# Alaska Mathematics Standards
# Vocabulary Word List
# Grade 3

| Operations and Algebraic Thinking | |
|---|---|
| add | To combine; put together two or more quantities. |
| addend | Any number being added. |
| arithmetic patterns | A sequence of numbers in which the difference between any two consecutive numbers is the same. |
| array | An arrangement of objects in equal rows. |
| compare | To decide if one number is greater than, less than, or equal to another number. |
| compatible numbers | Numbers that are easy to compute mentally and are close in value to the actual numbers. Compatible numbers can be used when estimating. |
| compose | To put together smaller numbers to make larger numbers. To put together 2 or more shapes to create a new shape. |
| counting number | A whole number that can be used to count a set of objects. Counting numbers do not include 0. (e.g., 1, 2, 3, 4...) |
| decompose | To separate a number into 2 or more parts. |
| difference | The amount that remains after one quantity is subtracted from another. |
| digit | Any of the symbols 0, 1, 2, 3, 4, 5, 6, 7, 8, or 9. (also known as base-ten numerals) |
| divide | To separate into equal groups and find the number in each group or the number of groups. |
| dividend | A number that is divided by another number. |
| divisor | The number by which another number is divided. |
| equal | Having the same value. |
| equation | A number sentence with an equal sign. The amount on one side of the equal sign has the same value as the amount on the other side. |
| estimate | A number close to an exact amount. An estimate tells *about* how much or *about* how many. |
| even number | An even number can be shown as 2 equal parts. An even number has 0, 2, 4, 6, or 8 in the ones place) |
| expression | A mathematical phrase without an equal sign. |

## Operations and Algebraic Thinking

| | |
|---|---|
| fact family | A group of related facts that use the same numbers. (also known as related facts) |
| factor | The whole numbers that are multiplied to get a product. |
| inverse operations | Operations that undo each other. |
| multiple | The product of a whole number and any other whole number. |
| multiply | The operation of repeated addition of the same number. |
| odd number | An odd number *cannot* be shown as two equal parts. An odd number has 1, 3, 5, 7, or 9 in the ones place. |
| Order of Operations | A set of rules that tells the order in which to compute. |
| parentheses | Used in mathematics as grouping symbols for operations. When simplifying an expression, the operations within the parentheses are performed first. |
| partitive division | A division problem where the number of objects in each group is unknown. |
| pattern | A repeating or growing sequence. An ordered set of numbers arranged according to a rule. |
| product | The answer to a multiplication problem. |
| | |
| Properties of Addition | Additive Identity Property of 0 (zero) number. | Adding zero to a given number gives a sum identical to the given 3 + 0 = 3 |
| | Associative Property of Addition (2 + 3) + 4 = 2 + (3 + 4) | Changing the grouping of 3 or more addends does not change the sum. |
| | Commutative Property of Addition 4 = 3 + 4 + 1 | Changing the order of the addends does not change the sum. 1 + 3 + |
| | |

Properties of Multiplication

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

(2 x 4) x 5 = 2 x (4 x 5)

Commutative Property of Multiplication  Changing the order of the factors does not change the product.

1 x 4 x 6 = 6 x 1 x 4

## Operations and Algebraic Thinking

| | | |
|---|---|---|
| Properties of Multiplication continued | | |
| 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 x (4 + 5) = 3 x 4 + 3 x 5 | | |
| | Multiplicative Identity Property of 1 1 x 6 = 6 | Multiplying a factor by one gives a product identical to the given factor. |
| | Zero Property of Multiplication | The product of a factor and zero is 0. 2 x 0 = 0 |
| quotative division | A division problem where the number of groups is unknown. | |
| quotient | The answer to a division problem. | |
| reasonableness | An answer that is based on good number sense. | |
| regroup | To rearrange the formation of a group. | |
| related facts | Related addition and subtraction facts or related multiplication and division facts. (also known as fact family) | |
| repeated addition | Adding equal groups of objects to find the total amount of objects. | |
| repeated subtraction | Subtracting equal groups to find the total amount of groups. | |
| round a whole number | To find the nearest ten, hundred, thousand, (and so on). | |
| skip count | Counting by a given number greater than 1. | |
| subtract | An operation that gives the difference between two numbers. Subtraction can be used to compare two numbers, or to find out how much is left after some is taken away. | |
| sum | The answer to an addition problem. | |
| unknown | A letter, box or ? that represents unknown values (3 x 4 = ?) | |
| variable | A letter or symbol that represents a number. | |
| whole numbers | Whole numbers are 0 and the counting numbers 1, 2, 3, 4, 5, 6, and so on. | |

