3-2 Notes Angles & Their Measure Day 2 Name _____
Pre-Calculus

I. Conversions Between Degrees and Radians

$360^\circ = 2\pi \text{ rad} \Rightarrow 180^\circ = \pi \text{ rad}$

radians to degrees	degrees to radians
multiply by $\frac{180^\circ}{\pi \text{ rad}}$	multiply by $\frac{\pi \text{ rad}}{180^\circ}$

A. Convert each angle from degrees to radians.

1. 60° 2. 150° 3. -45° 4. 90°

B. Convert each angle from radians to degrees.

5. $\frac{\pi}{6}$ 6. $\frac{3\pi}{2}$ 7. $-\frac{3\pi}{4}$ 8. 3

9. How many radians are in 135°?

10. Convert $\frac{\pi}{3}$ to degrees.

11. Write 120° in radians.

12. Convert $\frac{5\pi}{6}$ to degrees.

It may be helpful to memorize some common angles.

Degrees	0°	30°	45°	60°	90°	120°	135°	150°	180°
Radians	0	$\frac{\pi}{6}$	$\frac{\pi}{4}$	$\frac{\pi}{3}$	$\frac{\pi}{2}$	$\frac{2\pi}{3}$	$\frac{3\pi}{4}$	$\frac{5\pi}{6}$	π
Degrees		210°	225°	240°	270°	300°	315°	330°	360°
Radians		$\frac{7\pi}{6}$	$\frac{5\pi}{4}$	$\frac{4\pi}{3}$	$\frac{3\pi}{2}$	$\frac{5\pi}{3}$	$\frac{7\pi}{4}$	$\frac{11\pi}{6}$	2π