

# Alaska Mathematics Standards Vocabulary Word List Grade 6



<b>Ratios and Proportional Relationships</b>	
benchmark	A reference point, such as 0, $\frac{1}{2}$ , or 1, that is used for estimating fractions.
conversion factor	A type of rate in which two quantities use different units but remain equal; used to convert a measurement from one unit to another.
double number line diagram	A graphic diagram that shows a proportional relationship between two quantities.
equivalent ratios	Two ratios that have the same value when simplified.
percent	A special ratio that compares a number to 100 using the symbol %.
proportion	An equation showing that two ratios are equivalent.
rate	A ratio comparing two different units.
ratio	A comparison of two numbers using division.
rational number	A number that can be expressed as a ratio of two integers.
reciprocal	One of two numbers whose product is 1. (also known as multiplicative inverse)
repeating decimal	A decimal which has repeating digits or a repeating pattern of digits.
simplest form	A fraction is in simplest form when the greatest common factor of the numerator and denominator is 1.
simplify	To express a fraction in its simplest form.
terminating decimal	A decimal which has a finite number of digits.
unit fraction	A fraction that has 1 as its numerator. A unit fraction names 1 equal part of a whole.
unit rate	A rate with a denominator of 1.
value	The amount something is worth.

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## The Number System

absolute value	The distance of a number from zero on the number line. Absolute value is always positive.
addend	Any number being added.
additive inverse	The opposite of a number. When a number is added to its additive invers, the sum is zero.
algebraic expression	A group of numbers, symbols, and variables that express an operation or a series of operations.
algorithm	A step-by-step method for computing.
array	An arrangement of objects in equal rows.
common denominator	For two or more fractions, a common denominator is a common multiple of the denominators.
common factor	Any common factor of two or more numbers.
common multiple	Any common multiple of two or more numbers.
compatible numbers	Pairs of numbers that are easy to compute mentally.
compose	To put together, as in numbers or shapes.
constant speed	Movement at a fixed (constant) distance per unit of time.
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. (also known as a coordinate plane or coordinate system)
coordinate pair	A pair of numbers that gives the coordinates of a point on a grid in this order: (horizontal coordinate, vertical coordinate). (also known as an ordered pair)
coordinate plane	A two-dimensional system in which the coordinates of a point are its distances from two intersecting, usually perpendicular, straight lines called axes. (also known as coordinate grid or coordinate system)
coordinate system	A two-dimensional system in which the coordinates of a point are its distances from two intersecting, usually perpendicular, straight lines called axes. (also known as a coordinate grid or coordinate plane)
coordinates	An ordered pair of numbers that identify a point on a coordinate plane.
decimal	A number with one or more digits to the right of a decimal point. Decimal is used as another name for decimal fraction.

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decimal fraction	A fractional number with a denominator of 10 or a power of 10. It can be written with a decimal point.
decompose	To separate into components or basic elements.
denominator	The number or expression written below the line in a fraction.
difference	The amount that remains after one quantity is subtracted from another.
Distributive Property	$a \times (b + c) = (a \times b) + (a \times c)$ and $a \times (b - c) = (a \times b) - (a \times c)$ , where $a$ , $b$ , and $c$ stand for any real numbers.
dividend	A quantity to be divided.
divisible	A number is divisible by another number if the quotient is a counting number without a remainder.
divisor	The quantity by which another quantity is to be divided.
equivalent	Naming the same number.
equivalent fractions	Fractions that have the same value (e.g. $1/2$ , $2/4$ , and $4/8$ all have the same value)
exponent	The number that tells how many equal factors there are. In $5^2$ , 5 is the base and 2 is the exponent. 5 is raised to the power of 2. ( $5^2 = 5 \times 5 = 25$ )
expression	A variable or combination of variables, numbers, and symbols that represents a mathematical relationship.
factor	An integer that divides evenly into another.
formula	A general mathematical rule that is written as an equation.
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 parts you are describing.
fraction bar	A horizontal bar that separates the numerator and the denominator.
fraction greater than one	A fraction with a numerator greater than its denominator.
fraction less than one	A fraction with a numerator less than its denominator.
greater than	Greater than is used to compare two numbers when the first number is larger than the second number.

