Glossary

A–D

absolute value - the value of a number without its sign, or the difference between a number and zero expressed as a positive number

algebra - a branch of mathematics that deals with numbers, which may be represented by letters or symbols

asymptote - a line that is continually approached by a given curve but is never met by that curve

base - a particular side or face of a geometric figure used to calculate area or volume; a number that is raised to a power; the number that is the foundation in a given number system

binomial - an algebraic expression with two terms

binomial theorem - a formula for finding the complete expansion of any positive power of a binomial

coefficient - a quantity placed before and multiplying the variable in an algebraic expression

completing the square - a technique for solving a quadratic equation that involves rewriting it as a perfect square plus a constant

complex number - a combination of a real and an imaginary number in the form $a + bi$

cone - a solid with a circular base and a curved surface that rises to a point

conic section - a curve that results when a cone is intersected by a plane

conjugate - a binomial formed by negating the second term of a given binomial

constant - a fixed, unchanging value

difference of two squares - an expression in which one squared number is subtracted from another squared number

E–I

ellipse - a regular oval created by moving a point around two foci

empty set - a set having no elements; also called *null set*

hyperbola - a conic section that forms two congruent open curves facing in opposite directions on a graph

imaginary number - a number that, when squared, gives a negative product; generally written in the form bi, where i equals the square root of -1

integer - a non-fractional number that can be positive, negative, or zero

irrational numbers - numbers that cannot be written as fractions and form non-repeating, non-terminating decimals

L–O

linear equation - an equation that creates a straight line when graphed

magnitude - length of a vector

maximum - the greatest value of a function at a particular point in its domain; plural is *maxima*

minimum - the least value of a function at a particular point in its domain; plural is *minima*

multiplicative inverse - the number that, when multiplied by a given number, has a product of 1; also called *reciprocal*

natural numbers - whole numbers from 1 to infinity; also called *counting numbers*

origin - on a coordinate grid, the point at the intersection of the axes, generally identified by the ordered pair (0, 0)

P–Q

parabola - a conic section that forms a symmetrical curve on a graph

parallel lines - lines in the same plane that do not intersect

Pascal's triangle - a triangular array of numbers that has a variety of mathematical applications

perfect cube - a number that has a whole number as its cube root

perfect square - a number that has a whole number as its square root

polynomial - an algebraic expression with more than one term

quadratic equation - an equation where the highest power of the variable is 2

quadratic expression - an expression where the highest power of the variable is 2

R–S

radical - an expression containing a root

ratio - the relationship between two values; can be written in fractional form

rational expression - an expression that is the ratio of two polynomials

rational numbers - numbers that can be written as ratios or fractions, including decimals

real numbers - numbers that can be written as decimals, including rational and irrational numbers

reciprocal - the number that, when multiplied by a given number, has a product of 1; also called *multiplicative inverse*

resultant vector - the combination of two or more vectors

scientific notation - a way to write numbers using the product of a base and a power of ten

significant digits - digits that indicate the accuracy of a measurement

simultaneous equations - a pair of equations with two unknown variables that must be solved at the same time

T–Z

trinomial - an algebraic expression with three terms

unknown - a specific quantity that has not yet been determined

variable - a value that is not fixed or determined, often representing a range of possible values

vector - a quantity with both direction and magnitude

vertex - the highest or lowest point of a parabola; the endpoint shared by two rays, line segments, or edges; plural is *vertices*