| Numbers and Operations in Base Ten | |
|---|---|
| algorithm | A step-by-step method for computing. |
| base-ten numeral form | A common way of writing a number using digits. The value of a numeral depends on where it appears in the number. (also known as standard form) |
| base-ten numerals | Any of the symbols 0, 1, 2, 3, 4, 5, 6, 7, 8, or 9. The symbols can represent any amount based on a place value system of grouping by tens. (also known as digits) |
| expanded form | A way to write numbers that shows the place value of each digit. |
| hundreds | The value of a digit that is the third position from the right when describing whole number place value. |
| ones | A single unit or object. |
| place value | The value a digit has because of its place in a number. |
| round a whole number | To find the nearest ten, hundred, thousand, (and so on). |
| standard form | The common or usual way of writing a number using digits. (also known as base-ten numeral form) |
| tens | Sets of ten ones. (i.e., 10, 20, 30, 40, 50, 60, 70, 80, or 90) |

## Numbers and Operations - Fractions

| | |
|---|---|
| denominator | The number written below the line in a fraction. It tells how many equal parts are in the whole. |
| difference | The amount that remains after one quantity is subtracted from another. |
| eighths | The parts you get when you divide something into eight equal parts. |
| equal | Having the same value. |
| equal groups | Groups that contain the same number of objects. Whenever you divide, you separate items into equal groups. |
| equal parts | Parts of an object or group that have divided equally into pieces. |
| equivalent fractions | Fractions that have the same value (e.g. 1/2, 2/4, and 4/8 all have the same value) |
| fourths | The parts you get when you divide something into 4 equal parts. |
| fraction | A way to describe a part of a whole or a part of a group by using equal parts. |
| fraction bar | A 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. |
| halves | The parts you get when you divide something into 2 equal parts. |
| less than | Less than is used to compare two numbers when the first number is smaller than the second number. |
| numerator | The number written above the line in a fraction. It tells how many equal parts are described in the fraction. |
| order | A sequence or arrangement of things. To order fractions, compare to fractions at a time. |
| partition | An action to divide shapes into smaller parts. |
| reasonableness | An answer that is based on good number sense. |
| sixths | The parts you get when you divide something into six equal parts. |
| thirds | The parts you get when you divide something into 3 equal parts. |
| unit fraction | A fraction that has 1 as its numerator. A unit fraction names 1 equal part of a whole. |
| whole | All of an object, a group of objects, shape, or quantity. |

| Measurement and Data | |
|---|---|
| a.m. | A time between 12:00 midnight and 12:00 noon. |
| analog clock | A clock that shows the time by the positions of the hour and minute hands. |
| area | The measure, in square units, of the inside of a plane figure. |
| area model | A model of multiplication that shows the product within a rectangle drawing. |
| axis | The two sides of a graph. |
| bar graph | A graph that uses height or length of rectangles to compare data. |
| bar model | A model that uses bars to represent known and unknown quantities and the relationship between these quantities. |
| centimeter | A metric unit of length equal to 0.01 of a meter. 100 cm = 1 m |
| column | A vertical arrangement of numbers or information in an array or table. |
| coordinate | A position on a graph. |
| customary system | A system of measurement used in the U.S. The system includes units for measuring length, capacity, and weight. |
| data | A collection of information. |
| digital clock | A clock that shows the time with numbers of hours and minutes, usually separated with a colon (:) |
| elapsed time | The amount of time that has passed. (also known as time interval) |
| experiment | An activity that has two or more possible results. (e.g. pulling marbles from a bag) |
| foot | A customary unit of length. 1 foot = 12 inches. |
| frequency table | A table that uses numbers to record data. |
| gram | The standard unit of mass in the metric system. |
| half hour | A unit of time equal to 30 minutes. |
| horizontal bar graph | A graph that uses length of rectangles to compare data. |
| hour | A unit of time. 1 hour = 60 minutes  24 hours = 1 day |
| inch | A customary unit of length. 12 inches = 1 foot |
| interval | The distance between two points. |
| key | A part of a map, graph, or chart that explains what the symbols mean. |
| kilogram | A metric unit of mass equal to 1000 grams. |

