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Glossary

Common Core Curriculum Maps

Math/Grade 6 – Grade 8

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Grade 6 – Grade 8

absolute value   Distance of a number (x) from zero on a number line. Because absolute value represents distance, the absolute value of any number must be positive and is never less than zero.

addition property of equality   If a = b, then a + c = b + c.

additive inverse   The number you add to another number to get zero.

adjacent angle   Two angles are adjacent if they have a common side and a common vertex.

angle   The shape formed by two rays (called sides of the angle) with the same endpoint (called the vertex of the angle).

angle sum   The total of all of the angles in a figure.

approximate   Approximate is an estimation of a number or rounding a number to its nearest place value.

area   The measure (usually in square units) of the interior region of a two-dimensional figure.

area (of a circle)   The size of the surface of a circle. Formula: Area = πr^2

axis   A reference line from which distances or angles are measured in a coordinate grid. (plural – axes)

bivariate data   Pairs of linked numerical observations. Example: a list of heights and weights for each player on a football team.

box plot   A diagram that divides a set of data into four parts: lower quartile, below the mean (average), above the mean, and highest quartile.

center   The center of a circle is the point inside the circle, from which all points on the circle are the same distance.

circumference   The distance around a circle. Formula: $2 \pi r$ or πd

clustering   Cluster analysis or clustering is the task of assigning a set of objects into groups (called clusters) so that the objects in the same cluster are more similar (in some sense or another) to each other than to those in other clusters.

coefficient   A numerical factor in a term of an algebraic expression.

complementary angle   Any two angles such that the sum of their measure is 90 degrees.

complex fraction   A fraction A/B where A and/or B are fractions (B nonzero).

compound event   Two or more independent events considered together.

cone (volume formula)   Cone is a three-dimensional figure that has one circular base and one vertex. The volume of a cone is 1/3(Area of Base)(height) = 1/3 π r2 h

congruence   In geometry, two figures are congruent if they have the same shape and size.

convert   To change from one unit to another.

coordinate plane   A two-dimensional plane in which a location is described by its distances to two perpendicular reference lines (axes). The horizontal axis is the x-axis and the vertical axis is the y-axis.

cube root   A number that must be multiplied times itself three times to equal a given number.

cylinder (volume formula)   A three-dimensional geometric figure with parallel congruent bases. The bases can be shaped like any closed plane figure, not necessarily a circle. The volume of a cylinder equals the (area of the base)*height = π r2 h

data set   A collection of facts or information from which conclusions may be drawn.

decimal   A number written with place value instead of fractions or mixed numbers.

dependent variable   A variable that relies on the value of another variable.

dilation   A transformation in which a figure grows larger. Dilations may be with respect to a point (a geometric figure) or an axis related to the graph of a geometric figure.

distribution   In statistics, data can be distributed (spread) in different ways.

distributive property   A property of real numbers stating that a · (b+c) = (a · b) + (a · c) Example: 3 · (40 + 5) = (3 · 40) + (3 · 5)

division property of equality   If a = b and c ≠ 0, then a ÷ c = b ÷ c.

divisor   The number that you divide by in division. In 12 ÷ 3, 3 is the divisor.

dot plot   A statistical chart consisting of plotted data points plotted on a simple scale, typically using filled in circles, that show the relationship between two sets of data.

edge   The line segment where two faces of a solid figure meet.

equation   A number sentence that shows two or more expressions are equivalent. Example: 4 + 8 = 6 + 7

equation   A number sentence that shows two or more expressions are equivalent. Example: 4 + 8 = 6 + 8

equivalent   Having the same value.

equivalent numerical expression   Two numerical expressions are said to be equivalent if their values are the same.

equivalent ratio   If two ratios have the same value when simplified, then they are called equivalent ratios.

evaluate   To find the value of a numerical expression or equivalent for (an equation, formula, or function).

event   A set of outcomes to which a probability is assigned.

exponent   A numeral written above and to the right of another numeral to indicate how many times the original number is used as a factor.

expression   A combination of variables, numbers, and/or operations that represents a mathematical relationship but no statement of equality or inequality.

exterior angle   An exterior angle of a polygon is the angle formed when one side is extended beyond its adjacent sides. When two lines are cut by a third line (transversal), then the angles formed outside the lines are called exterior angles.

factor   One of two or more numbers that are multiplied together to obtain a product; factor x factor = product Example: 4 x 3 = 12, 4 and 3 are factors.

formula   Numbers and symbols that show how to work something out. For example: The formula for finding the volume of a box is "V = w × d × h" (V stands for volume, w for width, d for depth and h for height).

fraction   Part of a group or whole: A way of representing a 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; it is written in the form numerator/denominator.

fractional   Of, relating to, or being a fraction

frequency   The number of occurrences of a particular item in a set of data.

function   A relation in which every input (domain) value is paired with exactly one output (range) value. Functions can be represented in many different ways, including ordered pairs, tables, graphs, equations, and words.

