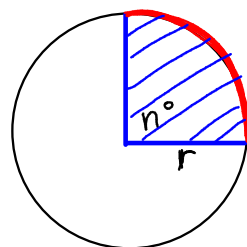
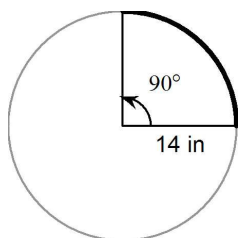


Arc Length and Sector Area



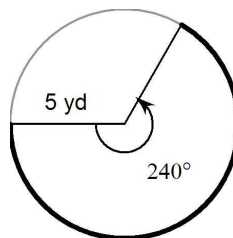
Arc length
 $AL = 2\pi r \cdot \frac{n^\circ}{360^\circ}$
 Sector Area
 $SA = \pi r^2 \cdot \frac{n^\circ}{360^\circ}$

Find the arc length.



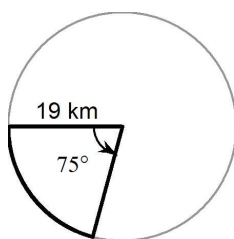
$r = 14 \text{ in } n^\circ = 90^\circ$
 $AL = 2\pi \cdot 14 \cdot \left(\frac{90}{360}\right)$
 $= 28\pi \cdot 0.25$
 $AL = 22.0 \text{ in}$

Find the arc length.



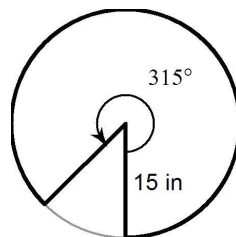
$AL = 2\pi \cdot 5 \cdot \frac{240}{360}$
 $= 10\pi \cdot 0.666667$
 $AL = 20.9 \text{ yd}$

Find the sector area.



$SA = \pi 19^2 \cdot \frac{75}{360}$
 $= 361\pi \cdot 0.208333\dots$
 $SA = 236.3 \text{ km}^2$

Find the sector area.



$SA = \pi \cdot 15^2 \cdot \frac{315}{360}$
 $= 225\pi \cdot 0.875$
 $= 618.5 \text{ in}^2$