Standard 5 Practice Quiz D

MA 109

Print Your Name:_____ ID:_____

Be sure that the ID number above is your correct 8-digit student ID number (without the leading 9). If this number is incorrect or not legible, it will take longer to process your score on this quiz.

This is practice for an in-class assessments on Standard 5. The only technology allowed during this quiz is a 4-function calculator. No notes or books may be used. This is an individual quiz, so any work done here must be entirely your own work.

Show all of your work. Your work will be graded on both accuracy and completeness, and partial credit is possible. You have 20 minutes to take this quiz.

Be sure to complete both the questions on this page and those on the back of this page.

1. Write the equation of the exponential function with initial value 132 and growth rate of 95%. Write your answer in the answer box below.

Answer:

2. Simplify each expression below. Write your answer in the answer box.

a) $\log_5(25^{13})$

Answer:

b) $\ln\left(\sqrt[5]{e}\right)$

Answer:

c) $13^{\log_{13}(21)}$

Answer:

3. Find the end behavior of each exponential function below.

a) $f(x) = 13(0.03)^{x+1} - 4$

i. As $x \to \infty$, $y \to$_____

ii. As $x \to -\infty$, $y \to$_____

b) $f(x) = 77(1.95)^{x-2} + 6$

i. As $x \to \infty$, $y \to$_____

ii. As $x \to -\infty$, $y \to$_____