

Number/Computation

addend

Any number being added

algorithm

A step-by-step method for computing

array

A picture that shows a number of items arranged in rows and columns to form a rectangle

associative property of addition

The sum stays the same when the grouping of addends is changed.

example: $(6 + 4) + 2 = 6 + (4 + 2)$

associative property of multiplication

The product stays the same when the grouping of factors is changed.

example: $(6 \times 4) \times 2 = 6 \times (4 \times 2)$

base ten

A number system in which each digit has ten times the value of the same digit one place to its right
example: $77 = 70 + 7$

common factor

A number that is a factor of two or more numbers

common multiple

A number that is a multiple of two or more numbers

commutative property of addition

The sum stays the same when the order of the addends is changed.

example: $6 + 4 = 4 + 6$

commutative property of multiplication

The product stays the same when the order of the factors is changed.

example: $6 \times 4 = 4 \times 6$

composite numbers

A number that has more than two factors.

example: 8 is a composite number because it has four factors: 1, 2, 4, and 8

decimal

1. A number written using base ten
2. A number containing a decimal point

difference

The amount that remains after one quantity is subtracted from another

digit

Any one of the ten symbols: 0, 1, 2, 3, 4, 5, 6, 7, 8, or 9

divide

To separate into equal groups

dividend

A quantity to be divided

division

The operation of making equal groups

equal

Having the same value

equivalent

Naming the same number; 4.6 and 4.60 are equivalent decimals.

examples: $2/3$ and $4/6$ are equivalent fractions, 2:6 and 1:3 are equivalent ratios

equivalent fractions

Fractions that name the same number

example: $2/4$ is equivalent to $1/2$

estimate

To find a number close to an exact amount

even number

A whole number that is divisible by two

expanded form

A way to write numbers that shows the place value of each digit

example: $789 = (7 \times 100) + (8 \times 10) + (9 \times 1)$

denominator

The quantity below the line in a fraction that identifies the number of equal parts into which a whole is divided

factor

An integer that divides evenly into another

example: $2 \times 6 = 12$, 2 and 6 are factors of 12

fraction

A way of representing part of a whole or part of a group by telling the number of equal parts in the whole and the number of those parts you are describing

greatest common factor

The largest factor of two or more numbers

identity property of addition

Adding zero to a number gives a sum identical to the given number.

example: $8 + 0 = 0 + 8$

identity property of multiplication

Multiplying a number by 1 gives a product identical to the given number.

example: $8 \times 1 = 8$ and $1 \times 8 = 8$

improper fraction

A fraction that can be written as a mixed number

example: $12/5$ or $2 \frac{2}{5}$

integer

The set of whole numbers and their opposites

least common denominator (LCD)

The smallest common multiple of the denominators of two or more fractions

example: The LCD of $1/4$ and $5/6$ is 12.

least common multiple (LCM)

The smallest common multiple of a set of two or more numbers

example: The LCM of 4 is 6 and 12.

mental math

Computing an exact answer without using paper and pencil

mixed number

A decimal number with an integer part and a decimal part

multiplication

The operation of repeated addition

multiple

The product of a whole number and any other whole number

example: A multiple of 4 is 8.

negative number

Numbers less than zero

number line

A diagram that represents numbers as points on a line

number sentence

An equation or inequality with numbers

example: $6 + 3 = 9$

numeral

A symbol (not a variable) used to represent a number

numerator

The number or expression written above the fraction line

odd number

A whole number that ends in 1, 3, 5, 7, or 9

operation

Addition, subtraction, multiplication, and division

place value

The value of the position of a digit in a number

example: In the number *7,863*, the 8 is in the hundreds place and its value is 800.

positive numbers

Numbers greater than zero

prime number

A number that has exactly two positive factors, itself and one

product

The result of multiplication

quotient

The result of the division of one quantity by another

ratio

A comparison of two numbers using division

subtraction

An operation that gives the difference between two numbers

sum

The result of addition

unit fraction

A fraction unit with a numerator of one

whole number

Any of the numbers *0, 1, 2, 3, 4, 5,* and so on

zero property of multiplication

The product of any number and zero is zero.

example: $8 \times 0 = 0$ and $0 \times 8 = 0$

Geometry

acute angle

An angle with a measure less than 90 degrees

angle

Two rays that share an endpoint

circle

A closed curve with all its points in one plane and the same distance from a fixed point (the center)

circle graph

A graph in which a circle and its interior are divided into parts to represent the parts of a set of data

circumference

The boundary line, or perimeter, of a circle or the length of the perimeter of a circle

cone

A three-dimensional figure with one curved surface, one flat surface (usually circular), one curved edge, and one vertex

cube

A regular solid having six congruent square faces

cylinder

A three-dimensional figure with two parallel and congruent circles as bases, one curved surface, two curved edges, and no vertices

diagram

A drawing that represents a mathematical situation

diameter

1. A line that passes through the center of a circle
2. The distance of a line that passes through the center of a circle

edge

The line segment where two faces of a solid figure meet

endpoint

Either of two points marking the end of a line segment

equilateral triangle

A triangle whose sides are all the same length

face

A plane figure that serves as one side of a solid figure

hexagon

A polygon with six sides

intersecting lines

Lines having a point in common

isosceles triangle

A triangle that has at least two congruent sides

line

An infinite set of points forming a straight path extending in two directions

line graph

A graph in which points are connected by a line or line segments to represent data that changes over time

