

# Quiz 5C, Precalculus-02 (Calculator needed)

Dr. Graham-Squire, Fall 2013

Name: \_\_\_\_\_

1. (3 points) For what value(s) of  $x$  does the equation hold?

$$\ln(x + 8) = \ln x + \ln 8$$

2. (2 points) Draw a unit circle to help show your work: Find the exact value of

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

(b)  $\tan\left(\frac{-4\pi}{3}\right)$

3. (1 point) Find the reference number and terminal point for  $t = \frac{-13\pi}{6}$ . Show your work and explain how you got your results.

4. (4 points) A bacteria culture is started and after 4 hours has 1000 bacteria. It is known that this bacteria doubles in population every 5 hours. What will the population be in 8 more hours?