



# Alaska Mathematics Standards

## Vocabulary Word List

### Grade 7



#### The Number System

absolute value	The distance of a number from zero on the number line. Absolute value is always positive.
additive inverse	A number that is the same distance from 0 on the number line, but in the opposite direction.
axis (plural – axes)	A reference line from which distances or angles are measured in a coordinate grid.
commissions	A fee charged by a broker or agent for his/her service in a facilitating a transaction.
coordinate plane	A 2-dimensional system in which the coordinates of a point are its distances from two intersecting, usually perpendicular, straight lines called axes. (Also called coordinate <i>grid</i> or coordinate <i>system</i> .)
coordinate system	Also known as a coordinate grid. A 2-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.
diagram	A drawing that represents a mathematical situation.
Distributive Property	$a \cdot (b + c) = (a \cdot b) + (a \cdot c)$ and $a \cdot (b - c) = (a \cdot b) - (a \cdot c)$ , where $a$ , $b$ , and $c$ stand for any real numbers.
equation	A statement that two mathematical expressions are equal.
equivalent	Naming the same number.
estimate	To find a number close to an exact amount; an estimate tells <i>about</i> how much or <i>about</i> how many.
evaluate	To find the value of a mathematical expression.
factor	An integer that divides evenly into another.
gratuities	Something given voluntarily or beyond obligation usually for some service: tip.
integers	The set of whole numbers and their opposites.
long division	A standard procedure suitable for dividing simple or complex multi-digit numbers.
markdowns	The amount by which a price is reduced.
markups	An amount added to the cost price to determine the selling price; broadly: profit.
non-zero divisor	A quantity, not including zero, by which another quantity, the dividend, is to be divided.

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number line	A diagram that represents numbers as points on a line.
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 $(0, 0)$ .
percent	A special ratio that compares a number to 100 using the symbol %.
percent decrease	Percent decrease is a measure of percent change, which is the extent to which a variable loses value. It is found by comparing the initial (or before) and final (or after) quantities according to a specific formula. It is assumed that both the initial and the final quantities are positive (larger than 0).
percent error	Percent error is the difference between a predicted value and the actual value. Percent errors tell you how close or how far you came to the actual answer.
percent increase	Percent increase is a measure of percent change, which is the extent to which a variable gains value. It is found by comparing the initial (or before) and final (or after) quantities according to a specific formula. It is assumed that both the initial and the final quantities are positive (larger than 0).
quadrants	The four sections of a coordinate grid that are separated by the axes.
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.
simple interest	A quick method for calculating the interest charge on a loan.
tax	A fee charged by a government on a product, income, or activity.
terminating decimal	A decimal which has a finite number of digits.
$x$ -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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#### Geometry

acute triangle	A triangle with no angle measuring $90^\circ$ or more.
adjacent angle	Two angles in a plane that have a common vertex and a common side. They do not have any common interior points. In other words, they do not share any "inside space."
area	The measure, in square units, of the interior region of a two-dimensional figure or the surface of a three-dimensional figure.
area (circle)	The measure, in square units, of the interior region of a 2- dimensional figure. The formula for the area of a circle, $A = \pi r^2$ .
area (regular polygon)	The area of a polygon is the measurement of the 2-dimensional region enclosed by the polygon.
area (quadrilateral)	Area is the measurement of the 2-dimensional region enclosed by the quadrilateral.
area (triangle)	The area of a triangle is $A = 1/2 bh$ , where $b$ = the base and $h$ = the vertical height.
circumference	The distance around a circle, which equals a little more than three times its diameter.
complementary angles	Two angles are complementary if they add up to $90^\circ$ (right angle). They don't have to be next to each other.
cube	A three-dimensional shape with six square faces.
equilateral triangle	A triangle with all sides the same length.
geometric figure	Any combination of points, lines, planes, or curves in two or three dimensions.
isosceles triangle	A triangle that has exactly 2 congruent sides.
obtuse triangle	A triangle that contains one angle with a measure greater than $90^\circ$ (obtuse angle) and two acute angles.
plane sections	The area created by a plane cutting through a solid.
polygon	A closed plane 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 are parallelograms.
protractor	A tool used to measure and draw angles.
pyramid	A polyhedron whose base is a polygon and whose other faces are triangles that share a common vertex.

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## Geometry

quadrilateral	A four-sided polygon.
right prism	A prism where the lateral faces are at right angles to the base.
right rectangular prism	A prism with 6 rectangular faces where the lateral edge is perpendicular to the plane of the base.
right rectangular pyramid	A pyramid that has its apex aligned directly above the center of its rectangular base.
right triangle	A triangle that has one $90^\circ$ angle.
scalene triangle	A triangle that has no congruent sides.
supplementary angles	If the sum of the measure of two angles is $180^\circ$ , then the two angles are <b>supplementary</b> . If two angles form a straight line, then they are supplementary.
surface area	The total area of the faces (including the bases) and curved surfaces of a solid figure.
surface area (cube)	Surface Area of Cube: Surface Area = $6 \cdot (\text{length of side})^2$
surface area (right prism)	Surface Area of Right Prism: Surface Area = lateral area + area of two ends
triangle	A polygon with three angles and three sides.
vertical angle	A pair of angles is said to be <b>vertical</b> if the angles share the same vertex and are bounded by the same pair of lines but are opposite to each other. Such angles are congruent and thus have equal measure.
volume	The number of cubic units it takes to fill a figure.
volume (cube)	Volume of Cube: Volume = $(\text{side length})^3$
volume (right prism)	Volume of Right Prism: Volume = area of base $\cdot$ length

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#### Statistics and Probability

compound events	Two or more independent events considered together.
data	Information, especially numerical information. Usually organized for analysis.
degree of visual overlap	Describes the separation (or lack of separation) between two distributions.
event	A set of outcomes to which a probability is assigned.
frequency	The number of times an event occurs within a specific time period.
graph	A pictorial device used to show a numerical relationship.
inferences	The act or process of deriving logical conclusions from premises known or assumed to be true.
likely event	An event that is most likely to happen.
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 variation	A measure of how much a collection of data is spread out. Commonly used types include range and quartiles. (Also known as spread or dispersion.)
population	The entire collection of items that is the focus of concern. A population can be of any size and while the items need not be uniform, the items must share at least one measureable feature.
prediction	To state in advance on the basis of observation, experience, or scientific reason.
probability	The chance that a particular outcome will occur, measured as a ratio of the total possible outcomes.
random sample	A selection that is chosen randomly (purely by chance, with no predictability.)
relative frequency	The ratio of the actual number of favorable events to the total possible number of events; often taken as an estimate of probability.
sample space	The set of all possible outcomes of a random process.
simulation	Carrying out a simple experiment to collect data.
spread	A measure of how much a collection of data is spread out. Commonly used types include range and quartiles. (Also known as measures of variation or dispersion.)

