

# Glossary

## A

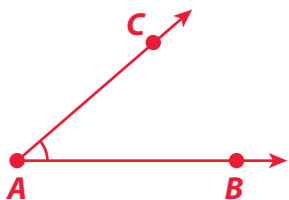
**AM** morning, or the time from midnight until noon.

**acute angle** an angle with a measure less than  $90^\circ$ .

**acute triangle** a triangle that has three acute angles.

**addend** a number being added.

**angle** two rays that share an endpoint.



**area** the amount of space inside a closed, two-dimensional figure. Area is measured in square units such as square centimeters.

**array** a set of objects grouped in equal rows and equal columns.



## associative property of addition

Changing the grouping of three or more addends does not change the sum.

$$(2 + 3) + 4 = 2 + (3 + 4)$$
The diagram shows two equations. The first equation shows 2 blue dots, 3 red dots, and 4 purple dots grouped together, followed by an equals sign. The second equation shows 2 blue dots, 3 red dots, and 4 purple dots grouped together, followed by an equals sign.

## associative property of multiplication

Changing the grouping of three or more factors does not change the product.

$$(2 \times 4) \times 3 = 2 \times (4 \times 3)$$
The diagram shows two equations. The first equation shows a 2x4x3 rectangular prism made of blocks, followed by an equals sign. The second equation shows a 2x4x3 rectangular prism made of blocks, followed by an equals sign.

**attribute** a characteristic of an object.

Attributes of a shape include the number of sides and the length of the sides.

## B

**benchmark fraction** a common fraction that you might compare other fractions to.

For example,  $\frac{1}{2}$  can be used as a benchmark.

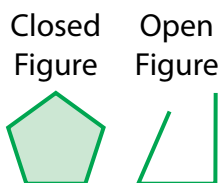
## C

**capacity** the amount of liquid a container can hold. Capacity is measured in the same units as liquid volume.

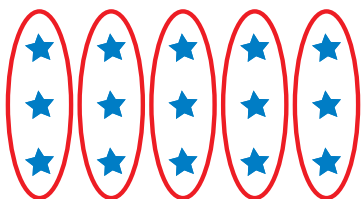
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**centimeter (cm)** a unit of length in the metric system. Your little finger is about 1 centimeter across. 100 centimeters is equivalent to 1 meter.

**closed figure** a two-dimensional figure that begins and ends at the same point.



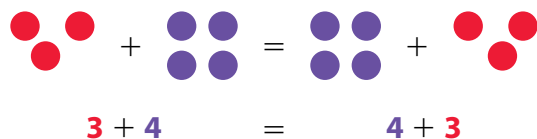
**column** a top to bottom line of objects in an array.



**common denominator** a number that is a common multiple of the denominators of two or more fractions.

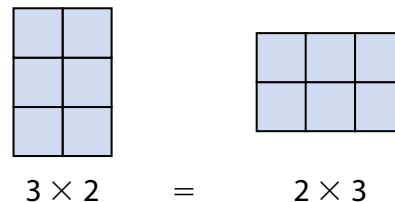
## commutative property of addition

Changing the order of the addends does not change the sum.



## commutative property of multiplication

Changing the order of the factors does not change the product.



**compare** to decide if one number is greater than ( $>$ ), less than ( $<$ ), or equal to ( $=$ ) another number.

**compose** to make by combining parts.

**composite number** a number greater than 0 that has more than one pair of factors.

**convert** to change from one measurement unit to another.

**cup (c)** a unit of liquid volume in the customary system. Four cups is equivalent to 1 quart.

**customary system** the measurement system commonly used in the United States. It measures length in inches, feet, yards, and miles; liquid volume in cups, pints, quarts, and gallons; and weight in ounces and pounds.



**data** information, often numerical information such as a list of measurements.

**decimal** a number containing a decimal point that separates the ones place from the tenths place.

**decimal point** the period or dot used in a decimal that separates the ones place from the tenths place.

**decompose** to break up into parts.

**degree (°)** a unit used to measure angles. There are 360° in one circle.

**denominator** the number below the line in a fraction. It tells how many equal parts are in the whole.

$$\frac{2}{5} \leftarrow \text{denominator}$$

**difference** the result of subtraction.

**digit** a symbol used to write numbers. The digits are 0, 1, 2, 3, 4, 5, 6, 7, 8, and 9.

**dimension** length in one direction. A figure may have one, two, or three dimensions.

**distributive property** When one of the factors of a product is written as a sum, multiplying each addend by the other factor before adding does not change the product.

$$2 \times (3 + 6) = (2 \times 3) + (2 \times 6)$$

**divide** to separate into equal groups.

**dividend** the number that is divided in a division problem.

**division** an operation used to separate a number of items into equal-sized groups.

**divisor** the number you divide by in a division problem.

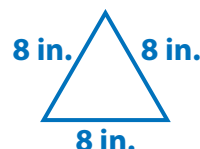
## E

**elapsed time** the time that has passed between a start time and an end time.

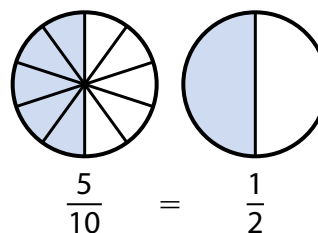
**equal (=)** having the same value, same size, or same amount.

