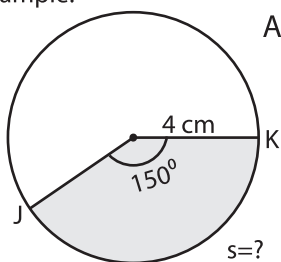


# Arc Length and Area of a Sector

Sheet 1

Example:

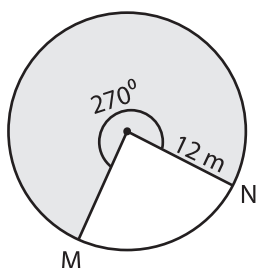


$$\begin{aligned}\text{Arc length of a sector (s)} &= \frac{\theta \times \pi \times r}{180^\circ} \\ &= \frac{150^\circ \times 3.14 \times 4}{180^\circ} \\ &= \mathbf{10.47 \text{ cm}}\end{aligned}$$

$$\begin{aligned}\text{Area} &= \frac{s \times r}{2} \\ &= \frac{10.47 \times 4}{2} \\ &= \mathbf{20.94 \text{ cm}^2}\end{aligned}$$

Find the length of the arc and area of the shaded region. Round the answer to two decimal places. ( use  $\pi = 3.14$  )

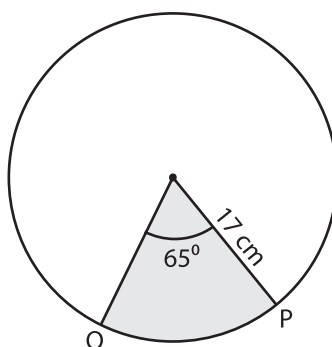
1)



Length of the arc MN = \_\_\_\_\_

Area of a sector = \_\_\_\_\_

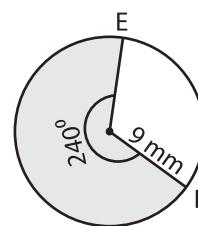
2)



Length of the arc OP = \_\_\_\_\_

Area of a sector = \_\_\_\_\_

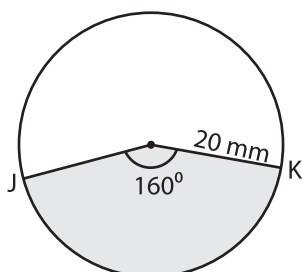
3)



Length of the arc EF = \_\_\_\_\_

Area of a sector = \_\_\_\_\_

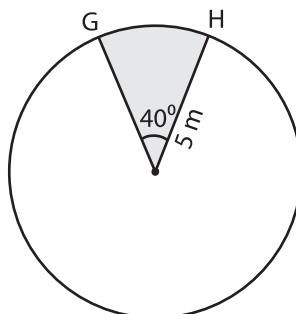
4)



Length of the arc JK = \_\_\_\_\_

Area of a sector = \_\_\_\_\_

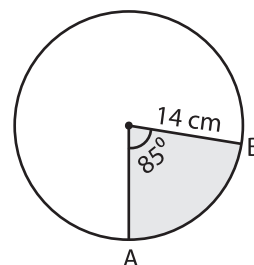
5)



Length of the arc GH = \_\_\_\_\_

Area of a sector = \_\_\_\_\_

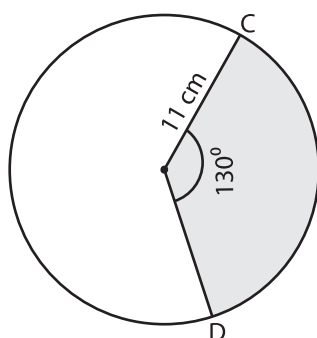
6)



Length of the arc AB = \_\_\_\_\_

Area of a sector = \_\_\_\_\_

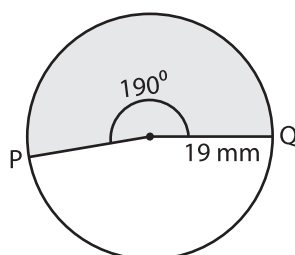
7)



Length of the arc CD = \_\_\_\_\_

Area of a sector = \_\_\_\_\_

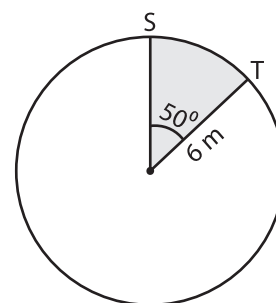
8)



Length of the arc PQ = \_\_\_\_\_

Area of a sector = \_\_\_\_\_

9)



Length of the arc ST = \_\_\_\_\_

Area of a sector = \_\_\_\_\_