# Chapter-11 Areas Related to Circles

WORKSHEET

1. The perimeter of quadrant of a circle of radius 7cm is
   a) 14cm   b) 4cm   c) 22cm   d) 25cm

2. Area of segment is:
   a) $\frac{\pi r^2 \theta}{360°}$ b) $\frac{r^2}{2}\left(\frac{\pi\theta}{180} - \sin\theta\right)$ c) $\frac{r}{2}\left(\frac{\pi\theta}{180} - \sin\theta\right)$ d) $\frac{\pi r \theta}{180} - \frac{1}{2}r^2\sin\theta$

3. If the perimeter of a quadrant of a circle is 3.75cm, then its radius is
   a) 10.5mm   b) 1.05mm   c) 10.5cm   d) 1.05m

4. The area of the circle that can be inscribed in a square of side 6cm is
   a) $36\pi\ cm^2$ b) $18\pi\ cm^2$ c) $12\pi\ cm^2$ d) $9\pi\ cm^2$

5. The hour-hand of a clock is 6cm long. The angle swept by it between 7:20 am to 7:55am is
   a) $\left(\frac{35}{4}\right)°$ b) $\left(\frac{35}{2}\right)°$ c) $35°$ d) $70°$

6. Two diameters of a circle having 14cm in length perpendicular to each other. Then, find area enclosed by two opposite sectors.

7. ABC is an equilateral triangle with side 6cm and D , E and F are mid-points of sides BC, AC and AB respectively. Find the area of shaded region and non-shaded region.
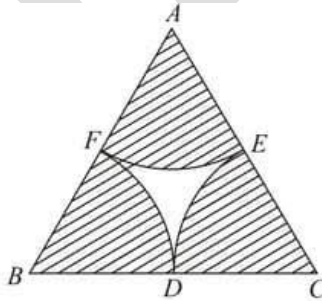

8. If the radius of the sector of a circle is 7cm with central angle 30°, then find the perimeter of the sector.

9. In the given figure, a circle with centre O, AB is a tangent of length 12cm with point of contact B. Find the area of shaded region.
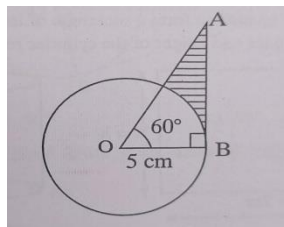
10. The length of minute hand of a clock is 7cm. How much area does it sweep in 25 minutes?

11. An Arc of a circle of radius 21cm subtends an angle of 60° at the centre. Find : i) the length of the arc   ii) the area of the minor segment

12. Find the perimeter of the shaded region in the given figure if APB andCPD are semicircles and ABCD is square.
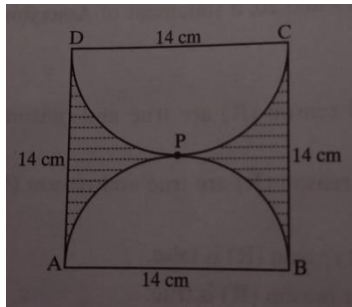
13. Find the area of the shaded region, if PR=24cm, PQ=7cm and O is centre of the circle.
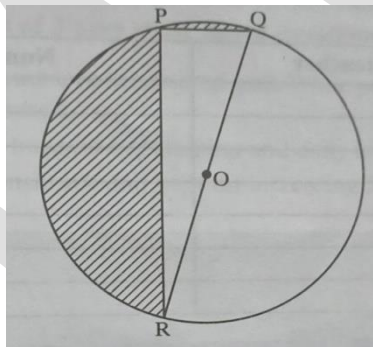
14. The shape of the top of a table is that of a sector of a circle with centre O and angle AOB=90 as shown in figure. If OA=OB=42cm, then find the perimeter of the top of the table.
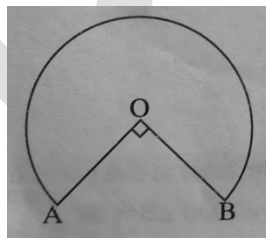
15. A pendulum swings through an angle of 30° and describes an arc of 8.8cn in length. Find the area swept by the pendulum.