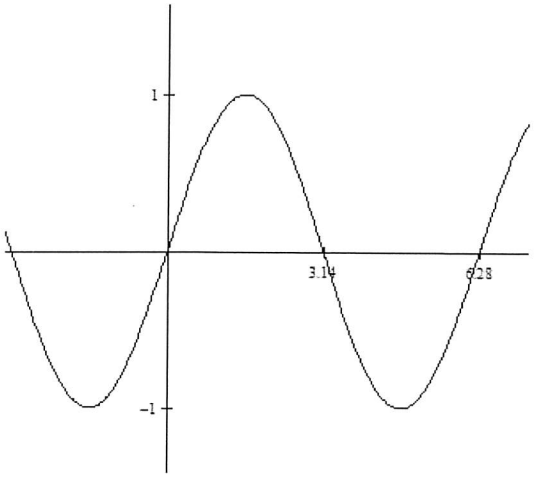
Name_____ Date_____ Period_____

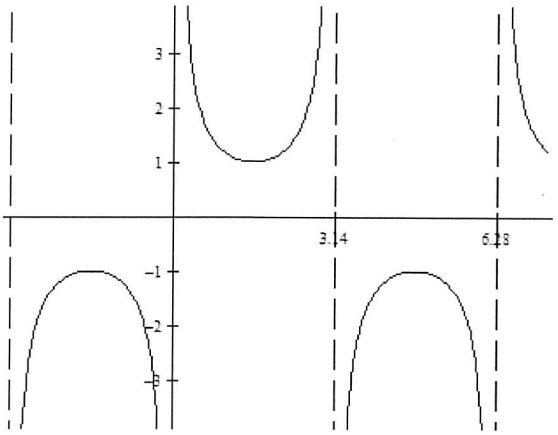
Day #83 Homework

1. Answer the following questions about the graph of $f(\theta)$ pictured to the right.



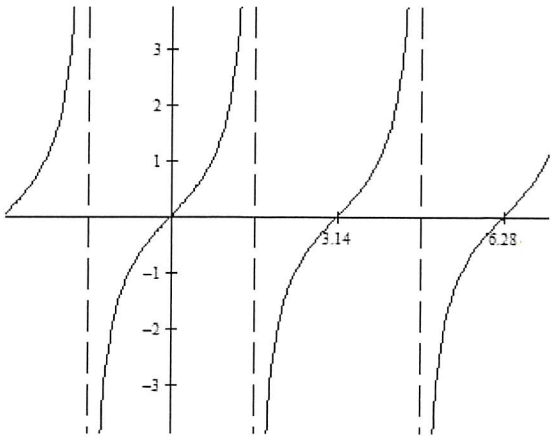
a. Which trigonometric function is $f(\theta)$?
b. What is the amplitude of the function $g(\theta) = 2f\left(\frac{1}{2}\theta\right)+3$?
c. What is the period of the function $g(\theta) = 2f\left(\frac{1}{2}\theta\right)+3$?

2. Answer the following questions about the graph of $f(\theta)$ pictured to the right.



a. Which trigonometric function is $f(\theta)$?
b. What is the range of the function $g(\theta) = 3f(2\theta)-2$?
c. What is the period of the function $g(\theta) = 3f(2\theta)-2$?

3. Answer the following questions about the graph of $f(\theta)$ pictured to the right.



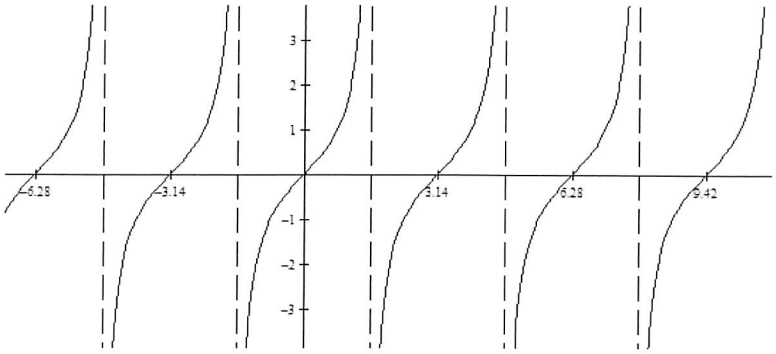
a. Which trigonometric function is $f(\theta)$?
b. What is the period of the function $g(\theta) = 3f\left(\frac{1}{3}\theta\right)-2$?
c. Write a function, $h(\theta)$, that would transform $f(\theta)$ into its reciprocal trig function.

For exercises 4 – 7, identify the range of each of the following functions.

4. $f(\theta) = 2\cos(\theta - \pi) - 4$	5. $g(\theta) = \sec(\theta - \pi) + 4$
6. $h(\theta) = 2\tan(\theta - \pi) - 4$	7. $h(\theta) = 2\csc(\theta - \pi) - 3$

Pictured below is the graph of a trigonometric function, $f(\theta)$. Use the graph to determine if the following statements are true or false. Give explanation for your reasoning.

8. The graph of the function is of $f(\theta) = \cot\theta$.



9. The period of the function $g(\theta) = 2f(2\theta)$ is 2π.

10. The domain of the function $h(\theta) = f(\theta + \pi/2)$ is $(-\infty, \infty)$ except for $x = k\pi$, where k is any integer.

11. As $\theta \to -\frac{11\pi}{2}$ from the right, the graph of $f(\theta) \to -\infty$.