

PRECALC JOURNAL
Exponential & Logarithmic Functions

1. (a) The two major characteristics of an exponential function are _____
and _____.
- (b) The base of an exponential function must be _____.
2. (a) Once you have the equation of a function typed in $y =$ in a graphing calculator, two ways to substitute a number in the function and find the value are _____
or _____.
- (b) To find the value where a function equals a specific number with your calculator, you should _____.
3. (a) The number e was discovered by _____
and resulted from the formula _____.
- (b) The value of e to the nearest thousandth is _____.
- (c) The base of a common logarithm is _____ while the base of a natural logarithm is _____.
4. (a) A logarithmic function is the _____ of an exponential function.
- (b) In interval notation, the domain of an exponential function is _____ while the domain of a logarithmic function is _____.
- (c) The graph of an exponential function always passes through the coordinate _____ and has a _____ asymptote, while the graph of a logarithmic function always includes the coordinate _____ and has a _____ asymptote.
5. (a) Logarithms were originally developed by _____ in order to _____
_____ while today the primary purpose of a logarithm in mathematics is to _____.
- (b) An equation with a logarithm on only one side of the equal sign can be solved by _____.
- (c) Three examples of real world problems that require the use of exponential or logarithmic functions are _____.
6. (a) When doing curve fitting, the term for r is _____, and it describes _____.
- (b) r^2 is called the _____ and it describes _____.

(c) The two things that must be considered when choosing the best regression function to model a set of data are _____ and _____.

7. (a) The constant value in the numerator of a logistic function is called the _____.

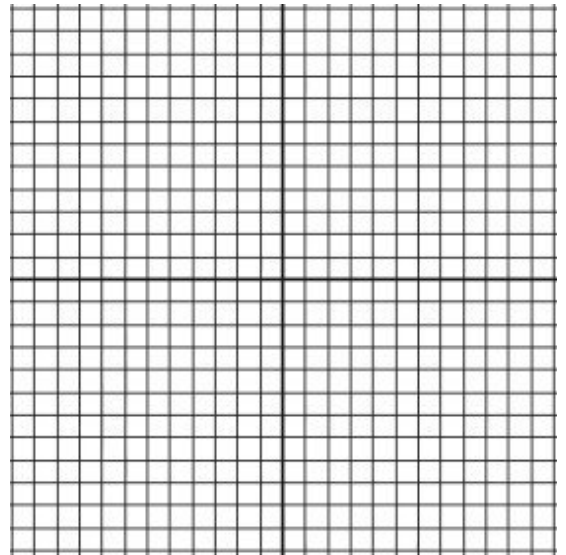
(b) On the graph of a logistic function, this value indicates _____.

8. Important Rules, Formulas, Etc.

a) Relationship between exponential form and logarithmic form.

b) 3 properties of logarithms

c) Draw and label graphs of $y = e^x$ and $y = \ln x$. Clearly show all asymptotes and a T-Table of 3 sets of coordinates used to graph each function.



d) Attach the formula sheet for exponential applications.

e) Attach the sheet showing all types of regression, their equations, and graphs.