CBSE Class 10- Mathematics: Chapter – 12 Areas Related to Circles Part 1

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1 Mark Questions

Unless stated otherwise, take $\pi = \dfrac{22}{7}$

Question 1:

The radii of two circles are $19 \, cm$ and $9 \, cm$ respectively. Find the radius of the circle which has circumference equal to the sum of the circumferences of the two circles.

Answer:

Let R be the radius of the circle which has circumference equal to the sum of circumferences of the two circles, then according to question,

$$2\pi R = 2\pi (19) + 2\pi (9)$$

$$\Rightarrow R = 19 + 9$$

$$\Rightarrow R = 28 \, cm$$

Question 2:

The circumference of a circular field is 528 cm. Then its radius is

(a) $42 \, cm$

(b) $84 \, cm$

(c) $72 \, cm$

(d) $56 \, cm$

Answer:

(b) 84 cm

Question 3:

The circumference of a circle exceeds its diameter by 180 cm. Then its radius is

(a) $32 \, cm$

(b) $36 \, cm$

(c) $40 \, cm$

(d) $42 \, cm$

Answer:

(d) $42\ cm$

Question 4:

Area of the sector of angle $60°$ of a circle with radius $10\ cm$ is

(a) $52\dfrac{5}{21}cm^2$

(b) $52\dfrac{8}{21}cm^2$

(c) $52\dfrac{4}{21}cm^2$

(d) None of there

Answer:

(b) $52\dfrac{8}{21}cm^2$

Question 5:

Area of a sector of angle P of a circle with radius R is

(a) $\dfrac{P}{180}\times 2\pi R$

(b) $\dfrac{P}{180}\times \pi R^2$

(c) $\dfrac{P}{360}\times 2\pi R$

(d) $\dfrac{P}{720}\times 2\pi R^2$

Answer:

(d) $\dfrac{P}{720}\times 2\pi R^2$

Question 6:

If the sum of the circumferences of two circles with radii R_1 and R_2 is equal to the circumference of a circle of Radius R_1, then

(a) $R_1 + R_2 = R$

(b) $R_1 + R_2 > R$

(c) $R_1 + R_2 < R$

(d) None of these

Answer:

(a) $R_1 + R_2 = R$

Question 7:

If the perimeter of a circle is equal to that of a square, then the ratio of their area is

(a) $22 : 7$

(b) $14 : 11$

(c) $7 : 22$

(d) $11 : 14$

Answer:

(c) $7 : 22$

Question 8:

Area of a sector of angle p^0 of a circle with radius R is

(a) $\dfrac{P}{180} \times 2\pi R$

(b) $\dfrac{P}{180} \times \pi R^2$

(c) $\dfrac{P}{360} \times 2\pi R$

(d) $\dfrac{P}{720} \times 2\pi R^2$

Answer:

(d) $\dfrac{P}{720} \times 2\pi R^2$