

A **absolute value** the distance a number is from zero

addend a number that is added to another number

algebraic expression a mathematical statement containing letters and numbers organized as terms but with no equal sign

area the number of non-overlapping square units needed to exactly cover the entire inside of a two-dimensional figure

average the value found by adding all numbers in a data set and dividing by the total number of data in the set

B **bar graph** a graph that uses the length of bars to represent data values

benchmark a point of reference from which other measurements or estimates can be made

box plot a display that shows the range and distribution of a data set

C **circle** a closed figure with all of its points the same distance from a fixed point called the center

circle graph a graph that uses sections of a circle to represent data values

circumference the distance around the outside of the circle

coefficient a number that is multiplied by a variable

combination a selection of objects or values in which order is unimportant

common difference the amount that is the same between all consecutive differences

complement an event that shows all the ways that an event cannot happen

completing the square a technique of manipulating quadratic equations so that they can be solved by taking the square root of both sides

composite figure a figure that is made up of two or more shapes

composite solid an object that is made up of more than one type of solid

compound event an event formed by two or more simple events

consecutive difference the difference between the next and current terms in a table

constant an expression that stays the same

coordinate the pairs (x, y) graphed on a plane

coordinate plane a grid formed by the intersection of a horizontal number line and a vertical number line

cube a number raised to the third power

cube root a number that, when cubed, equals a given number

cylinder a solid formed by two bases that are parallel, congruent circles

D **degree of a polynomial** the largest power of the variable

denominator the bottom number of a fraction that represents the total number of parts contained in the whole of a fraction

dependent event a second event whose probability depends upon a first event

dependent system a system that has an infinite number of solutions

diameter any segment that passes through the center of the circle and whose endpoints are on the circle

discount a decrease or reduction in price

discriminant the part of the quadratic formula that is under the square root

distribute to use multiplication over addition or subtraction

distribution a description of how the data values in a set are spread out

domain the set of inputs of a function

dot plot a display that shows how often each data value occurs

E **elimination method** a method of solving a system of equations by adding or subtracting equations to eliminate one of the variables

end behavior the appearance of a graph as it extends in both directions away from zero

equation a mathematical statement that two expressions are equal

equivalent equal, having the same value

evaluate to substitute values for variables

experiment an activity or situation in which the results are uncertain

expression a mathematical statement that contains numbers, operations, and/or variables but no equal sign

F **factor** a number that is multiplied by another number

factorial the product of a series of all descending consecutive positive integers from a given starting point

first quartile the median of the lower half of a data set

function a rule that assigns exactly one output to each input

G **greatest common factor (GCF)** the greatest factor that is shared between the numbers

H **hemisphere** half of a sphere

histogram a display that shows data that have been divided into intervals

hypotenuse the longest side of a right triangle, which is opposite the right angle

I **inconsistent system** a system that has no solutions

independent event a second event whose probability does not depend upon a first event

independent system a system that has exactly one solution

index the small number next to a radical sign that indicates the degree of the root

inequality a mathematical statement showing that two quantities are not equal

inequality signs symbols used to show the relationship between the expressions in an inequality ($<$, $>$, \leq , or \geq)

integers the set of whole numbers and their opposites

interest rate the amount that is earned or charged during a certain amount of time

inverse operations operations that undo each other

irrational number the set of numbers that cannot be expressed as the ratio of two integers

L **leading coefficient** the coefficient accompanying the first term in a polynomial that has been written in standard form

least common denominator (LCD) the least common multiple of two or more denominators

least common multiple the least multiple that is shared between the numbers

legend a key printed on a graph or chart that shows the meanings of colors, symbols, or markings used

line graph a graph displaying two-variable data that change continuously over time

line symmetry a figure for which there is a line that divides the figure into two halves that are mirror images of each other

linear function a function that can be written in the form $f(x) = mx + b$, where m and b are constants, whose graph is a non-vertical line

M **mean** the sum of all values in a data set divided by the number of values

median the middle value of an ordered data set; in a data set with an even number of values, the average of the two middle values

mode the value(s) that occur most often in a data set

monomial a polynomial with one term, such as 10 , $2x$, and $3xy$.

