Quiz 7

Math 3C: Precalculus

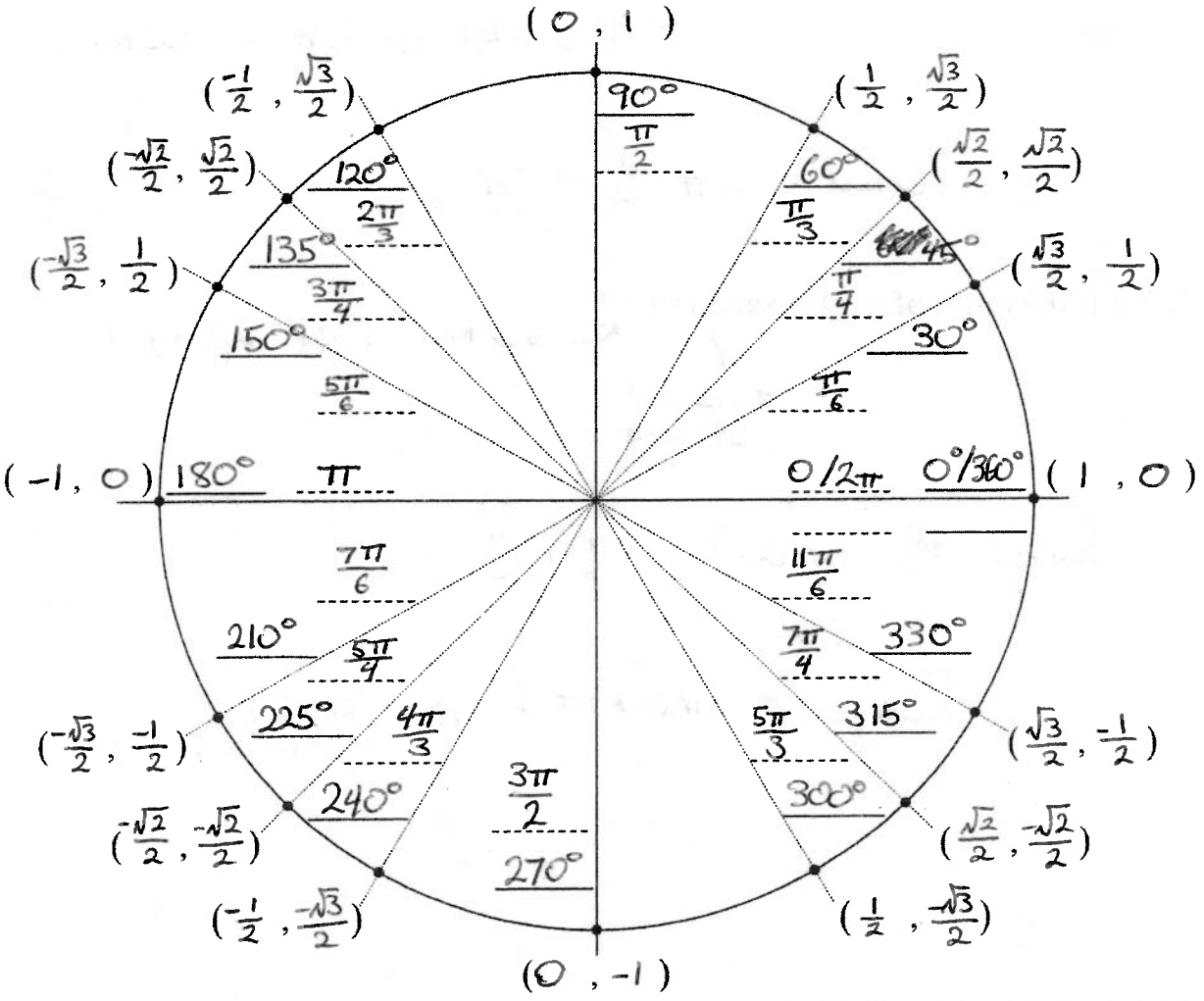
December 2, 2019

When you finish, please remain seated until class is dismissed

Name: Solutions PID: _____

Problem 1 (10 points). Fill in the blanks of the unit circle drawn below. In the parentheses, write the **coordinates** of each point; on the solid line write the angle measure in **degrees**, and on the dotted line write the angle measure in **radians**.

(there are two extra lines near (1,0), you can leave those two blank)



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EXTRA CREDIT:

(2 points each)

What is $\csc\left(\frac{5\pi}{4}\right)$?

OPTIONAL simplification

$$\csc\left(\frac{5\pi}{4}\right) = \frac{1}{\sin\left(\frac{5\pi}{4}\right)} = \frac{1}{-\frac{\sqrt{2}}{2}} = \frac{-2}{\sqrt{2}} = -\sqrt{2}$$

What is the period of $f(x) = 3\cos(2x)$?

↑ Horizontal stretch by factor of $\frac{1}{2}$

$$\text{Period} = 2\pi \cdot \frac{1}{2} = \pi$$

What is the range of $g(x) = \sin(2x) + 1$?

↑ Horizontal stretch ← vertical shift up by 1

Range of $\sin(2x)$ is $[-1, 1]$

↓

Range of $\sin(2x) + 1$ is $[0, 2]$