Florida International University
Trigonometry-MAC1114
Pre-Class Assignment 5

Spring 2018
Due Date: 2/9/2018

Name: _____

SHOW ALL YOUR WORK FOR EACH PROBLEM TO GET FULL CREDIT.
PLEASE BE NEAT.

Direction: Read through sections 5.6 and 5.7 in your book and answer the following questions.

1. Find two consecutive asymptotes of the following functions, then find the midpoint of these two consecutive asymptotes. (Section 5.6)

   a) $y = 2\tan\dfrac{x}{2}$

   b) $y = 3\cot\left(2x + \dfrac{\pi}{2}\right)$

2. a) If $f(x) = 2x - 3$, find $f^{-1}(x)$.

   b) If $g(1) = -3$ for a function $g(x)$, what can you say about $g^{-1}(-3)$?

3. Why is there a restriction on the domain of trigonometric functions when we defining their inverses? Explain. (Section 5.7)

4. Find the exact value of the expressions without using a calculator

    a) $\sin\left(\frac{5\pi}{6}\right)$

    b) $\cos\left(\frac{7\pi}{6}\right)$

    c) $\sin\left(\frac{3\pi}{4}\right)$

    d) $\cos\left(\frac{5\pi}{3}\right)$

5. Find the exact value of the expressions without using a calculator. (Section 5.7)

    a) $\sin^{-1}\left(\frac{\sqrt{2}}{2}\right)$

    b) $\cos^{-1}\left(-\frac{\sqrt{3}}{2}\right)$

    c) $\sin^{-1}(3)$