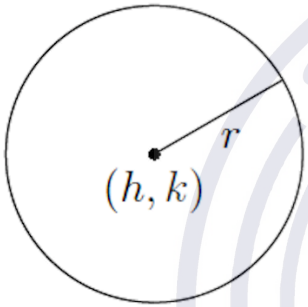
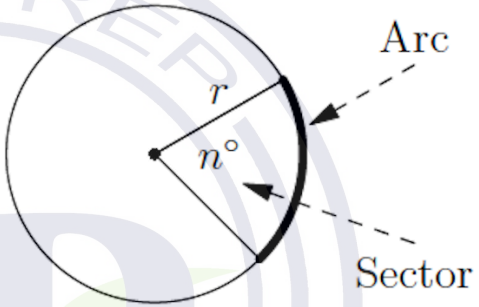
SAT PREP
Circle and Sector

Circles





$$\text{Area} = \pi r^2$$

$$\text{Circumference} = 2\pi r$$

$$\text{Full circle} = 360^\circ$$

$$\text{Length Of Arc} = (n^\circ/360^\circ) \cdot 2\pi r$$

$$\text{Area Of Sector} = (n^\circ/360^\circ) \cdot \pi r^2$$

Equation of the circle (above left figure): $(x-h)^2 + (y-k)^2 = r^2$.

Another way to measure angles is with radians. These are defined such that π radians is equal to 180°, so that the number of radians in a circle is 2π (or 360°).

To convert from degrees to radians, just multiply by $\pi/180^\circ$. For example, the number of radians in 45° is 0.785, since $45^\circ \cdot \pi/180^\circ = \pi/4$ rad ≈ 0.785 rad.