NAME:

Math 103: College Algebra and Trigonometry
Quiz 5, 7 November 2008

The following two questions are worth a total of 10 points. The majority of the credit you receive will be based on the completeness and the clarity of your responses. Show your work, and avoid saying things that are untrue, ambiguous, or nonsensical.

1. (a) In what quadrant is $\sec^{-1}(-4)$?

   (b) Compute $\sin\big(\sec^{-1}(-4)\big)$ exactly.

2. Let $f(x) = 37\sin\left(\dfrac{\pi x}{50}\right)$.

   (a) What is the amplitude of $f(x)$?

   (b) What is the period of $f(x)$?

3. **Bonus** (+3 points). Observe that $\csc(-\pi/2) = -1$ and $\csc(\pi/2) = 1$. Is there a value of x between $-\pi/2$ and $\pi/2$ for which $\csc(x) = 0$? If so, how do you know? If not, how is this possible?