Pre-AP Algebra II 1ˢᵗ Six Weeks Vocabulary Fall 2019

Absolute Value - A number's distance from zero on the number line.

Algebraic Expression - An expression that contains at least one variable.

Axiom - A statement taken to be true to serve as a starting point for further reasoning and arguments.

Cartesian Coordinate Plane - A plane divided into four quadrants by the intersection of the *x*-axis and the *y*-axis at the origin.

Coefficient - A number or symbol multiplied with a variable or an unknown quantity in an algebraic term

Compound Inequality - Two inequalities joined by the word *and* or *or*.

Constant - A number on its own, or sometimes a letter such as a, b or c to stand for a fixed number.

Constant Function - A linear equation of the form $f(x) = b$.

Constraints - Conditions given to variables, often expressed as linear inequalities.

Continuous Relation - A relation that can be graphed with a line or smooth curve.

Correlation - A mutual relationship or connection between two or more things.

Discrete Relation - A relation in which the domain is a set of individual points.

Domain - The set of all *x*-coordinates of the ordered pairs of a relation.

Element of a Set - A number, letter, point, line, or any other object contained in a set.

Empty Set - The unique set having no elements, symbolized by { }or ∅.

Equation - A statement that the values of two mathematical expressions are equal.

Evaluate - Finding the particular value of a numerical or algebraic expression. This is done through substituting numbers for variables and following order of operations.

Exponent - A numerical notation that determines how many factors of the base number are multiplied together.

Expression - a representation of a value; for example, it may contain variables and/or numbers that can appear alone or in combination with operators.

Factor - a number or expression that divides another number or expression evenly without a remainder.

Function - A relation in which each element of the domain is paired with exactly one element in the range.

Infinity - Without bound, or continues without end.

Integers – A number with no fractional part. This includes the counting numbers, zero, and the negative counting numbers.

Inverse (operation) - The operation that reverses the effect of another operation.

Inverse (relation) - The set of ordered pairs obtained by switching the *x* and *y* coordinates of each ordered pair. Some ordered pairs may be discarded to make the set of ordered pairs a function.

Irrational Numbers- a real number that <u>cannot</u> be written as a ratio of integers (a simple fraction).

Linear equation - An equation that has no operations other than addition, subtraction, and multiplication of a variable by a constant.

Line of best fit - A straight line that best represents the data on a scatter plot.

Natural Numbers - positive numbers, excluding zero, without any decimal or fractional parts.

No solution -occurs when any possible value for the variable(s) in an equation results in a contradictory statement.

One-to-One Function - A function for which every element of the range of the function corresponds to exactly one element of the domain.

Parallel Lines - Nonvertical coplanar lines with the same slope.

Parent Function - The simplest, most general function in a family of functions (has no transformations).

Perpendicular Lines - Any two oblique lines in a plane whose slopes are opposite reciprocals of one another or sum to -1.

Point-slope form - An equation in the form $y - y_1 = m(x - x_1)$ where (x_1, y_1) are the coordinates of a point on the line and m is the slope of the line.

Range - The set of all y-coordinates of a relation.

Rate of change - How much a quantity changes, on average, relative to the change in another quantity.

Relation - A set of ordered pairs.

Set - A well-defined collection of distinct objects, considered as an object in its own right.

Simplify - To use arithmetic and algebraic rules to reduce an expression to an easier to use form.

Slope - A number that describes both the *direction* and *steepness* of a line, often denoted by the letter m.

Slope-Intercept Form - the equation of a straight line in the form $y = mx + b$, where m is the slope of the line and b is its y-intercept.

Substitution - the replacement of a term in an equation with another expression that is known to have the same value for the purpose of simplifying.

Variable - A symbol, usually a letter, that represents an unknown quantity and subject to change within the context of a problem.

Vertical line test - If no vertical line intersects a graph in more than one point, then the graph represents a function.

Whole Numbers - positive numbers, including zero, without any decimal or fractional parts.

x - intercept - the x-coordinate of a point where a line, curve, or surface intersects the x-axis.

y - intercept - the y-coordinate of a point where a line, curve, or surface intersects the y-axis.