You may only use your textbook, your notes, and your calculator on these problems. You may not use any outside resources, including tutors or solution manuals. Remember that the purpose of these quizzes is to see if you understand what you have learned on your homework, and also to tell you what you still need to study for the upcoming exam. **(NOTE: this quiz is two-sided.)**

1. (2 points) What is the difference between an exponential function and a power function?

2. (2 points) In general, what are the 3 ways to find an inverse? Describe each method and when you would use each one. What is the purpose of the inverse function?

3. (2 points) Graph with all parts (i.e., list all transformations, show all important parts of graph, domain and range, etc.) $y = 5 - \log_3(x + 2)$.

4. (2 points)

a. Expand: $\log_2 \left(\frac{4x^3}{\sqrt{x+3}} \right)$

b. Condense to a single logarithmic function: $\ln(3) - \ln(x+1) + 2\ln(x-3) - \frac{1}{2}\ln(x)$

5. (2 points) Solve for x given $7^{2x-1} = 5^{x+1}$ (Give the exact and approximate solutions).