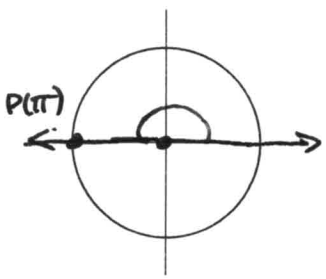
Quiz #5 Math 1060 10/16/2013

Name: Key Section: _____

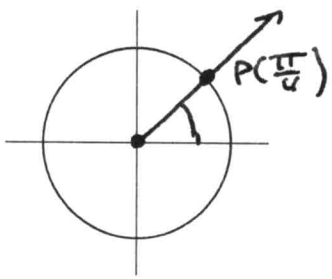
You have 10 minutes to complete the quiz. Please **show all work**, and then **write your answer on the line provided.**

1. (6 points). Plot the approximate location of the following angles on the unit circle.

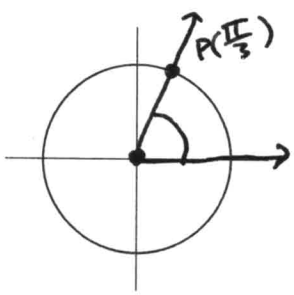
(a) $\theta = \pi$ radians



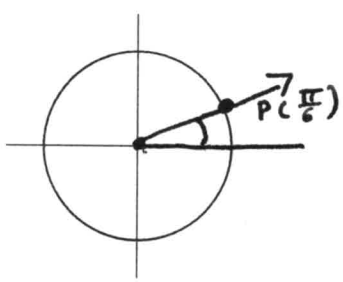
(b) $\theta = \frac{\pi}{4}$ radians



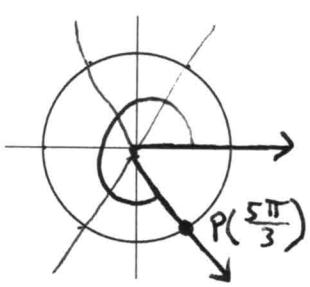
(c) $\theta = \frac{\pi}{3}$ radians



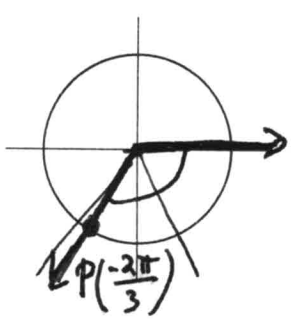
(d) $\theta = \frac{\pi}{6}$ radians



(e) $\theta = \frac{5\pi}{3}$ radians



(f) $\theta = \frac{-2\pi}{3}$ radians



(Quiz continued on other side).

Name: _____ Section: _____

2.3.

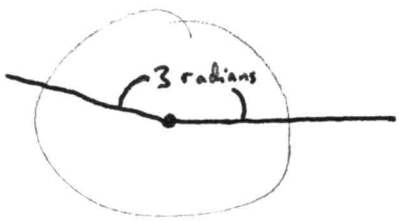
2. (2 points). Convert 60° and 30° to radians.

$60° \cdot \frac{\pi}{180°} = \frac{60}{180} \cdot \pi = \frac{2 \cdot 3 \cdot 10}{2 \cdot 9 \cdot 10}\pi = \frac{1}{3} \cdot \pi = \frac{\pi}{3}$

$30° \cdot \frac{\pi}{180} = \frac{30}{180}\pi = \frac{3 \cdot 10}{2 \cdot 9 \cdot 10}\pi = \frac{1}{6}\pi = \frac{\pi}{6}$

Answer: _____

3. (2 points). Fix the circle with radius 1″.
Find the length of the arc intercepted by the angle $\theta = 3$ radians.



$\left(\begin{matrix}\text{length} \\ \text{of arc}\end{matrix}\right) = \left(\begin{matrix}\text{radius} \\ \text{of circle}\end{matrix}\right)\left(\begin{matrix}\text{angle} \\ \text{in radians}\end{matrix}\right)$

$= 1'' \cdot 3$

arc-length $= 3''$

Answer: 3″