Name: Tuesday, May 6th , 2014

Id#:

Exam#1-Math42

1) Evaluate six trigonometric functions for $\theta = -\frac{8\pi}{3}$, by determining the reference angle and the special triangle.

2) Given $\cos(-t) = -\frac{1}{5}$ evaluate $\sec(\pi - t)$, and $\sec(\pi + t)$.

3) Use the trigonometric identities to to transform the left side of the equation into the right side $0 \le x \le \frac{\pi}{2}$.

$\csc x - \cos x \cot x = \sin x$

4) Find the indicated values for the following triangles.

5) Find two solutions for the given equation. Give your answer in degrees $0 \le \theta \le 180$, and in radians $0 \le \theta \le 2\pi$. Do not use a calculator.

a) $\csc\theta = \frac{2\sqrt{3}}{3}$

b) $\cot\theta = -1$

6) Sketch the graph of $y = 4\cos\left(x + \frac{\pi}{4}\right) + 4$

7) Sketch the graph of $y = 4\csc(2x - \pi)$. (include two full periods)

8) Sketch the graph of $y = 3\cot\frac{\pi x}{2}$. (include two full periods)