\[
\therefore \frac{l}{\theta} = \frac{\pi d}{360} = \frac{2\pi r}{360} = \frac{\pi r}{180}
\]

\[
l = \frac{\pi d\theta}{360} = \frac{\pi r\theta}{180}
\]

\[\text{Area of a Sector:}\]

\[\theta_1 = \text{the angle formed by the minor sector}\]

\[\theta_2 = \text{the angle formed by the major sector}\]

\[\theta = \text{the angle formed by a sector}\]

Let the area of the sector = \(A_s\)

\[
A_s = \frac{\pi r^2}{360} = \frac{\pi \left(\frac{d}{2}\right)^2}{360}
\]

\[
A_s = \frac{\pi r^2}{360} = \frac{\pi \left(\frac{d^2}{4}\right)}{360}
\]

\[
\therefore A_s = \frac{\pi r^2 \theta}{360} = \frac{\pi d^2 \theta}{4 \times 360}
\]

\[\text{Examples:}\]

1. \textit{Find the area of the circle with diameter of 6 cm. Take } \pi = 3.142. \textit{ (Answer } = 28.3 \text{ cm}^2)\]

2.

   ii) \textit{Find the circumference of the circle with (Take } \pi = 3.142)\]
   a) \textit{Diameter= 8cm}\n   b) \textit{Radius=4cm}\n
3. \textit{Find the area of the sector of a circle with radius of 2 cm and an angle of 60°. (Take } \pi = 3.142)\]

4. \textit{Find the length of the arc on a circle with radius of 8cm and forms an angle of 80° at the centre of the circle.}\]