**equation** a mathematical statement that uses an equal sign (=) to show that two expressions have the same value.

**equilateral triangle** a triangle that has all three sides the same length.



**equivalent fractions** two or more fractions that name the same part of a whole or the same point on a number line.



**estimate (noun)** a close guess made using math thinking.

# Glossary

**estimate (verb)** to make a close guess based on math thinking.

**even number** a whole number that ends in the digit 0, 2, 4, 6, or 8. Even numbers have 2 as a factor.

**expanded form** a way of writing a number to show the place value of each digit.

$$254.3 = 200 + 50 + 4 + \frac{3}{10}$$

**expression** numbers or unknowns combined with operation symbols. For example,  $5 + a$  or  $3 \times 6$ .

## F

**fact family** a group of related math facts that all use the same numbers. The group of facts shows the relationship between addition and subtraction, or between multiplication and division.

$$5 \times 4 = 20$$

$$4 \times 5 = 20$$

$$20 \div 4 = 5$$

$$20 \div 5 = 4$$

**factor** a number that is multiplied.

**factor pair** two numbers that are multiplied together to give a particular product. For example, 1 and 12, 2 and 6, and 3 and 4 are all factor pairs of 12.

**factors of a number** whole numbers that multiply together to get the given number.

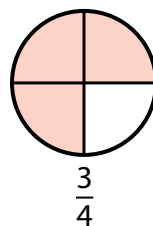
**foot (ft)** a unit of length in the customary system. One foot is equivalent to 12 inches.

**formula** a mathematical relationship that is expressed in the form of an equation. For example, the formula for the area of a rectangle is  $A = \ell \times w$ .

**fourths** the parts formed when a whole is divided into four equal parts.

**function** a relationship between two variables; A rule is applied to one variable in order to determine the other variable.

**fraction** a number that names equal parts of a whole; a fraction names a point on the number line.



## G

**gallon (gal)** a unit of liquid volume in the customary system. One gallon is equivalent to 4 quarts.

**gram (g)** a unit of mass in the metric system. A paper clip has a mass of about 1 gram. 1000 grams is equivalent to 1 kilogram.

**greater than symbol ( $>$ )** a symbol used to compare two numbers. It shows that the first number has a greater value than the second.

## H

**halves** the parts formed when a whole is divided into two equal parts.

**hexagon** a polygon with exactly six sides and six angles.



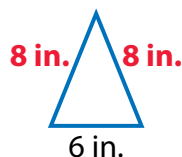
**hour (h)** a unit of time. One hour is equivalent to 60 minutes.

**hundredths** the parts formed when a whole is divided into 100 equal parts.

## I

**inch (in.)** a unit of length in the customary system. A quarter is about 1 inch across. Twelve inches is equivalent to 1 foot.

**isosceles triangle** a triangle that has at least two sides with the same length.



## K

**kilogram (kg)** a unit of mass in the metric system. One kilogram is to equivalent to 1,000 grams.

**kilometer (km)** a unit of length in the metric system. One kilometer is equivalent to 1,000 meters.

## L

**length** a measurement that tells the distance from one point to another, or how long something is.

**less than symbol (<)** a symbol used to compare two numbers when the first has less value than the second.

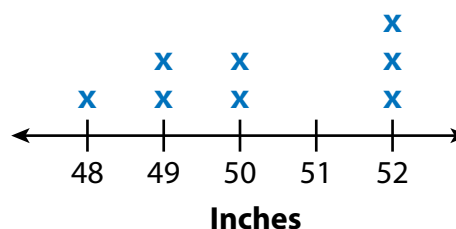
**line** (in geometry) a straight row of points that goes on forever in both directions.

**line of symmetry** a line that divides a shape into two mirror images.



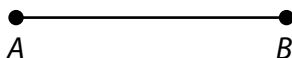
**line plot** a data display that uses a number line to show measurement data.

