

Advanced Algebra Vocabulary

Absolute Value	The distance between zero and the point representing a real number on the number line
Coefficient	This is the number in front of the variables in a term
composition of functions	Evaluation of a function with another function.
Extraneous Solution	An answer that does not satisfy the original equation
Function	A relation in which every domain value is paired with exactly one range value
Function Notation	If x is the independent variable and y is the dependent variable, then for y is $f(x)$, read "f of x", where f names the function
linear function	A mathematical equation in which no independent-variable is raised to a power greater than one.
parent function	A set of basic functions used as building blocks for more complicated functions.
quadratic function	A function includes only second degree polynomials.
Rate of change	A ratio that compares two quantities measured in different units
degree of a polynomial	The greatest sum of exponents in one term of a polynomial.
Discriminant	The expression inside the radical of the quadratic formula
Domain	The set of all first coordinates (x -values) of a relation or function
imaginary unit	The square root of negative one
range	The set of y -values of a function or relation.
transformation	Operations that alter the form of a figure, such as translations, reflections, dilations, compressions, and rotations.
translation	A transformation in which a graph or geometric figure is picked up and moved to another location without any change in size or orientation.
zero of a function	A number that names the function equal to zero.
Axis of Symmetry	The line that divides a graph into two symmetrical parts that are mirror images or each other
End behavior	The behavior of the graph of a function as x approaches positive infinity or negative infinity.
Irrational Number	A number that can be represented by a non-repeating, non-terminating decimal
Local extrema	A point that represents the maximum or minimum for a certain interval.
Parabola	A u-shaped curve with certain specific properties.
Polynomial	An expression consisting of variables and coefficients involving only addition, subtraction, multiplication and non-negative integer exponents

Quadratic Formula	Used to find solutions to an equation that has a term with a variable to the second power
Radical	The symbol used to indicate square root or nth roots
Amplitude	Half the difference between the minimum and maximum values of the range.
Angle of Elevation	The angle above horizontal that an observer must look to see an object that is higher than the observer.
Coterminal angles	Angles which, drawn in standard position, share a terminal side.
Period	The horizontal distance required for the graph of a periodic function to complete one cycle.
Radian	The angle made by taking the radius and wrapping it along the edge of the circle.
Reference angle	The smallest angle between the terminal side and the x-axis.
Unit circle	The circle with radius 1 which is centered at the origin on the x-y plane.
Arithmetic Sequence	A sequence such as 1, 5, 9, 13, 17 or 12, 7, 2, -3, -8, -13, -18 which has a constant difference between terms.
Asymptote	A line or curve that the graph of a relation approaches more and more closely the further the graph is followed.
Explicit rule	A formula that allows direct computation of any term for a sequence $a_1, a_2, a_3, \dots, a_n, \dots$
Exponential function	A function of the form $y = a \cdot b^x$ where $a > 0$ and either $0 < b < 1$ or $b > 1$.
Geometric sequence	A series such as $2 + 6 + 18 + 54 + 162$ or which has a constant ratio between terms.
Logarithmic function	A function that is the inverse of an exponential function.
Rational function	A function that can be written as a polynomial divided by a polynomial.
Recursive rule	For a sequence $a_1, a_2, a_3, \dots, a_n, \dots$ a formula that requires the computation of all previous terms in order to find the value of a_n .