

# Exam #1

Math 115-A

Friday, September 24, 2004

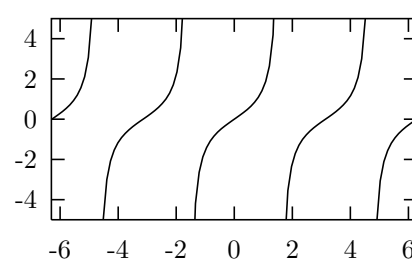
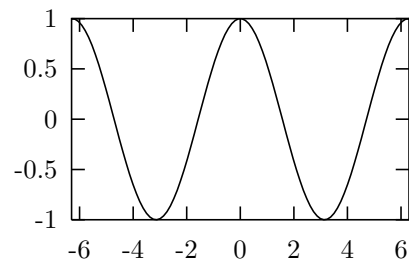
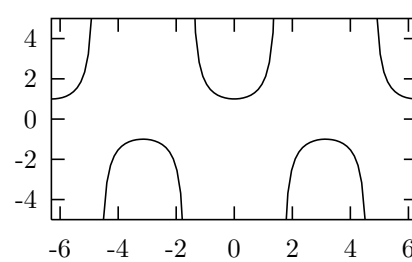
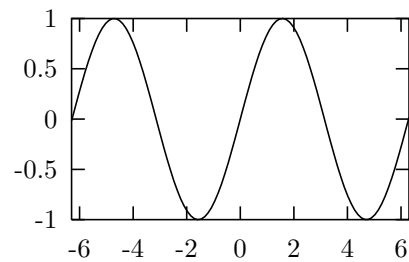
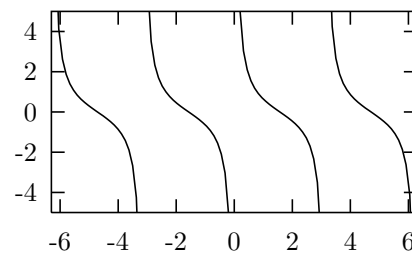
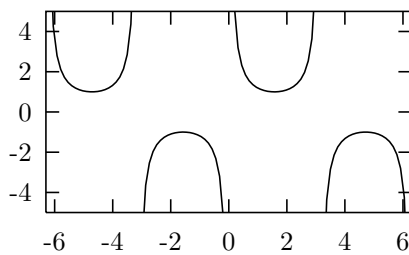
For full credit show all work. When in doubt, explain your reasoning. Round your final answers to two decimal digits.

1.

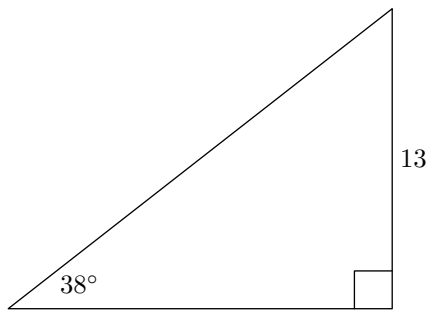
(a) Convert  $35^\circ$  into radians.

(b) Convert 2.3 radians into degrees.

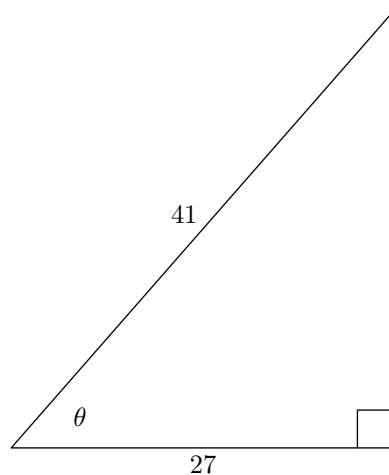
2. Label the following graphs with the function being graphed. The choices are  $\sin x$ ,  $\cos x$ ,  $\tan x$ ,  $\cot x$ ,  $\sec x$ , and  $\csc x$ .



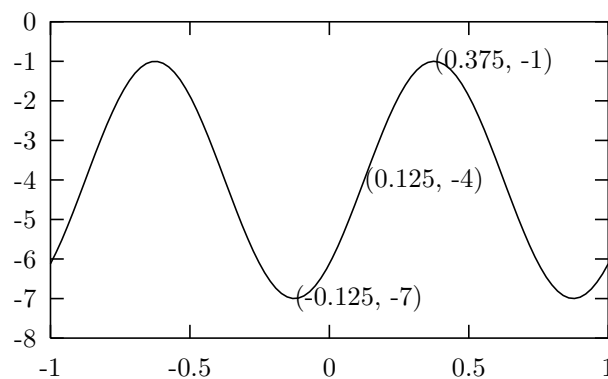
3. Find the length of the diagonal.



4. Explain in a few sentences how to determine the amplitude and vertical shift when given some data points that are to be fitted with a sine curve.
5. Find the degree measure of  $\theta$ .



6. Find an equation for the following sine-like curve.



7. What is the period of  $\cot(3x - 5)$ ?
8. Find three angles that are coterminal to  $235^\circ$ .
9. Explain why we first had to restrict the domain of the trigonometric functions before we could define their inverses.
10. Given that  $\sec(\theta) = 13/5$  and that  $\theta$  is in Quadrant IV, find the values of all of the other trigonometric functions.