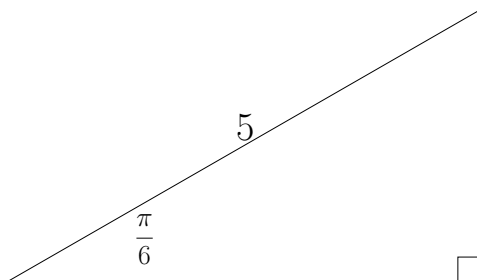


Name:

Math 115 — Exam 3 — November 9, 2018

For full credit, show all your work!

1. Find all the missing angles and lengths.



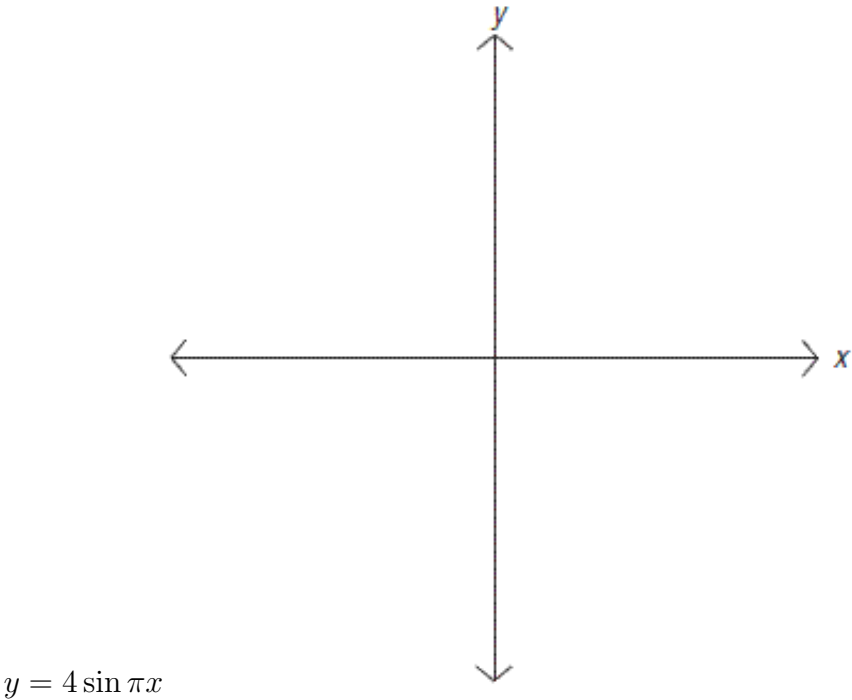
2. If $\cos t = -3/5$ and the terminal point of t is in quadrant III, find

$\sin t$	$\tan t$	$\sec t$	$\cot t$	$\csc t$

3. For the angles given below give their co-terminal angles, reference angles and terminal points.

Radian Measure	Co-Terminal Angle in $[0, 2\pi)$	Reference Angle	Terminal Point
$\theta = \frac{22\pi}{3}$			
$\theta = \frac{35\pi}{6}$			

4. Sketch a graph, determine the domain, determine at least two zeros, and determine the amplitude, period and phase shift (where appropriate)



5. Answer the following:

(a) $g(x) = \cos(x - \pi)$

Find at least four zeros of $g(x)$ _____

(b) $f(x) = \tan x$

the domain of $f(x)$ is _____

(c) $h(x) = 4 \cos(3\pi x)$

the amplitude of $h(x)$ is _____

(d) $k(x) = 3 \sin(4\pi x)$

the period of $k(x)$ is _____

(e) $F(x) = 3 \sin(2\pi x - 3)$

the phase shift of $F(x)$ is _____

6. Compute the following by hand - no calculator allowed.

(a) $\cos\left(\frac{-17\pi}{6}\right)$ _____

(b) $\sec\left(\frac{37\pi}{3}\right)$ _____

(c) $\tan\left(\frac{13\pi}{3}\right)$ _____

(d) $\csc\left(\frac{-4\pi}{3}\right)$ _____

(e) $\sin\left(\frac{14\pi}{6}\right)$ _____

7. Fill in the blank. Sometimes math is _____

Fill in The Unit Circle