N **negative trend** as one variable increases, the other variable tends to decrease

no trend there is no pattern between two variables

numerator the top number in a fraction that represents the part of the whole the fraction is describing

O **one-to-one function** a function for which every value in the range has exactly one element assigned to it from the domain

opposite polynomial the polynomial with all of its signs changed to their opposites

order to place in the proper sequence

order of operations the rules for the order in which calculations should be done when evaluating an expression

ordered pair a pair of numbers (x, y) that is used to describe the location of a point in the coordinate plane

outcome a result of an experiment or activity that involves uncertainty

P **parallelogram** a four-sided polygon whose opposite sides are parallel

percent a ratio of a number to 100

perfect square trinomial a quadratic expression that can be written as a perfect square of a linear expression

perimeter the distance around the outside of a polygon

permutation a selection of objects or values in which order is important

pi an irrational number approximately equal to 3.14 that represents the ratio of a circle's circumference to its diameter

point-slope form an equation that allows points on a line to be calculated if one point and the slope are known

polygon a closed figure in a plane that is formed by three or more segments

polynomial an algebraic expression consisting of one or more terms in which each term is a number or a product of numbers and variables with whole-number exponents

positive trend as one variable increases, the other variable tends to increase

prime factorization shows a number written as the product of its prime factors

prime number a whole number greater than 1 whose only two factors are 1 and itself

principal an amount of money invested or borrowed
prism a solid with two bases that are congruent, parallel shapes and rectangular lateral faces that connect the bases

probability the study of how likely it is for an event to occur

proportion an equation stating that two ratios are equal
proportional relationship an equation of the form $y = kx$ for some nonzero k

pyramid a solid with all of its faces, except for the base, that intersect at a point called the vertex

Q
quadrant one of the four regions of the coordinate plane formed by the intersection of the x - and y -axes
quadratic function a polynomial that has 2 as its highest power of x

R
radius any segment within a circle whose endpoints are the center of the circle and a point on the circle
range the set of outputs of a function
range the difference between the greatest and least values in a data set

ratio a comparison of two values
rational exponent an exponent that is a rational number
rational expression a ratio of two polynomials

rational number the set of numbers that can be expressed as the ratio of two integers

reciprocals two numbers or expressions whose product is 1

relative maximum/minimum the y -coordinate of any point that is the highest/lowest point for some section of the graph

restricted value (of a rational expression) a value of the variable for which the denominator of the rational expression is equal to 0

rotational symmetry a figure that can be rotated less than 360 degrees around a point to coincide with itself

S
scale factor a ratio of corresponding parts of similar figures

scatter plot a graph that plots two-variable data items on the coordinate plane to show a general trend

scientific notation a system of writing a number as the product of a decimal and a power of 10

similar having the same shape, but not necessarily the same size

simple interest the amount of interest charged or earned after an interest rate is applied to the principal

slope the ratio of rise to run

slope-intercept form $y = mx + b$, where m is the slope of the line and b is the y -intercept
solution of an equation a value for the variable that makes the equation true

solution of an inequality the numbers that, when substituted for the variable in an inequality, make the inequality statement true

solving by inspection determining the solution(s) of an equation simply by looking at the equation

sphere a solid formed by the set of all points that are a given distance from the center

square a number raised to the second power

square root a number that, when squared, equals a given number

standard form the form of a polynomial that shows the terms listed from left to right with the powers of the variables from greatest to least

standard form of a linear equation $Ax + By = C$, where A is a whole number and A and B cannot be 0

standard notation the way in which a number is typically written, using place value

substitute to replace a variable in an expression with a numerical value

substitution method a method of solving a system of equations by solving one equation for one variable and substituting the resulting expression into the other equation

surface area the sum of the areas of all the faces of a three-dimensional figure

system of linear equations a set of two or more linear equations with two or more variables

T
third quartile the median of the upper half of a data set
trapezoid a four-sided polygon with exactly one pair of parallel opposite sides

tree diagram a branching diagram that shows possible outcomes of an experiment

3-dimensional an object consisting of 3 dimensions, usually length, width, and height

2-dimensional a flat shape having only two dimensions, often length and width

U
undefined an expression that cannot be evaluated
unit rate a ratio that compares a quantity to a single unit

V
variable a symbol used to represent an unknown value
volume a measure of the amount of space enclosed by a three-dimensional figure

W
weighted average an average of a data set in which some items carry more importance (weight) than others

X
x-intercept the x -coordinate of a point where a graph crosses the x -axis
x-value the horizontal value in an ordered pair

Y
y-intercept the y -coordinate of the point where a graph crosses the y -axis
y-value the vertical value in an ordered pair