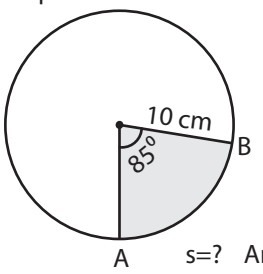
Name : _____ Score : _____

Arc Length and Area of a Sector

Example:



s=? Area=?

Arc length of a sector (s) = $\frac{\theta \times \pi \times r}{180^0}$

$= \frac{85^0 \times 3.14 \times 10}{180^0}$

$= \mathbf{14.83\ cm}$

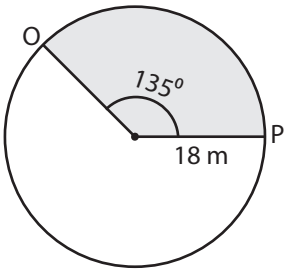
Area = $\frac{s \times r}{2}$

$= \frac{14.83 \times 10}{2}$

$= \mathbf{74.15\ cm^2}$

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

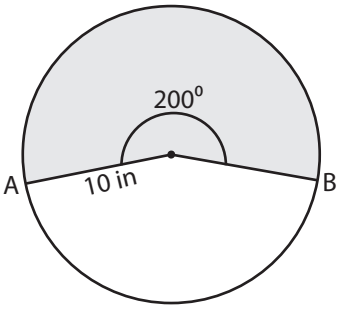
1)



Length of the arc OP = _____

Area of a sector = _____

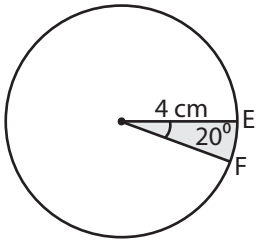
2)



Length of the arc AB = _____

Area of a sector = _____

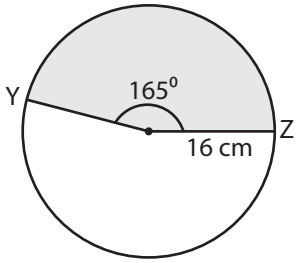
3)



Length of the arc EF = _____

Area of a sector = _____

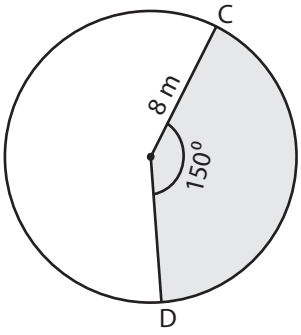
4)



Length of the arc YZ = _____

Area of a sector = _____

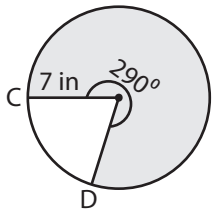
5)



Length of the arc CD = _____

Area of a sector = _____

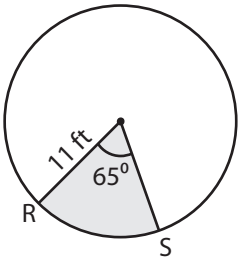
6)



Length of the arc CD = _____

Area of a sector = _____

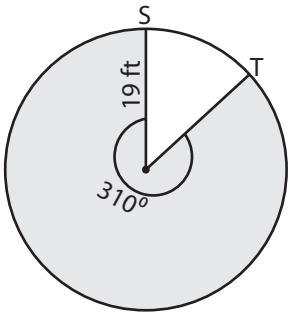
7)



Length of the arc RS = _____

Area of a sector = _____

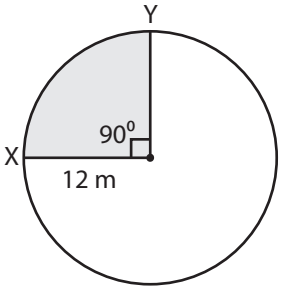
8)



Length of the arc ST = _____

Area of a sector = _____

9)



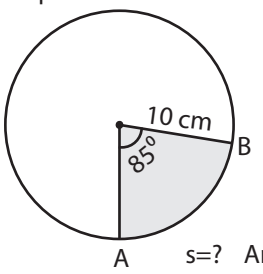
Length of the arc XY = _____

Area of a sector = _____

Name : _____ Score : _____

Answer Key

Example:



s=? Area=?