| Measurement and Data | |
|---|---|
| length | How long something is. The distance from one point to another. Length is measured in units such as inches, feet, centimeters, etc. |
| liter | The basic unit of capacity in the metric system. 1 liter = 1,000 milliliters |
| mass | The amount of matter in an object. Usually measured by comparing with an object of known mass. While gravity influences weight, it does not affect mass. |
| meter | A standard unit 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. |
| midnight | 12:00 at night. |
| minute | A unit used to measure short amounts of time; there are 60 minutes in one hour. |
| noon | 12:00 in the day. |
| number line | A diagram that represents numbers as points on a line. |
| ordered pair | Two numbers written in a certain order, usually with parentheses (4, 5) |
| p.m. | The time between 12:00 noon and 12:00 midnight. |
| perimeter | The distance around a figure. |
| picture graph | A graph that uses pictures or symbols to show data. |
| quarter hour | A unit of time worth 15 minutes. |
| row | A horizontal arrangement of numbers or information in an array or table. |
| scale | A series of numbers at regular intervals that help label a graph. |
| square unit | A unit, such as square centime or square inch, used to measure area. |
| survey | A way to gather data by asking questions. |
| tally table | A table that uses tally marks to record data. |
| tiling | A pattern of shapes repeated to fill a plane. The shapes do not overlap and there are no gaps. |
| time interval | A duration of a segment of time. (also known as elapsed time) |
| Venn Diagram | A drawing with circles or rings to show how sets of objects are related. |
| vertical bar graph | A graph that uses height of rectangles to compare data. |
| volume (liquid) | The number of cubic units it takes to fill a figure. |

| Geometry | |
|---|---|
| angle | Two rays that share an endpoint. |
| attribute | A characteristic of an object such as color, shape, size, etc. |
| circle | A shape with no sides and no vertices. |
| closed shape | A shape that begins and ends at the same point. |
| decagon | A polygon with 10 sides. |
| endpoint | A point at either end of a line segment, or a point at one end of a ray. |
| hexagon | A polygon with 6 sides. |
| intersecting lines | Lines that cross at a point. |
| line | A set of connected points continuing without end in both directions. |
| line plot | A diagram showing frequency of data on a number line. |
| line segment | A part of a line with two endpoints. |
| net | A pattern that you can cut and fold to make a model of a solid shape. |
| open shape | A figure that does not begin and end at the same point. |
| parallel lines | Lines that are always the same distance apart. |
| parallelogram | A quadrilateral with 2 pairs of parallel and congruent sides. |
| pentagon | A polygon with 5 sides. |
| perpendicular lines | Two intersecting lines that form right angles. |
| plane shape | A shape that is two-dimensional and is formed by curves, line segments, or both. |
| point | The exact location in space represented by a dot. |

| Geometry | |
|---|---|
| polygon | A closed plane shape made by line segments. |
| quadrilateral | A polygon with 4 sides. |
| ray | A part of a line that has one end point and goes on forever in one direction. |
| rectangle | A quadrilateral with 2 pairs of equal, parallel sides and 4 right angles. |
| rectilinear figure | A polygon where all angles are right angles. |
| rhombus | A 4-sdied flat shape with straight sides where all sides are of equal length. |
| right angle | An angle that forms a square corner. |
| rotational turn | A circular movement around a fixed point. |
| side | One of the line segments that makes a polygon. |
| slide-translation | To move a figure with rotating or flipping and the shape still looks exactly the same but in a different place. |
| square | A parallelogram with 4 equal angles AND 4 equal sides. |
| trapezoid | A quadrilateral with 1 pair of parallel sides and 1 pair of sides that are not parallel. |
| triangle | A polygon with 3 sides and 3 angles. |
| two-dimensional shape | A plane, flat shape that has length and width. |
| vertex (plural - vertices) | The point where sides of a shape or angles meet. |
| width | One dimension of a two- or three- dimensional figure. |

Illustrated Mathematics Dictionary – Math is Fun Definitions