No Calculator Section

Graph the following functions without the aid of a calculator. Identify Domain, Range, Intercepts, and if the function is Increasing/Decreasing.

Graph the following functions on the same coordinate plane without the aid of a calculator. Then explain the relationship between the graphs and the functions. Remember to identify each graph.

Express the following logarithmic equation in exponential form

Write the exponential equation in logarithmic form.

Evaluate the exponential equation without using a calculator.

Solve using the One-to-One Property.

Calculator Section

Evaluate the expression. Round to three decimal places.

1. ln(9) / ln(4)

Use the interest formulas to solve the following:

1. Caleb invests $2,100 in a company that pays out at an interest rate of 3% compounded monthly.
   1. What is the balance at the end of 10 years?
   2. What would the balance be at the end of 10 years IF the interest were compounded continuously?
2. Determine the amount of money that should be invested at a rate of 7% compounded continuously to produce a final balance of $15,000 in 20 years. What is the difference in the initial investment amount if the rate were 14%?
3. A certain population in millions decreases according to the equation where t is time in years.
   1. Determine the initial population.
   2. Determine the population (to the nearest integer) when t = 10.
4. Students in a mathematics class were given an exam and then tested monthly with an equivalent exam. The average score for the class was given by the human memory model for 0 ≤ t ≤ 12 where t is the time in months.
   1. What was the average score on the original exam?
   2. What was the average score after 4 months?
   3. What was the average score after 10 months?