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greater than or equal to	Greater than or equal to is used to compare two quantities in an inequality where the first quantity is larger than or equal to the second quantity.
greatest common factor (GCF)	The largest factor of two or more numbers.
inequality	A mathematical sentence that compares two unequal expressions using one of the symbols $<$ , $>$ , $\leq$ , $\geq$ , or $\neq$ .
infinite	Having no boundaries or limits.
integers	The set of whole numbers and their opposites.
inverse operations	Operations that undo each other.
is not equal to	A symbol used to compare two quantities in an inequality where the two quantities do not equal each other.
least common multiple	The smallest common multiple of a set of two or more numbers.
less than	Less than is used to compare two numbers when the first number is smaller than the second number.
less than or equal to	Less than or equal to is used to compare two quantities in an inequality where the first quantity is smaller than or equal to the second quantity.
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.
minuend	The quantity from which another quantity, the subtrahend, is to be subtracted.
mixed number	A number with an integer and a fraction part.
multiple	The product of a whole number and any other whole number.
multiplicative inverse	One of two numbers whose product is 1. (also known as reciprocal)
negative numbers	Numbers less than 0 (zero).
numerator	The number written above the line in a fraction. It tells how many equal parts are described in the fraction.
numerical expression	A mathematical statement including numbers and operations.
opposites	Having a different sign but the same numeral.

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## The Number System

Order of Operations	An order, agreed on by mathematicians, for performing operations to simplify expressions.		
ordered pair	A pair of numbers that gives the coordinates of a point on a grid in this order (horizontal coordinate, vertical coordinate). (also known as a coordinate pair)		
origin	The intersection of the $x$ - and $y$ - axes in a coordinate plane, described by the ordered pair (0, 0).		
pattern	A repeating or growing sequence. An ordered set of numbers or shapes arranged according to a rule.		
plot	To place points on a graph or coordinate plane.		
positive numbers	Numbers that are greater than zero.		
prime factorization	The expression of a number as the product of its prime factors.		
prime number	A whole number greater than 0 that has exactly two different factors, 1 and itself.		
product	The result of multiplication.		
Properties of Addition	Additive Identity Property of 0 (zero)	Adding zero to a given number gives a sum identical to the given number.	$3 + 0 = 3$
	Addition Property of Equality	If you add the same number to both sides of an equation, the two sides will remain equal.	$2 + 4 = 6$ $2 + 4 + 3 = 6 + 3$
	Associative Property of Addition	Changing the grouping of 3 or more addends does not change the sum.	$(2 + 3) + 4 = 2 + (3 + 4)$
	Commutative Property of Addition	Changing the order of the addends does not change the sum.	$1 + 3 + 4 = 3 + 4 + 1$
Properties of Division	Division Property of Equality	If you divide both sides of an equation by the same nonzero number, the two sides will remain equal	$2 + 5 \div 2 = 7 + 3$
Properties of Multiplication	Associative Property of Multiplication	Changing the grouping of three or more factors does not change the product.	$(2 \times 4) \times 5 = 2 \times (4 \times 5)$
	Commutative Property of Multiplication	Changing the order of the factors does not change the product.	$1 \times 4 \times 6 = 6 \times 1 \times 4$
	Distributive Property of Multiplication	When one of the factors of a product is a sum, multiplying each addend before adding does not change the product.	$3 \times (4 + 5) = (3 \times 4) + (3 \times 5)$

