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CLASS-X Mathematics (Area related to circle)

1. The radius of a circle is $\frac{7}{\sqrt{\pi}} cm$ them the area of the circle is [1]

   (a) $154 cm^2$ (b) $\frac{49}{\pi} cm^2$

   (c) $22\, cm^2$ (d) $49\, cm^2$

2. Area of a sector of angle P° of a circle with radius R is [1]

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

   (c) $\frac{P}{360} \times 2\pi R$ (d) $\frac{P}{720} \times 2\pi R^2$

3. The diameter of a circle whose area is equal to the sum of the area of the two circles of radii 24cm and 7cm is [1]

   (a) 31cm (b) 25cm

   (c) 62cm (d) 50cm

4. The circumference a circle is 528cm. Then its area is [1]

   (a) $22{,}176\, cm^2$ (b) $22{,}576\, cm^2$

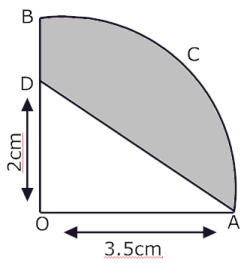
   (c) $23{,}176\, cm^2$ (d) $24{,}576\, cm^2$

5. The radii of two circles are 19cm and 9cm respectively. Find the radius of the circle which has its circumference equal to the sum of the circumference of the two circles [2]

6. A car travels 0.99km distance in which each wheel makes 450 complete revolutions. Find the radius of its wheel [2]

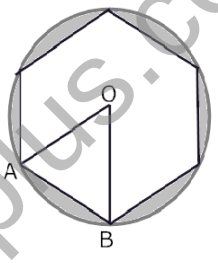
7. A sector is cut from a circle of diameter 21cm. if the angle of the sector is 150° find its area [2]

8. In the given figure AOBCA represent a quadrant of area $9.625\,cm^2$. Calculate the area of the shaded portion. [2]

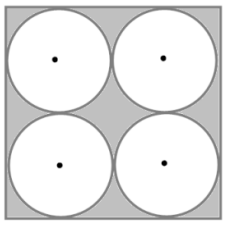


9. The length of the minute hand of clock is 14cm. Find the area swept by the minute hand is 5 minutes [3]

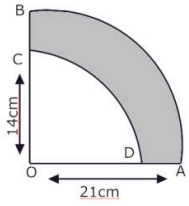
10. A round table cover has six equal designs as shown is the figure. If the radius of the cover is 28cm. find the cost of making the design at the rate of Rs.0.35 per cm^2 (use $\sqrt{3}=1.7$) [3]



11. Find the area of the shaded region where ABCD is a square of side 14cm [3]



12. ABCD is a flower bed If OA = 21m and DC = 14m. Find the area of the bed [3]



13. An elastic belt is placed round the rein of a pulley of radius 5cm. one point on the belt is pulled directly away from the centre O of the pulley until it is at P, 10cm from O. Find the length of the best that is in contact with the rim of the pulley. Also find the shaded area. [5]