

# Radians

$$C = 2\pi r$$

$$2\pi \text{ rad} = 360^\circ$$

$$\pi \text{ rad} = 180^\circ$$

Degrees  $\rightarrow$  Radians

$$\frac{\# \text{ of degrees}}{180} \cdot \pi$$

$$\underline{\text{EX}} \rightarrow 90^\circ \rightarrow \frac{90}{180} \cdot \pi = \frac{1}{2} \pi = \frac{\pi}{2}$$

$$\underline{\text{EX}} \rightarrow 135^\circ \rightarrow \frac{135}{180} \cdot \pi = \frac{3}{4} \pi = \frac{3\pi}{4}$$

$$\underline{\text{EX}} \rightarrow 240^\circ \rightarrow \frac{240}{180} \cdot \pi = \frac{4}{3} \pi = \frac{4\pi}{3}$$

Radians  $\rightarrow$  Degrees

$$\frac{\text{Radian Measure}}{\pi} \cdot 180^\circ$$

$$\underline{\text{EX}} \rightarrow \frac{7}{6} \pi \Rightarrow \frac{\cancel{\frac{7}{6}} \pi}{\cancel{\pi}} \cdot 180 = \frac{7}{6} \cdot 180 = 210^\circ$$

$$\underline{\text{EX}} \rightarrow \frac{4\pi}{9} \Rightarrow \frac{\cancel{4} \pi}{\cancel{9}} \Rightarrow \frac{\cancel{4} \pi}{\cancel{9}} \cdot 180 = \frac{4}{9} \cdot 180 = 80^\circ$$

$$\underline{\text{EX}} \rightarrow \frac{8\pi}{5} \Rightarrow \frac{\cancel{8} \pi}{\cancel{5}} \Rightarrow \frac{\cancel{8} \pi}{\cancel{5}} \cdot 180 = \frac{8}{5} \cdot 180 = 288^\circ$$