

Name: \_\_\_\_\_

GTID: \_\_\_\_\_

Answer the questions in the spaces provided and put your answer in the BOX. Organize work clearly and simplify answers for full credit.

1a. Evaluate:  $\tan\left(\frac{-\pi}{6}\right)$

1b. In which two quadrants is  $\sec(\theta)$  negative?1c. If you eat a slice of pizza with a diameter of 8 inches and the slice makes a  $60^\circ$  angle, then how many square inches of pizza did you eat?

1d. Evaluate:  $\cos^{-1}\left(\frac{-1}{2}\right)$ .

1e. Find the measure of the reference angle for  $\frac{7\pi}{6}$ .

1f. State the range of  $f(x) = \arccos(x)$ .

2. Find the six trigonometric values of  $\frac{\pi}{3}$ .  
*Note: clearly label each answer.*

3. Find all values of  $u$  so that the given point is on the unit circle  $(\frac{4}{5}, u)$ . Show work for credit.

4. What is the period of  $f(x) = \tan(x - \frac{\pi}{2}) + 1$ ? Give some reasoning for your answer.

5. Evaluate:  $\cos(\tan^{-1}(\frac{1}{2}))$

*For this page: label any intercepts, label the axes and the curve, and identify and include the indicated number of points with at least **two** points having non-zero  $y$ -value on your graph for full credit.*

6. Graph  $f(x) = \cos(\frac{1}{2}x)$  and include all  $x$ -values in the range  $[-2\pi, 4\pi]$  in your sketch. Label the intercepts and a total of at least **six** points on the curve for full credit. At least **two** labeled points must have non-zero  $y$ -value.

7. Graph  $f(x) = \tan(x)$  and include all  $x$ -values in the range  $[-\frac{\pi}{2}, \frac{3\pi}{2}]$  in your sketch. Label the intercepts and a total of at least **four** points on the curve for full credit. At least **two** labeled points must have non-zero  $y$ -value.