Pre-Calculus 30 **Chapter 4 Review**

Radians ⟶degrees: multiply by $\frac{180^\circ}{\pi}$

Degrees ⟶radians: multiply by $\frac{\pi}{180^\circ}$

Coterminal Angles

Standard Position of an angle

Arc Length: a = θr (remember θ must be in radians!)

Unit Circle

- $P\left(\frac{\pi}{3}\right)=\left(\frac{1}{2},\frac{\sqrt{3}}{2}\right)$ $P\left(\frac{\pi}{4}\right)=\left(\frac{\sqrt{2}}{2},\frac{\sqrt{2}}{2}\right)$ $P\left(\frac{\pi}{6}\right)=\left(\frac{\sqrt{3}}{2},\frac{1}{2}\right)$
- Radius of 1
- Equation of unit circle: $x^2 + y^2 = 1$

Equation of a circle with center at (0, 0) and radius r: $x^2 + y^2 = r^2$

Memorize $30^0$ - $60^0$ - $90^0$ and $45^0$ - $45^0$ - $90^0$ triangle

P(θ)=(cosθ, sinθ) for any point P(θ) on the intersection of the terminal arm of θ and the unit circle

Reciprocal trig ratios: $\csc\theta=\frac{1}{\sin\theta}$, $\sec\theta=\frac{1}{\cos\theta}$, $\cot\theta=\frac{1}{\tan\theta}$

Find *exact* values of trig ratios for special angles – Use the unit circle.

Find *approximate* values for trig ratios using a calculator (degrees or radians)

Find the trig ratios for an angle in standard position from the coordinates of a point on the terminal arm.

Solve trig equations. Use reference angles and "CAST" to find solutions in other quadrants. Watch domain!

**Assignment**: Page 215 #1 – 7, 9 – 17, 19 – 21