

Quiz 11

Name: Key

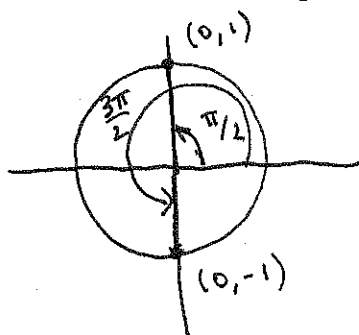
Math 115, Fall 2016

Thursday Discussion Time: _____

Directions: You have 20 minutes to complete this quiz. Read each problem carefully. There are two problems on the back of this page. Please put a box around your answers. No calculators are allowed.

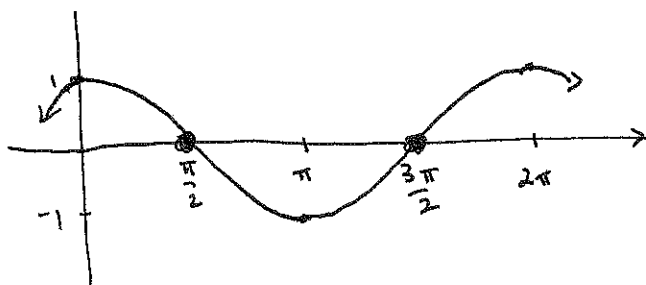
1. (2 points)

Let $f(x) = \cos x$ on the interval $[0, 2\pi)$. Find all of the x -intercepts. Write your answers in terms of multiples of π .



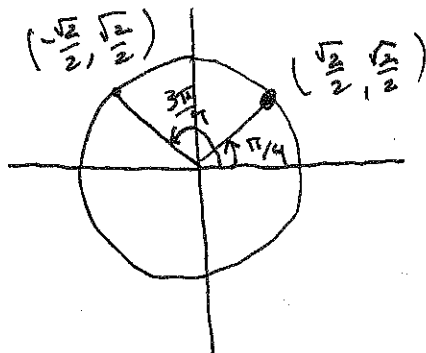
x-intercepts

$$\left(\frac{\pi}{2}, 0 \right), \left(\frac{3\pi}{2}, 0 \right)$$



2. (2 points)

Let $f(x) = \sin x$ on the interval $[0, 2\pi)$. Find all solutions of the equation $\sin x = \frac{\sqrt{2}}{2}$. Write your answers in terms of multiples of π .



$$x = \frac{\pi}{4}, x = \frac{3\pi}{4}$$

3. (5 points)

Let $f(x) = 2 \sin(x - \frac{\pi}{2})$. The following parts, (a)-(e), refer to this function.

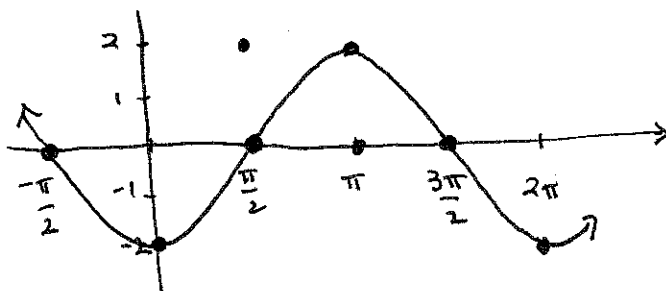
(a) State the domain. $(-\infty, \infty)$

(b) State the amplitude. $\text{amplitude} = 2$

(c) State the period. $\text{period} = \frac{2\pi}{1} = 2\pi$

(d) State the horizontal shift. $\frac{\pi}{2}$ units to the right.

(e) Graph the function on the interval $[-\frac{\pi}{2}, 2\pi]$. On the x -axis, make marks at increments of $\frac{\pi}{2}$; also indicate scale on the y -axis.



4. (1 point)

(a) If $\tan(\theta) = 9$, state the value of $\tan(-\theta)$.

$$\boxed{\tan(-\theta) = -9}$$

(b) If $\sec(\theta) = -2$, state the value of $\sec(-\theta)$.

$$\boxed{\sec(-\theta) = -2}$$