line of symmetry

A line that divides a figure into two congruent halves that are mirror images of one another

line segment

A part of a line defined by two endpoints

obtuse angle

An angle with a measure greater than 90 degrees and less than 180 degrees

octagon

A polygon with eight sides

parallel

Always the same distance apart

parallelogram

A quadrilateral with two pairs of parallel and congruent sides

pentagon

A polygon that has five sides

perpendicular

Forming right angles

plane figure

Any two-dimensional figure

point

An exact position in space

polygon

A closed figure formed from line segments that meet only at their endpoints

prism

A three-dimensional figure that has two congruent and parallel faces that are polygons, the remaining faces being parallelograms

pyramid

A polyhedron whose base is a polygon and whose other faces are triangles that share a common vertex

quadrilateral

A four-sided polygon

radius

The segment, or the length of the segment, from the center of a circle to a point on the circle

ray

A part of a line that has one endpoint and extends indefinitely in one direction

rectangle

A quadrilateral with two pairs of congruent, parallel sides and four right angles

rectangular prism

A prism with six rectangular faces

reflection

A transformation creating a mirror image of a figure on the opposite side of a line

regular polygon

A polygon with all sides the same length and all angles the same measures

rhombus

A parallelogram with all four sides equal in length

right angle

An angle that measures exactly 90 degrees

right triangle

A triangle that has one 90-degree angle

rotation

A transformation in which a figure is turned in a given angle and direction around a point

side

A line segment connected to other segments to form a polygon

similar figures

Figures that have the same shape, but not necessarily the same size, and corresponding sides of similar figures are proportional

solid figure

A geometric figure with three dimensions

sphere

A three-dimensional figure made up of all points that are equally distant from a point called the center

three dimensional

Existing in three dimensions, having length, width, and height

translation

A transformation that slides a figure a given distance in a given direction

trapezoid

A quadrilateral with exactly one pair of parallel sides

triangular prism

A prism whose bases are congruent triangles

vertex

The point at which two line segments, lines, or rays meet to form an angle

triangular pyramid

A pyramid with a triangular base

Measurement

area

The measure, in square units, of the interior region of a two-dimensional figure or the surface of a three-dimensional figure

capacity

The maximum amount that can be contained by an object—often refers to measurement of liquid

centimeter

A metric, linear unit of measure

circumference

The boundary line, or perimeter, of a circle or the length of the perimeter of a circle

congruent

Having exactly the same size and shape

cup

A customary unit of capacity equal to eight (8) fluid ounces

customary system

A system of measurement used in the United States, which includes units for measuring length, capacity, and weight

degree

A unit of angle measure

diameter

1. A line that passes through the center of a circle
2. The distance of a line that passes through the center of a circle

foot

A unit of measure that is equivalent to 12 inches

gallon

A liquid measure equivalent to four (4) quarts

inch

A customary unit of measure used to measure length

kilogram

A metric unit of mass equivalent to 1,000 grams

kilometer

A metric unit of length equivalent to 1,000 meters

length

The distance along a line or figure from one point to another

liter

A metric unit of capacity

mass

The amount of matter in an object, measured by balancing against an object of known mass

meter

A measure of length in the metric system

metric system

A system of measurement based on tens; the basic unit of capacity is the liter; the basic unit of length is the meter; the basic unit of mass is the gram.

ounce

A customary measure of liquid or mass
example: 8 ounces = 1 cup

perimeter

The distance around a figure

pint

A customary unit of capacity that is equivalent to two cups

pound

A customary unit of weight equivalent to 16 ounces

radius

The segment, or the length of the segment, from the center of a circle to a point on the circle

quart

A measure of capacity
example: 4 quarts = 1 gallon

square unit

A unit, such as a square meter, or a system of units used to measure area

volume

The number of cubic units it takes to fill a figure

weight

Heaviness, determined by the mass of an object and the effect of gravity on that object

yard

A customary unit of measure of length equivalent to three (3) feet or 36 inches

Probability/Statistics

bar graph

A graph in which horizontal or vertical bars represent data

data

Information, especially numerical, usually organized for analysis

graph

A pictorial device used to show a numerical relationship

line plot

A diagram showing frequency of data on a number line

mean

The sum of a set of numbers divided by the number of elements in the set

median

The middle number of a set of numbers when the numbers are arranged from least to greatest, or the mean of two middle numbers when the set has two middle numbers

mode

The number that appears most frequently in a set of numbers; there may be one, more than one, or no mode.

probability

The chance of an event occurring; the probability of an event is equal to the number of favorable outcomes divided by the number of possible outcomes.

range

The difference between the greatest number and the least number in a set of numbers

Venn diagram

A drawing that shows relationships among sets of objects

table

A set of organized data with rows and columns

Algebraic Thinking

axis

A reference line from which distances or angles are measured on a coordinate grid

coordinate grid

A two-dimensional system in which the coordinates of a point are its distances from two intersecting, usually perpendicular, straight lines called axes

coordinates

An ordered pair of numbers that identify a point on a coordinate plane

function

An input/output model for a given rule

ordered pair

A pair of numbers that gives the coordinates of a point on a grid in this order: horizontal coordinate, vertical coordinate

variable

1. A quantity that changes or that can have different values
2. A symbol, usually a letter that represents an amount that can have different values