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Properties of Multiplication continued	Multiplicative Identity Property of 1	Multiplying a factor by one gives a product identical to the given factor.	$1 \times 6 = 6$
	Multiplication Property of Equality	If you multiply both sides of an equation by the same number, the two sides will remain equal.	$(3 + 4) \times 3 = (2 + 5) \times 3$
	Zero Property of Multiplication	The product of a factor and zero is 0.	$2 \times 0 = 0$
Properties of Subtraction	Subtraction Property of Equality	If you subtract the same number from both sides of an equation, the two sides will remain equal.	$2 + 4 - 3 = 5 + 1 - 3$
quadrants	The four sections of a coordinate grid that are separated by the axes.		
quantity	An amount.		
quotient	The result of the division of one quantity by another.		
repeating decimal	A decimal which has repeating digits or a repeating pattern of digits.		
signed number	Positive or negative number.		
subtrahend	In subtraction, the subtrahend is the number being subtracted.		
sum	The result of addition.		
terminating decimal	A decimal which has a finite number of digits.		
value	The amount something is worth.		
whole numbers	Whole numbers are 0 and the counting numbers 1, 2, 3, 4, 5, 6, and so on.		
x-axis	In a Cartesian grid, the horizontal axis.		
x-coordinate	In an ordered pair, the value that is always written first.		
y-axis	In a Cartesian grid, the vertical axis.		
y-coordinate	In an ordered pair, the value that is always written second.		

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## Expressions and Equations

base of an exponent	The number that is raised to a power. In $5^2$ , 5 is the base and 2 is the exponent. 5 is raised to the power of 2. ( $5^2 = 5 \times 5 = 25$ )
coefficient	A numerical factor in a term of an algebraic expression.
constant	A number with a value that is always the same.
dependent variable	In a function, a variable whose value is determined by the value of the related independent variable.
equation	A statement that two mathematical expressions are equal.
equivalent expressions	Expressions which are equal to each other for any values of their variables. They can be generated by properties of operations.
evaluate	To find the value of a mathematical expression.
independent variable	A variable in a mathematical equation whose value determines that of a dependent variable.
like terms	Terms that have the same variables and the same exponents.
solution of an equation	The value of a variable that makes the equation true.
solution of an inequality	The value of a variable that makes the inequality true.
substitution	The replacement of the letters in an algebraic expression with known values.
term	A number, variable, product, or quotient in an expression. A term is <i>not</i> a sum or difference.
value	The amount something is worth.
variable	A quantity that changes or can have different values. A symbol, usually a letter, that can stand for a variable quantity.

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#### Geometry

Geometry	
acute triangle	A triangle with no angle measuring $90^\circ$ or more.
altitude	The perpendicular distance from a vertex to the opposite side of a plane figure.
area	The measure, in square units, of the interior region of a two-dimensional figure or the surface of a three-dimensional figure.
attribute	A characteristic of an object such as color, shape, size, etc.
axis (plural – axes)	A reference line from which distances or angles are measured in a coordinate grid.
base of a polygon	The side of a polygon that is perpendicular to the altitude or height.
base of a solid figure	A base of a solid figure is usually thought of as a face upon which it can "sit." Most solid figures have more than one base.
capacity	Capacity refers to the amount of liquid a container can hold.
composite figure	A shape made up of two or more simpler figures, such as triangles and quadrilaterals.
congruent	Having exactly the same shape and size.
cube	A rectangular solid having 6 congruent square faces.
cubic unit	A unit such as a cubic meter to measure volume or capacity.
customary system	A system of measurement used in the U.S. The system includes units for measuring length, capacity, and weight.
diagonal	A line that goes through vertices of a polygon that are not next to each other.
edge	The place where two flat surfaces of a solid figure meet.
equiangular triangle	A triangle with all equal angles ( $60^\circ$ ).
equilateral triangle	A triangle with all sides the same length.
face	A flat surface on a solid figure.
height	The perpendicular distance from a vertex to the opposite side of a plane figure.