geometric figure   A geometric figure is any set of points on a plane or in space.

greatest common factor   The largest factor of two or more numbers. Example: to find the greatest common factor of 24 and 36 factors of 24 {1, 2, 3, 4, 6, 8, 12, 24} factors of 36 {1, 2, 3, 4, 6, 9, 12, 18, 36}. The common factors of 24 and 36 are {1, 2, 3, 4, 6, 12}, the larg

histogram   A graphical representation that shows the frequency of data in intervals of equal size. The height of each bar contributes to a visual impression of the distribution of data at each interval.

hypotenuse   In any right triangle, the side opposite the right angle; the hypotenuse is always the longest side of the right triangle because it is opposite the angle of greatest measure (90º).

independent variable   A variable that does not depend on another variable.

inequality   A mathematical sentence that compares two expressions that may or may not be equivalent; uses one of these symbols $\neq, \leq, \geq, <, >$

integer   The counting numbers (1, 2, 3,...), their opposites (-1, -2, -3,...), and zero.

integer exponent   If a is any real number and n is any positive integer, then by an we mean the quantity a.a. . . . a (n times); thus, a1 = a, a2 = a.a, a5 = a.a.a.a.a

interquartile range   The difference between the first quartile and third quartile of a set of data. This is one way to describe the spread of a set of data.

intersection   Two lines are said to intersect when they cross each other or meet at a single point, called an intersection.

irrational   A number that cannot be written as the ratio of two integers; when written as a decimal, the digits of an irrational number neither terminate nor repeat.

least common multiple   The smallest number, besides zero, that is a multiple of a set of two or more numbers.

like terms   In algebraic expressions, like terms are terms that contain the same variables raised to the same power. Only the coefficients of like terms are different. Like terms can be combined to form a single term.

line   A straight path that goes on forever in opposite directions.

line plot   A line plot shows data on a number line with x or other marks to show frequency.

line segment   A part of a line. A line segment has two endpoints.

linear association   In statistics, a measure of the association between the horizontal variable and the vertical variable. It gives information about how tightly packed the data points are about the regression line.

linear equation   An equation of degree 1; graph is a line; shows a relationship between two variables; an equation of the form y = mx + b where a and b are real numbers.

magnitude   The length of a vector.

mean   A measure of central tendency which is affected by all data points (with the possible exception of outliers); calculated by finding the sum of the data values and dividing by the number of data points.

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.

measurement The size, length, or amount of something, as established by measuring.

median The number in the middle of a set of data arranged in order from least to greatest or from greatest to least; or the average of the two middle terms if there is an even number of terms.

multiplication property of equality If a = b, then a × c = b × c.

negative Negative numbers are real numbers that are less than zero. On a number line, numbers to the left of zero are all negative numbers.

negative association A relationship in paired data in which one variable's values tend to increase when the other decreases, and vice-versa. In a scatterplot, negatively associated data tend to follow a pattern from the upper left to the lower right.

nonlinear association In statistics, the data does not cluster around a straight line.

not equal (≠) If two values are definitely not equal, we use the "not equal to" sign (≠).

opposite Additive inverses - they are the same distance from zero on the number line; two numbers that add to zero.

order of operations A set of rules that states the order in which operations should be done. Compute inside parentheses and other grouping symbols first. Simplify all exponents, and then multiply and divide from left to right. Finally, add and subtract from left to right.

ordered pair A pair of numbers that shows the position of a point on a coordinate grid.

outlier A value in a data set that is much higher or lower than the rest; a point which falls more than 1.5 times the interquartile range above the third quartile or below the first quartile.

parallel lines Lines going in the same direction and always being the same distance apart. If lines are parallel, they never meet or cross each other.

percent Per cent means per one hundred; a special ratio in which the denominator is always 100.

perfect square Any natural number that can be expressed as a natural number multiplied by itself.

point A single exact location on a plane or in space having no dimensions and often represented by a dot.

polygon A simple, closed, plane figure with three or more sides that are line segments.

positive — Positive numbers are real numbers that are greater than zero. On a number line, numbers to the right of zero are all positive numbers.

positive association — A relationship in paired data in which the two sets of data tend to increase together or decrease together. In a scatterplot, positively associated data tend to follow a pattern from the lower left to the upper right.

probability — For an experiment, the total number of successful events divided by the total number of possible events.

probability distribution — The set of possible values of a random variable with a probability assigned to each.

probability model — A probability model is used to assign probabilities to

outcomes of a chance process by examining the nature of the process. The set of all outcomes is called the sample space, and their probabilities sum to 1.

product — The result of a multiplication expression; factor x factor = product. Example: 3 x 4 = 12, 12 is the product.

proportional — A proportion is an equation written in the form stating that two ratios are equivalent. In other words, two sets of numbers are proportional if one set is a constant times the other.

protractor — A device for measuring and drawing angles.

