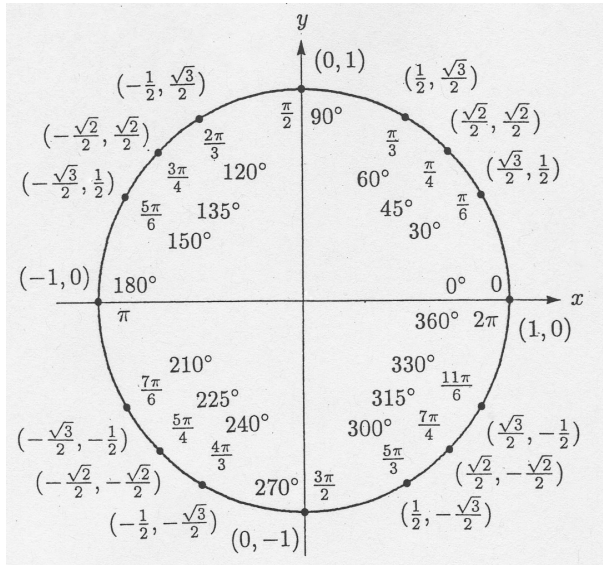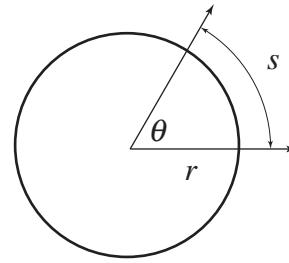# Angles, Triangles, and Trigonometry

The Unit Circle
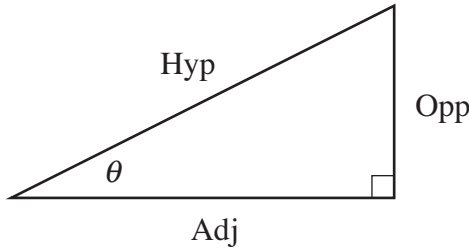

Radian Measure

The *radian* measure of an angle is defined by the equation $\theta = \dfrac{s}{r}$.

Note that when θ is measured in radians, arc length is given by the equation $s = r\theta$.

Right Triangle Trig Ratios

$$\cos\theta = \frac{\text{Adj}}{\text{Hyp}} \qquad \sec\theta = \frac{\text{Hyp}}{\text{Adj}}$$

$$\sin\theta = \frac{\text{Opp}}{\text{Hyp}} \qquad \csc\theta = \frac{\text{Hyp}}{\text{Opp}}$$
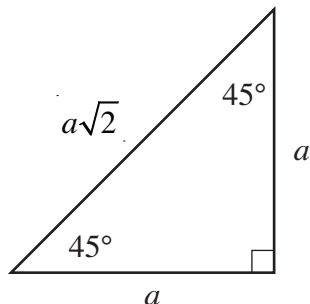
$$\tan\theta = \frac{\text{Opp}}{\text{Adj}} \qquad \cot\theta = \frac{\text{Adj}}{\text{Opp}}$$

Special Right Triangles

45°–45°–90°

30°–60°–90°