

Quiz 2**Name:** _____**Week 3: 01/28/2020****Math 285: Spring 2020****Instructor: Garrett Hartshaw**

Instructions:

Please answer the questions below. Show all your work. You may use a TI-84/85 (or equivalent) calculator.

Problem 1. (5 points) Solve for x : $8^{x^2} = 2^{x+4}$.

Problem 2. (5 points) Write this expression as a single logarithm: $2 \log(x) + \log(x-2) - \log(x^2+1)$.

Problem 3. (5 points) A culture initially contains 30,000 bacteria and is growing exponentially. After 1 hour, it contains 45,000 bacteria. Write a formula for the number of bacteria present after t hours.

Problem 4. (5 points) In the previous problem, how many bacteria are present after 2.5 hours?