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#### Geometry

isosceles triangle	A triangle that has exactly 2 equal sides.
lateral area	The sum of the lateral faces of a solid figure.
lateral face	The face of a prism or pyramid that is not a base.
length	How long something is. The distance from one point to another. Length is measured in units such as inches, feet, centimeters, etc. One dimension of a two- or three- dimensional figure.
line of symmetry	A line that divides a figure into two congruent halves that are mirror images of each other.
net	A two-dimensional shape that can be folded into a three-dimensional figure is a net of that figure. (also known as a network)
obtuse triangle	A triangle that contains one angle with a measure greater than $90^\circ$ (obtuse angle) and two acute angles.
parallelogram	A quadrilateral with 2 pairs of parallel and congruent sides.
polygon	A closed plane figure formed from line segments that meet only at their endpoints.
polyhedron	A three-dimensional figure in which all the faces are polygons. Polyhedrons have no curved surfaces.
prism	A three-dimensional figure that has two congruent and parallel faces that are polygons. The remaining faces are parallelograms.
pyramid	A polyhedron whose base is a polygon and whose other faces are triangles that share a common vertex.
quadrilateral	A polygon with 4 sides.
rectangle	A quadrilateral with 2 pairs of congruent, parallel sides and 4 right angles.
regular polygon	A polygon with all sides the same length and all angles the same measure.
right rectangular prism	A prism with 6 rectangular faces where the lateral edge is perpendicular to the plane of the base.
right triangle	A triangle that has one $90^\circ$ angle.
scalene triangle	A triangle that has no congruent sides.
solid figure	Three-dimensional figure that has length, width, and height.



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#### Statistics and Probability

bar graph	A graph that uses the height or length of rectangles to compare data.
bar model	A drawing that looks like a segment of tape, used to illustrate number relationships. (also known as a strip diagram, tape diagram, fraction strip, or length model)
box plot	A diagram that shows the figure number summary of a distribution. (Five number summary includes lowest value, lower quartile, median, upper quartile, and highest value.)
cluster	A group of the same or similar elements gathered or occurring closely together on a graph.
data	Information, especially numerical information. Usually organized for analysis.
distribution	A table that shows how many of each type of data.
dot plot	A diagram showing frequency of data on a number line. (also known as a line plot)
first quartile	The first quartile is the middle (the median) of the lower half of the data on a box plot. One-fourth of the data lies below the first quartile and three-fourths lies above. (also known as Q1 or lower quartile)
frequency table	A table which shows the number of times each data value or range of values occurs.
gap	A place on a graph where no data values are present.
histogram	A bar graph in which the labels for the bars are numerical intervals.
interquartile range	The difference between the upper quartile and the lower quartile.
interval	The range of values represented by each bar. The data is divided into equal increments.
line plot	A diagram showing frequency of data on a number line. (also known as a dot plot)
line symmetry	What a figure has if it can be folded in half and its two parts match exactly.
lower extreme	The smallest or least number out of a data set, usually farther away from interquartile range than other data in set. (also known as minimum)
lower quartile	The lower quartile is the middle (the median) of the lower half of the data on a box plot. One-fourth of the data lies below the first quartile and three-fourths lies above. (also known as Q1 or first quartile)
magnitude	Size; a property by which something can be compared as larger or smaller than other objects of the same kind.

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#### Statistics and Probability

maximum	The largest amount; the greatest number in a data set.
mean	The sum of a set of numbers divided by the number of elements in the set; a type of average.
mean absolute deviation	In statistics, the absolute deviation of an element of a data set is the absolute difference between that element and a given point.
measure of center	An average; a single value that is used to represent a collection of data. Three commonly used types of averages are mode, median, and mean. (also known as measure of central tendency or measure of average)
measure of variability	A measure of how much a collection of data is spread out. Commonly used types include range and quartiles. (also known as spread)
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.
minimum	The smallest amount; the smallest number in a data set.
mode	The number or numbers that occur most often in a data set.
number line	A diagram that represents numbers as points on a line.
outlier	A number in a set of data that is much larger or smaller than most of the other numbers in the set.
range	The difference between the greatest number and the least number in a set of numbers.
relative frequency table	A table which shows the percent of time each data item or group of data occurs.
spread	A measure of how much a collection of data is spread out. Commonly used types include range and quartiles. (also known as measure of variability)
statistical question	A question that generates a variety of categorical or numerical answers.
statistical variability	A spread in the distribution of data. An example is the interquartile range.
statistics	The science of collecting, organizing, representing, and interpreting data.
table	An organized way to list data. Tables usually have rows and columns of data.
tape diagram	A drawing that looks like a segment of tape, used to illustrate number relationships. (also known as a strip diagram, bar model, fraction strip, or length model)





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