Precalculus Honors
Study Guide §§4.3 – 4.5

I. Review your Quiz 4.3 – 4.4!!

II. Non-Calculator Review Questions:

1. Evaluate each expression. Leave in exact form:

   a) $\cot\left(\frac{5\pi}{3}\right)$

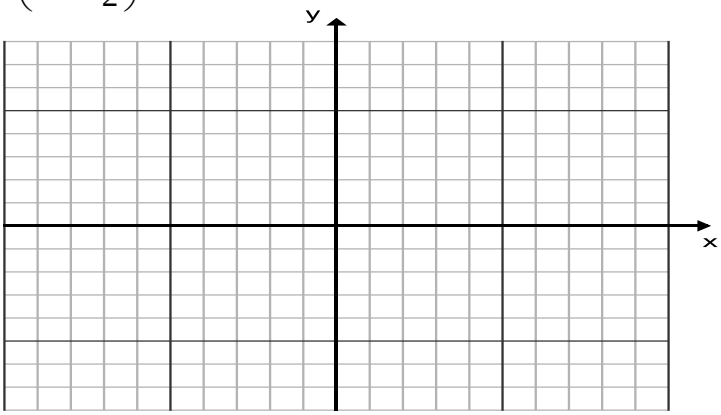
   b) Sin 240°

2. Point P(1, -1) is on the terminal side of angle θ.

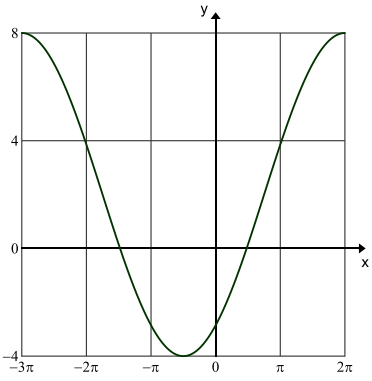
   a) Evaluate $\sec\theta$

   b) Give the smallest positive measure for θ (give your answer in radians)

3. Graph $y = -3\sin\left(2x - \frac{\pi}{2}\right) + 5$



4. Write an equation for the graph shown



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5. The town of Monotony has a very odd weather pattern: every day's temperatures follow the same pattern, with a high temperature of 80° at 2:00 pm, and a low temperature of 58° at 2:00 am. Let t represent the number of hours since midnight (on some given day) and write a sinusoidal model for the temperature as a function of t.

III. Calculator Review Questions:

6. Solve $\sec x = 4.75$ for $0 \le x \le 2\pi$

7. List 3 angles that are coterminal with $-\frac{2\pi}{3}$ (do not include $-\frac{2\pi}{3}$)

8. Identify the asymptotes of $y = 2 + \cot\left(\frac{x}{2}\right)$

9. Let $f(x) = 3 - 2\sec(4x)$
   a. Identify the period of $f(x)$
   b. Identify the domain of $f(x)$
   c. Identify the range of $f(x)$