

$$C = 2\pi r = 2\pi$$

$$\frac{30^\circ}{360} \cdot \frac{1}{17} (2\pi) = \frac{\pi}{6}$$

$$180^\circ \cdot \frac{1}{2} (2\pi) = \pi$$

Friday - Math Analysis - 2/1/08

I. CAME - 30 minutes

HW out on desk to stamp

II Circle roll

1. Draw an x and y-axis, mark off in inches
2. Place your unit circle, with the center at the origin. The circle should fit inside all of your 1" marks. Mark the 0° , 90° , 180° , + 270° on your circle.
3. Put 0° at the origin and carefully roll the circle along the positive x-axis. Stop at 90° and make a mark on the x-axis. Do the same for 180° , 270° and 360°
4. Now measure, with the ruler, the distances from 0 to each mark.

This relationship allows us to do a linear measure for degree measure. The unit is called a radian.

One radian is the angle formed by laying off the radius on the circumference.

1. Take the circle again, put 0° at the origin and roll to the 1" mark on the x-axis. Mark this on your circle. (estimate the \angle)
2. Since the length of the arc of 180° is π radians, $(\frac{1}{2} \cdot 2\pi)$
 $1 \text{ radian} = \frac{180^\circ}{\pi} \approx 57^\circ 17'$

$$1^\circ = \frac{\pi}{180}$$

→ Change degree to radians: $\text{angle} \cdot \frac{\pi}{180}$

for
hw
bright

change radians to degrees: $\text{angle} \cdot \frac{180}{\pi}$

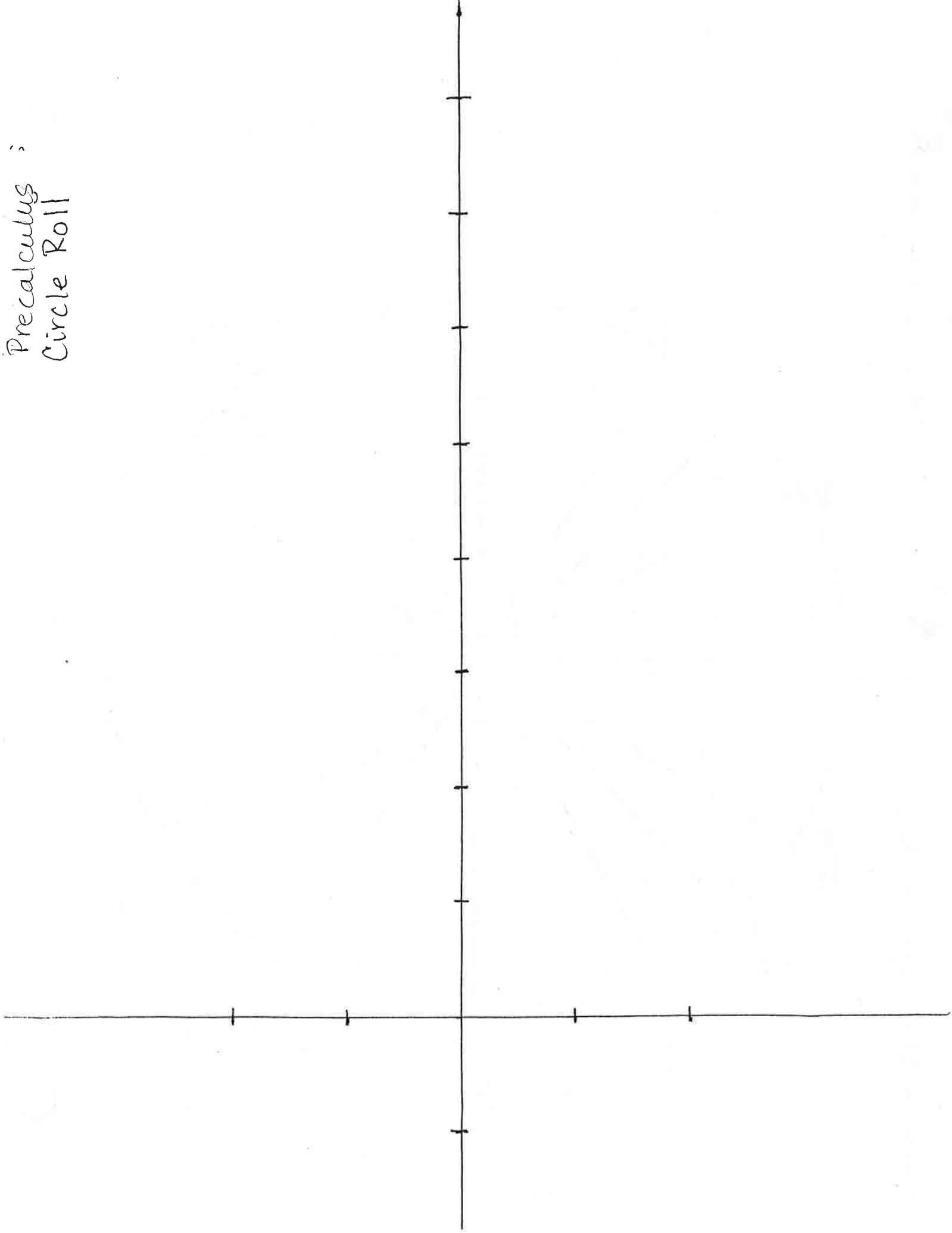
No
calculator

$$60^\circ \cdot \frac{\pi}{180} = \frac{\pi}{3}$$

$$210^\circ \cdot \frac{\pi}{180} = \frac{7\pi}{6}$$

III. hw - Degrees to radian circle
Trig #1 1-29 odd

Precalculus :
Circle Roll





Name _____