Arc length of a sector (s) = $\frac{\theta \times \pi \times r}{180^0}$

$= \frac{85^0 \times 3.14 \times 10}{180^0}$

$= \mathbf{14.83\ cm}$

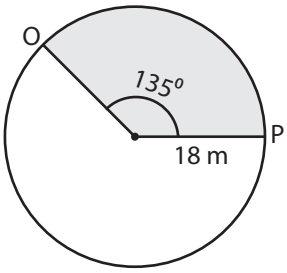
Area = $\frac{s \times r}{2}$

$= \frac{14.83 \times 10}{2}$

$= \mathbf{74.15\ cm^2}$

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

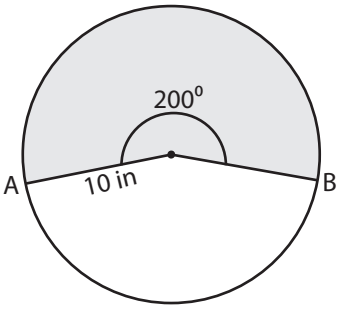
1)



Length of the arc OP = **42.39 m**

Area of a sector = **381.51 m²**

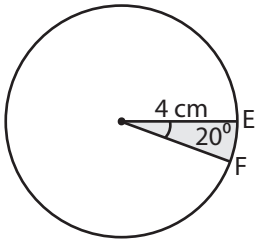
2)



Length of the arc AB = **34.89 in**

Area of a sector = **174.44 in²**

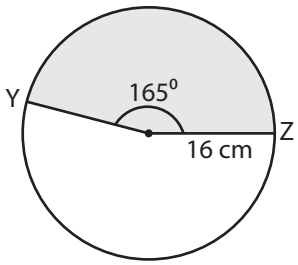
3)



Length of the arc EF = **1.40 cm**

Area of a sector = **2.79 cm²**

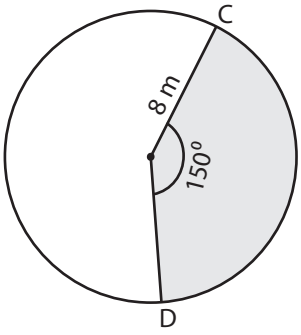
4)



Length of the arc YZ = **46.05 cm**

Area of a sector = **368.43 cm²**

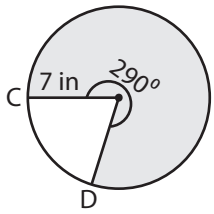
5)



Length of the arc CD = **20.93 m**

Area of a sector = **83.73 m²**

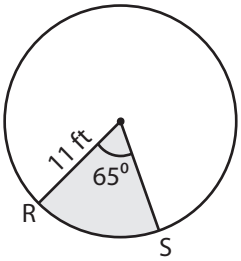
6)



Length of the arc CD = **35.41 in**

Area of a sector = **123.94 in²**

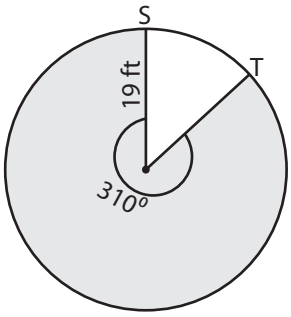
7)



Length of the arc RS = **12.47 ft**

Area of a sector = **68.60 ft²**

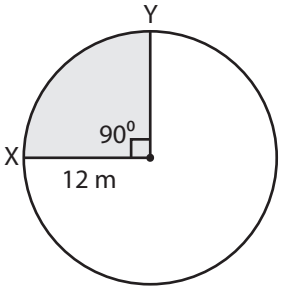
8)



Length of the arc ST = **102.75 ft**

Area of a sector = **976.10 ft²**

9)



Length of the arc XY = **18.84 m**

Area of a sector = **113.04 m²**