**Sea Lion Lengths**



# Glossary

**line segment** a straight row of points that starts at one point and ends at another point, or, a part of a line.



**liquid volume** the amount of space a liquid takes up.

**liter (L)** a unit of liquid volume in the metric system. One liter is equivalent to 1,000 milliliters.

## M

**mass** the amount of matter in an object. Measuring the mass of an object is one way to measure how heavy it is. Units of mass include the gram and kilogram.

**meter (m)** a unit of length in the metric system. One meter is equivalent to 100 centimeters.

**metric system** the measurement system that measures length based on meters, liquid volume based on liters, and mass based on grams.

**mile (mi)** a unit of length in the customary system. One mile is equivalent to 5,280 feet.

**milliliter (ml)** a unit of liquid volume in the metric system. 1,000 milliliters is equivalent to 1 liter.

**minute (min)** a unit of time equivalent to 60 seconds.

**mixed number** a number with a whole part and a fractional part.

$$4\frac{1}{2}$$

**multiple** the product of a number and any other whole number. For example, 4, 8, 12, 16, and so on, are multiples of 4.

**multiplication** an operation used to find the total number of items in equal-sized groups.

**multiplicative comparison** a comparison that tells how many times as many. For example,  $7 \times 3 = 21$  means 21 is 3 times as many as 7, and 21 is 7 times as many as 3.

**multiply** to find the total number of items in equal-sized groups.

## N

**numerator** the number above the line in a fraction. It tells how many equal parts are described.

$$\frac{2}{5} \leftarrow \text{numerator}$$

## O

**obtuse angle** an angle that measures more than  $90^\circ$  but less than  $180^\circ$ .

**obtuse triangle** a triangle that has one obtuse angle.

**odd number** a whole number that ends in the digit 1, 3, 5, 7, or 9. Odd numbers do not have 2 as a factor.

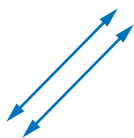
**operation** a mathematical action such as addition, subtraction, multiplication and division.

**ounce (oz)** a unit of weight in the customary system. A slice of bread weighs about one ounce. Sixteen ounces is equivalent to 1 pound.

## P

**PM** the time from noon until midnight.

**parallel lines** two or more lines that are always the same distance apart and will never cross.



**parallelogram** a quadrilateral with opposite sides parallel and equal in length.

**partial products** a strategy used to multiply multi-digit numbers. The products you get in each step are called “partial products”.

$$\begin{array}{r}
 218 \\
 \times 6 \\
 \hline
 48 \text{ (6} \times \text{8 ones)} \\
 60 \text{ (6} \times \text{1 ten)} \\
 1200 \text{ (6} \times \text{2 hundreds)} \\
 \hline
 1308
 \end{array}$$

**partial quotients** a strategy used to divide multi-digit numbers. The quotients you get in each step are called “partial quotients”.

**pattern** a series of numbers or shapes that follow a rule to repeat or change.



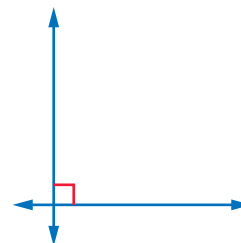
**pentagon** a polygon with exactly five sides and five angles.

**perimeter** the distance around a two-dimensional shape. The perimeter is equal to the sum of the lengths of the sides.

**period** a group of three related place values, usually separated by commas. Examples are the ones period, the thousands period, and the millions period.

Thousands Period			Ones Period		
Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones
4	6	7	8	8	2

**perpendicular lines** two lines that meet to form a right angle, or a 90° angle.



# Glossary

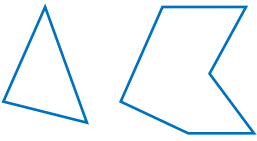

**pint (pt)** a unit of liquid volume in the customary system. One pint is equivalent to 2 cups.

**place value** the value of a digit based on its position in a number. For example, the 2 in 324 is in the tens place and has a value of 2 tens, or twenty.

**plane figure** a two-dimensional figure, such as a circle, triangle, or rectangle.

**point** a single location in space. Two lines cross at a point, and two sides of a triangle meet at a point.

**polygon** a two-dimensional closed figure made with three or more straight line segments that do not cross over each other.

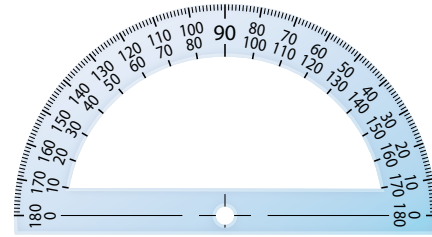
Polygons	Not Polygons
	

**pound (lb)** a unit of weight in the customary system. One pound is equivalent to 16 ounces.

**prime number** a whole number greater than 1 whose only factors are 1 and itself. For example, 2, 3, 5, 7, and 11 are prime numbers.

