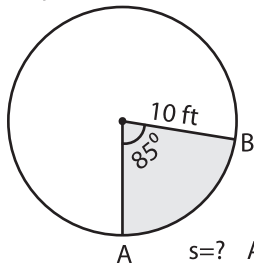


**Arc Length and Area of a Sector**

Example:

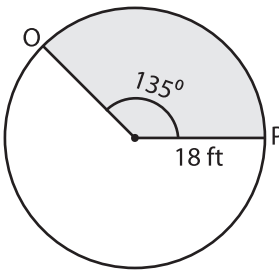


$$\begin{aligned} \text{Arc length of a sector (s)} &= \frac{\theta \times \pi \times r}{180^\circ} \\ &= \frac{85^\circ \times 3.14 \times 10}{180^\circ} \\ &= \mathbf{14.83 \text{ ft}} \end{aligned}$$

$$\begin{aligned} \text{Area} &= \frac{s \times r}{2} \\ &= \frac{14.83 \times 10}{2} \\ &= \mathbf{74.15 \text{ ft}^2} \end{aligned}$$

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

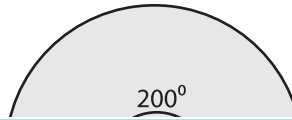
1)



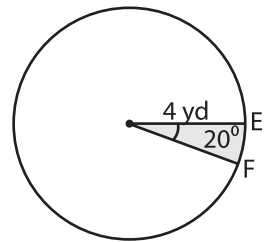
Length of the arc OP = \_\_\_\_\_

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

2)



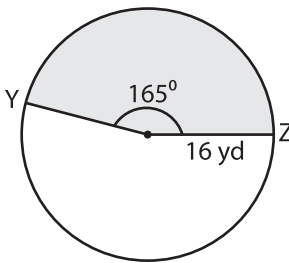
3)



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

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

4)



Length of the arc YZ = \_\_\_\_\_

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

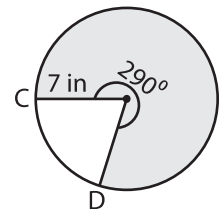
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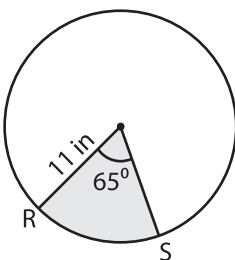
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Length of the arc CD = \_\_\_\_\_

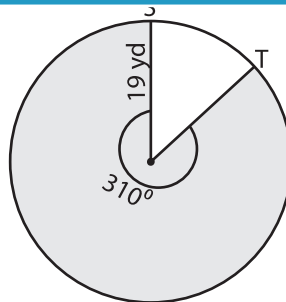
Area of a sector = \_\_\_\_\_

7)



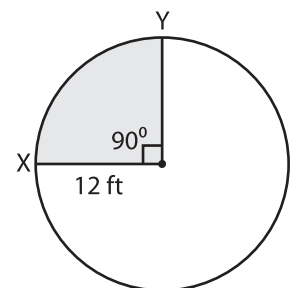
Length of the arc RS = \_\_\_\_\_

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



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

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



Length of the arc XY = \_\_\_\_\_

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