

Glossary

A - C

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

acute angle- an angle with a measure greater than 0° and less than 90°

additive inverse- the number that, when added to another, results in a sum of 0

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

altitude- the perpendicular distance from a vertex to the opposite side of a polygon or from the base to the apex of a cone or pyramid

angle- a geometric figure formed by two rays joined at their origins

apex- the point farthest from the base in a geometric figure

area- the measure of the space covered by a plane shape, expressed in square units

Associative Property- a property that states that the way terms are grouped in an addition or multiplication expression does not affect the result

average- a measure of center in a set of numbers; could be measured using a mean, median, or mode, but usually refers to the mean

base- 1. a particular side or face of a geometric figure used to calculate area or volume;
2. a number that is raised to a power;
3. the number that is the foundation in a given number system; for example, the decimal system describes numbers in relation to powers of 10, such as 100, 101, 102, and so on

base unit- a metric unit of measurement that can be modified by adding a prefix to represent fractions or multiples

binomial- an algebraic expression with two terms

Celsius- a scale for measuring temperature where the freezing point of water is 0° and the boiling point of water is 100°

centi- in the metric system, the Latin prefix representing one hundredth of the base unit

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

common factor- a number or algebraic expression that divides evenly into each of a group of numbers or expressions

common multiple- a number or algebraic expression that is a multiple of each of a group of numbers or expressions

Commutative Property- a property that states that the order in which numbers are added or multiplied does not affect the result

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

congruent- having exactly the same size and shape

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

cube- 1. a solid with six congruent square faces that meet at right angles; 2. a number multiplied by itself three times

cylinder- a solid with one curved surface and two congruent circular bases

D - E

deci- in the metric system, the Latin prefix representing one tenth of the base unit

decimal (fraction)- a fraction written using a decimal point and place value

decimal system- a number system based on ten, also called *base ten*

decompose- to separate a number into parts

degree- a measure of temperature

deka- also *deca*-; in the metric system, the Greek prefix representing ten of the base unit

denominator- the bottom number in a fraction, which shows the number of parts in the whole

diameter- a straight line passing through the center of a circle and touching both sides

dimension- a measurement in a particular direction (length, width, height, depth)

Distributive Property of Multiplication over Addition- a property for multiplying a sum by a given factor

dividend- the number being divided

divisor- a number that is being divided into another

equation- a mathematical statement that uses an equal sign to show that two expressions have the same value

equivalent- having the same value

expanded notation- a way of writing numbers by showing each digit multiplied by its place value

exponent- a raised number that indicates the number of times a factor is multiplied by itself; also called *power*

exponential notation- a form of expanded notation where each place value is indicated by 10 with an exponent

F - H

face- one of the flat surfaces of a solid

factor- (n.) a whole number that multiplies with another to form a product; (v.) to find the factors of a given product

factor tree- a diagram used to find the prime factors of a composite number

Fahrenheit- a scale for measuring temperature where the freezing point of water is 32° and the boiling point of water is 212°

fraction- a number indicating part of a whole

geometry- a branch of mathematics that deals with figures in space

gram- the basic unit of mass in the metric system

greatest common factor (GCF)- the greatest number that will divide evenly into two or more numbers

hectare- a metric unit of area, defined as 10,000 square meters

hecto- in the metric system, the Greek prefix representing 100 of the base unit

height- the perpendicular distance from the base to the top of a figure

hypotenuse- the side opposite the right angle in a right triangle

I - L

improper fraction- a fraction with a numerator greater than its denominator

infinite- without end; unable to be counted or measured

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

inverse- opposite or reverse

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

kilo- In the metric system, the Greek prefix representing 1,000 of the base unit

least common multiple (LCM)- the least number that is a multiple of two or more other numbers

leg- in a right triangle, one of the two sides that make up the right angle

line- in geometry, a set of connected points that extends infinitely in two directions

line segment- a section of a line bounded by two endpoints

liter- the basic unit of liquid volume in the metric system

M - O

mean - also called *average*; a measure of center found by dividing the sum of a set of values by the number of values

median- the middle value in a list of numbers when they are arranged in order from least to greatest

meter- the basic unit of linear measure in the metric system

metric system- a system of measurement based on ten

military time- a system of measuring time based on the full 24 hours in a day, rather than using a.m. and p.m.

milli- in the metric system, the Latin prefix representing one thousandth of the base unit

mixed number- a number written as a whole number and a fraction

mode- in a data set, the item that appears the most often

monomial- a mathematical expression with only one term

multiple- the product of a given number and another whole number

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*

negative number- a number less than zero

number line- a line on which every point corresponds to a real number

numerator- the top number in a fraction, which shows the number of parts being considered

obtuse angle- an angle with a measure greater than 90° and less than 180°

P

pi- the Greek letter π , which represents an irrational number with an approximate value of $22/7$ or 3.14

place value- the position of a digit which indicates its assigned value

place value notation- a way of writing numbers that shows the place value of each digit

plane- a flat, two-dimensional surface that extends infinitely in all directions

point- a defined position in space that has no dimensions; represented with a dot

polygon- a closed plane shape having three or more straight sides that do not cross

polynomial- an algebraic expression with more than one term

positive numbers- numbers greater than zero

power- another name for an *exponent*; indicates the number of times a factor is multiplied by itself

prime factorization- renaming a number as a product of two or more prime numbers

prime factors- all the factors of a number that are prime numbers

prime number- a number that has only two factors: one and itself

probability- the likelihood of getting a desired outcome, given all possible outcomes

proper fraction- a fraction with a numerator less than its denominator

proportion- two ratios that are equal to each other

pyramid- a solid with a polygonal base and triangular faces that rise to a point

Pythagorean theorem- states that the square of the length of the hypotenuse of a right triangle is equal to the sum of the squares of the lengths of the other sides

R-S

radical- an expression containing a root

radius- the distance from the center of a circle to its edge; in a regular polygon, the distance from the center to any vertex; in a sphere, the distance from the center to any point on the surface; plural is *radii*

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

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

ray- a geometric figure that starts at a definite point (called the origin) and extends infinitely in one direction

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*

rectangle- a quadrilateral with two pairs of opposite parallel sides and four right angles

rectangular solid- a solid with six rectangular faces that meet at right angles

repeated division- a method for finding the prime factors of a number

right angle- an angle measuring 90°

right triangle- a triangle with one right angle

root- a number that can be multiplied by itself a given number of times to form a specified product

“Rule of Four”- a Math-U-See method for finding the common denominator of two fractions

“same difference theorem”- a Math-U-See method for subtraction that adds the same value to minuend and subtrahend to avoid regrouping

similar- having the same shape but different sizes

slant height- the height of a triangle forming a face of a pyramid

square- 1. a quadrilateral in which the four sides are perpendicular and congruent;
2. a number multiplied by itself

square root- a number that can be multiplied by itself to form a specified product

standard form- the usual way of writing a number, with each digit representing a different place; also called *standard notation*

straight angle- an angle with a measure of 180°

surface area- the sum of the areas of all the faces of a solid

T - Z

term- a part of an algebraic expression which may be a number, a variable, or a product

trapezoid- a four-sided polygon with a set of parallel sides

trinomial- an algebraic expression with three terms

unit- 1. the place in a place-value system representing numbers less than the base; 2. a quantity used as a standard of measure

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

vertex- the endpoint shared by two rays, line segments, or edges; plural is *vertices*

volume- the number of cubic units that can be contained in a solid

whole numbers- counting numbers from zero to infinity, excluding fractions