**product** the result of multiplication.

**protractor** a tool used to measure angles.



## Q

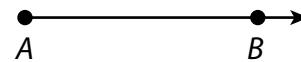
**quadrilateral** a polygon with exactly four sides and four angles.

**quart (qt)** a unit of liquid volume in the customary system. One quart is equivalent to 4 cups.

**quotient** the result of division.

## R

**ray** a straight row of points that starts at one point and goes on forever in one direction.



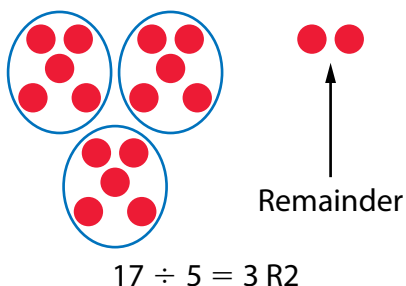
**reasonable** something that makes sense when given facts are taken into account.

**rectangle** a parallelogram with four right angles. Pairs of opposite sides of a rectangle are the same length.

**regroup** to compose or decompose tens, hundreds, thousands, and so forth. For example, 10 ones can be regrouped as 1 ten, or 1 hundred can be regrouped as 10 tens.



**remainder** in division, the amount left over after equal groups have been made.



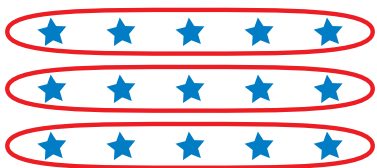
**rhombus** a parallelogram with all four sides the same length.

**right angle** an angle that forms a square corner and measures  $90^\circ$ .

**right triangle** a triangle with one right angle.

**round** to find a number that is close in value to the given number by finding the nearest ten, hundred, or other place value.

**row** a side-to-side line of objects in an array.



**rule** in a pattern, a procedure that describes the relationship between one number or shape and the next.

## S

**scale** on a graph, the difference between the numbers labeling the graph.

**scalene triangle** a triangle that has no two sides with the same length.

**second (s)** a unit of time. Sixty seconds is equivalent to 1 minute.

**side** one of the line segments that form two-dimensional figures.

**square** a shape that has four sides of equal length and four right angles.

**square unit** a square with a side length of 1 unit that is used to measure area.

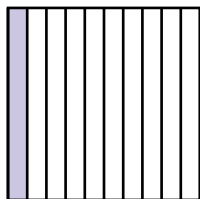
**standard form** the way a number is written using digits. For example, the standard form of *twelve* is 12.

**sum** the result of addition.

**symbol** any mark or drawing with a particular meaning, including numbers, letters, and operation signs. A symbol can be used to stand for an unknown number in an equation.

## T

**tenths** the parts formed when a whole is divided into ten equal parts.



**thirds** the parts formed when a whole is divided into three equal parts.

**three-dimensional** solid, or having length, width and height. For example, cubes are three-dimensional.

**trapezoid** a type of quadrilateral. A trapezoid always has a pair of parallel sides.



**triangle** a polygon with exactly three sides and three angles.

**two-dimensional** flat, or having measurement in two directions, like length and width. For example, a rectangle is two-dimensional.

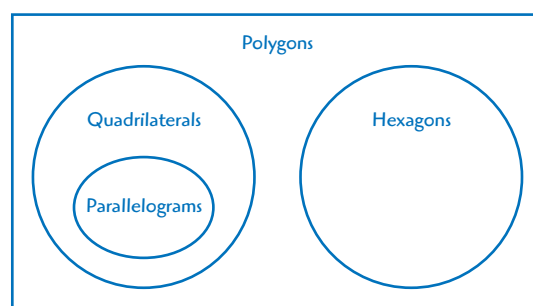
## U

**unit fraction** a fraction with a numerator of 1. Other fractions are built from unit fractions. For example  $\frac{1}{4}$  and  $\frac{1}{10}$  are unit fractions.

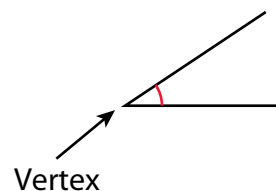
**unknown** the piece or pieces of a problem that you are not given or do not know.

## V

**Venn diagram** a drawing that shows how sets of numbers or objects compare.



**vertex** the point where two rays, lines, or line segments meet to form an angle.



## W

**weight** the measurement that tells how heavy an object is. Units of weight include ounces and pounds.

**word form** (of a number) the way a number is written with words, or said aloud. For example, the word form of 105 is *one hundred five*.

## Y

**yard (yd)** a unit of length in the U.S. customary system. One yard is equivalent to 3 feet.