Take-home trigonometry quiz—Due Monday April 24 _____

*SHOW ALL YOUR WORK ON A SEPARATE PIECE OF PAPER.*

You should be able to do this with no aids by now, notes or otherwise. The amount of looking things up you need to do is a good indication of how prepared you are for the test.

1. Fill in the information:

| | | | | | |
|---|---|---|---|---|---|
| y = sin x | dom: | range: | period: | amplitude: | roots on [0, $2\pi$]: |
| y = cos x | dom: | range: | period: | amplitude: | roots on [0, $2\pi$]: |
| y = tan x | dom: | range: | period: | amplitude: | roots on [$-\pi$, $\pi$]: |

2. Fill in the information for each angle given:

| | Complement | Supplement | Positive coterminal | Negative coterminal |
|---|---|---|---|---|
| 64° | | | | |
| $\frac{\pi}{12}^r$ | | | | |

3. Fill in the information for each angle given:

| | Conversion to $\pi^r$ or ° | Quadrant | Reference angle (in given angle's units) |
|---|---|---|---|
| –208° | | | |
| $\frac{11\pi}{6}^r$ | | | |

4. The point (2, –3) lies on the terminal side of angle $\theta$. Find the six trigonometric values of $\theta$.

| | |
|---|---|
| $\sin\theta =$ | $\csc\theta =$ |
| $\cos\theta =$ | $\sec\theta =$ |
| $\tan\theta =$ | $\cot\theta =$ |

Find the coordinates of the point on the *unit circle* that lies on the same terminal side of $\theta$.

5. Evaluate each of these:

sec $(\pi) =$ sin$(5\pi) =$

tan $(\pi/3) =$ cot $(\pi/3) =$

cos $(-\pi/2) =$ csc (0) =

6. The sine function and the tangent function are odd functions. The cosine function is an even function.

So, sin$(-4\pi) =$ _____ cos$(-\pi/3) =$ _____ –tan $(5\pi/6) =$ _____

7. What is the equation of a sine function that has an amplitude of 4, a minimum value of –1 and a maximum value of 3 (that is, a range of [–1, 3], and a period of $6\pi$?

8. Sketch two cycles of the graph of y = 5cos $(2\theta + \pi)$. There is no vertical shift. It will help to first find:

Amp ____ Period _____ Horizontal shift _____ Endpoints of one cycle _____