and the inner perimeters of a circular path is 9:8. The path is 3 metres wide. What is the diameter of the outer circle?

- (a) 40 m (b) 48 m (c) 70 m (d) 54 m

25. Four circular cardboard pieces; each of diameter 28 cm are placed in such a way that each piece touches two other pieces. Find the area of the space enclosed by the four pieces.

- (a) 195 cm^2 (b) 134 cm^2 (c) 168 cm^2 (d) 162 cm^2