

1. Asymptote	A line that a graph approaches but never crosses	21. Graph of a Function	The graph of the function is the set of all ordered pairs (x,y) such that $y=f(x)$.
2. Base	A number that is multiplied repeatedly; b in $y = b^x$	22. Half-Life	Time required until half of a sample remains
3. Common Logarithmic Function	The logarithmic function with base 10	23. Independent Variable	A variable (often denoted by x) whose variation does not depend on that of another.
4. Compounded Quarterly	Interest is added on 4 times a year or once every 3 months	24. Inverse Properties of Logarithms	For $b > 0$ and $b \neq 1$, $\log_b b^x = x$ $b^{(\log_b x)} = x$
5. Compounded Semiannually	The interest or return is accumulated every six months.	25. Linear Function	A function that creates a straight line when graphed
6. Compound Interest	Interest earned on both the principal amount and any interest already earned	26. Logarithm	In the function $x=b^y$, y is called logarithms, base b, of x. Usually written as $y=\log_b x$
7. Condense a Logarithmic Expression	When a rule is used to write the sum or difference of two or more logarithmic expressions as a single logarithmic expression.	27. Logarithmic Equation	An equation that contains a variable in a logarithmic expression
8. Continuous Compounding	Interest compounded infinitely often over infinitely small compounding periods.	28. Logarithmic Function	The inverse of an exponential function; $f(x)=\log(x)$
9. Correlation Effect	A measure of how well a model fits data; represented by the value r, $-1 \leq r \leq 1$	29. Natural Base	An irrational number approximately equal to 2.71828; represented by e
10. Dependent Variable	A variable (often denoted by y) whose value depends on that of another.	30. Natural Exponential Function	$y=e^x$
11. Domain	The set of input values of a function.	31. Natural Logarithmic Function	The function $f(x)=\ln x$, which is the inverse of the natural exponential functions $f(x)=e^x$
12. Domain of a Logarithmic Function	Can't log zero or a negative --> set whatever is inside the log >0 to find domain	32. Power Rule of Logarithms	$\log_b m^n = n \log_b m$
13. Evaluating a Function	Substituting a value for x in a function to find the value of the output, f(x).	33. Principal	The amount of money deposited or borrowed
14. Expanding a Logarithmic Expression	When a rule is used to write a single logarithm as the sum, difference, product, or quotient of two logarithms.	34. Product Rule of Logarithms	$\log_b(mn) = \log_b m + \log_b n$
15. Exponential Decay	Occurs when an exponential function has a b value between 0 and 1 $y=ab^x$ where $0 < b < 1$	35. Quotient Rule of Logarithms	$\log_b(m/n) = \log_b m - \log_b n$
16. Exponential Equation	An equation in which the variables occur as exponents	36. Range	The set of output values of a function.
17. Exponential Form	A number is in exponential form when it is written with a base and an exponent.	37. Relation	Any set of ordered pairs
18. Exponential Function	$y=ab^x$	38. Vertical Line Test	If no vertical line intersects a graph more than once, then the graph is a function
19. Exponential Growth	occurs when an exponential function has a b value greater than 1. $y=ab^x$; where $b > 1$	39. Y-intercept	The y-coordinate of a point where a graph crosses the y-axis
20. Function	A relationship that assigns exactly one output value to one input value.	40. Zeros of a Function	The x-intercepts of the function; the values of x when $f(x)=0$.