Pythagorean Theorum — A theorem defining the relationship between the lengths of the three sides of a right triangle; a2 + b2 = c2 where a and b are the lengths of the legs of the right ngle and c is the length of the hypotenuse.

quadrant — Any quarter of a plane divided by an x- and y-axis.

quantity — A certain amount or number of something

quotient — The answer when you divide numbers. In 12 ÷ 3 = 4, 4 is the quotient.

rate — Rate is a ratio that compares two quantities of different units. For example, 1 gallon of juice for $4, miles per hour, cost per pound, etc.

ratio — A comparison of any two quantities; may be expressed as a : b or a to b or a/b

rational number — The set of numbers that can be expressed as a ratio of two integers.

reflections — Transformations in which all points under than transformation are mirrored over a line of reflection.

reflexive property of equality — a = a

relative frequency — The ratio of the observed frequency of some outcome and the total frequency of the random experiment. Suppose a random experiment is repeated N times and some outcomes is observed f times, then the ratio f/N is called the relative frequency of the outcome

repeating decimal   The decimal form of a rational number.

right rectangular prism   A prism that has two bases, one directly above the other, and that has its lateral faces as rectangles.

right rectangular pyramid   A right pyramid with a base that is a regular polygon.

right triangles   A triangle that has one 90° angle. The other two angles will add up to 90°

rotation   A transformation in which all points under the transformation are turned through an angle of rotation about a center of rotation.

sample space   The set of all possible outcomes of an experiment. Example: a coin is flipped. Sample space = { heads, tails }

scale drawing   A drawing that shows a real object with accurate sizes except they have all been reduced or enlarged by a certain amount (called the scale).

scatter plot   A graph of paired data in which the data values are plotted as points in (x, y) format.

scientific notation   A standardized way of writing real numbers. In scientific notation, all real numbers are written in the form a x 10b where $1 \leq a < 10$ and b is an integer.

similar triangle   Similar triangles are triangles that have the same shape but not necessarily the same size.

slope   Slope is the measure of steepness of a line. Slope is equal to the change in the y-coordinates divided by the change in the x-coordinates of a line, or rise/run.

special quadrilateral   Four-sided polygons that have special properties (trapezoids, kites, parallelograms, rectangles, rhombuses, and squares).

sphere (volume formula)   A three-dimensional figure with all points in space a fixed distance from a given point, called the center. Formula: Volume = (4/3) × π × r3

spread   A measure of spread shows how much a data sample is spread out or scattered.

square root   A nonnegative number that must be multiplied by itself to equal a given number.

statistics   The science of collecting, organizing, and analyzing data.

substitution   In Algebra, substitution means putting numbers where the letters are in equations.

substitution property of equality   If a = b, then b may be substituted for a in any expression containing a.

subtraction property of equality   If a = b, then a – c = b – c.

sum   The result of addition. In the addition equation, 3 + 2 = 5, 5 is the sum.

supplementary angle   Two angles with measures adding to 180°. One angle is said to be the supplement of the other angle.

surface area   The total area of the exterior of a three-dimensional geometric figure; the lateral area added to the area of the base.

symmetric property of equality   If a = b, then b = a.

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.

term   Parts of an expression separated by + or - signs.

terminating decimal   A decimal is called terminating if its repeating digit is 0.

transitive property of equality   If a = b and b = c, then a = c.

translation   A transformation of a figure by moving it without turning or flipping it in any direction; the effect of a slide is a translation.

tranversal   A transversal is a line that crosses at least two other lines.

tree diagram   A way of organizing outcomes in order to identify probabilities; shows all the possible outcomes of an event.

triangle   A polygon with three sides and three corners or vertices.

uniform probability model   A probability model which assigns equal probability to all outcomes.

unit   A quantity used as a standard of measurement.

unit cube   A unit cube is a cube all of whose sides are 1 unit long.

unit fraction   A fraction where the the numerator is 1 .

unit price   The cost per unit of an item you wish to purchase.

unit rate   The ratio of two measurements in which the second term is 1.   For example, William can pack 60 toys in 4 hours. The unit rate with which he packs toys is 60/4, or 15 toys per 1 hour.

variability   The extent to which data points in a statistical distribution or data set diverge from the average or mean value.

variable   In a mathematical sentence, a variable is a symbol used to represent an unknown number or a number that varies, usually a lower case letter; y, a, b, x.

vertical angle   Angles formed by intersecting lines. Vertical angles have a common vertex and are congruent.

vertices (corners)   The plural version of vertex; the point on an angle where the two sides intersect.

volume   The total amount of space inside a three-dimensional object. Volume is measured in cubic units.

y = mx + b   The equation of any straight line, called a linear equation, can be written as: y = mx + b, where m is the slope of the line and b is the y-intercept. The y-intercept of this line is the value of y at the point where the line crosses the y axis