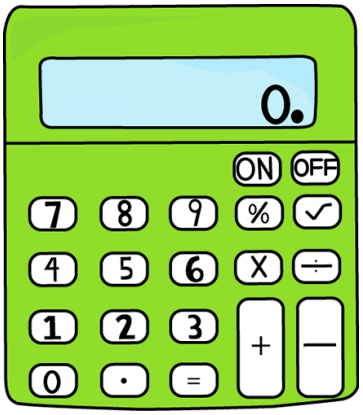
Ratios & Proportional Relationships



6th Grade—"I Can Do Math"

I can understand ratios and can use that understanding to solve problems.

6. RP. 1 □ I can use what I know about ratios to describe the relationship between two quantities.
6. RP. 2 □ I can understand how to find a rate when given a specific ratio (e.g. we paid $75 for 15 hamburgers, which is a rate of $5 per hamburger).
6. RP. 3 □ I can use reasoning to solve word problems involving rates and ratios.
6. RP. 3 .a □ I can make tables of equivalent ratios, find missing values in the tables, and use the tables to compare ratios.
6. RP. 3 .a □ I can plot ratios on a coordinate plane.
6. RP. 3 .b □ I can solve unit rate problem (e.g. If it took 7 hours to mow 4 lawns, then at that rate, how many lawns could be moved in 35 hours? At what rate were the lawns being mowed?)
6. RP. 3 .c □ I can find a percent of a quantity as a rate per 100. (e.g. 30% of a quantity means 30/ 100 times the quantity.)
6. RP. 3 .c □ I can solve problems involving finding the whole if I am given a part and the percent.
6. RP. 3 .d □ I can use what I know about ratios to covert units of measurement.
6. RP. 3 .a □ I can change units of measurement correctly when multiplying or dividing quantities.

The Number System

6th Grade—"I Can Do Math"

I can apply what I have learned about multiplication and division to the division of fractions.

6.NS. 1 □ I can interpret and solve for quotients of fractions.

6.NS. 1.a □ I can apply strategies of fractions to represent fraction problems.

6..NS. 1.b □ I can solve word problems involving the division of fractions by fractions.

6..NS. 1.c □ I can explain the meaning of quotients when solving fraction division problems.

6..NS. 2 □ I can fluently divide multi-digit numbers using standard equations.

6. NS. 3 □ I can easily add, subtract, multiply, and divide multi-digit decimals using standard operations.

6. NS. 3. a □ I can easily divide multi-digit decimals that are limited to a whole number dividend with a decimal divisor using standard operations.

6. NS. 3. b □ I can solve division problems when the dividend and divisor are both multi-digit decimals.

6. NS. 4 □ I can find the greatest common factor between two whole numbers that is less than or equal to 100.

6. NS. 4 □ I can find the least common multiple of two whole numbers that is less than or equal to 12.

6. NS. 5 □ I can understand how positive and negative numbers are used together to describe quantities that have opposite directions or values.

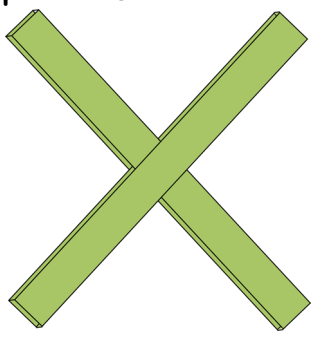
6. NS. 5 □ I can use positive and negative numbers in real-world contexts.

6.NS. 6 □ I can understand a rational number as a point on the number line.

6.NS. 6 .a □ I can recognize opposite signs of numbers as showing places on opposite sides of 0 on the number line.

6.NS. 6 .a □ I can recognize that the opposite of the opposite of a number is actually the number itself (ex: – (–3) = 3).

6.NS. 6 .a □ I can recognize that 0 is it's own opposite.



The Number System (cont.)

6th Grade—"I Can Do Math"

6.NS. 6 .b □ I can understand that the signs (- or +) of numbers in ordered pairs indicate locations in quadrants of the coordinate plane.

6.NS. 6 .b □ I can recognize two ordered pairs with differing signs as reflections of each other across one or both axes.

6.NS. 6 .c □ I can find and place integers and other rational numbers on a number line diagram.

6.NS. 6 .c □ I can find and place ordered pairs on a coordinate plane.

6.NS. 7 □ I can order rational numbers.

6.NS. 7 □ I can understand absolute value of rational numbers.

6.NS. 7.a □ I can understand statements of inequality (e.g. $-3 > -1$ and explain their positions and distances apart on a number line).

6.NS. 7. b □ I can write, understand, and explain how the order of rational numbers applies in real-world situations.

6.NS. 7. c □ I can understand the absolute value of a number as its distance from 0 on the number line.

6.NS. 7. c □ I can understand absolute values as they apply to real-world situations (e.g. for an account balance of –30 dollars, write $(-30) = 30$ to describe the size of the debt in dollars).

6.NS. 7. d □ I can tell the difference between comparison of absolute value from statements of order.

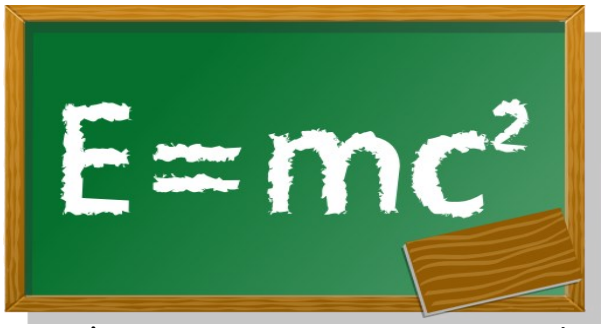
6.NS. 8 □ I can graph points in all four quadrants of the coordinate plane to help me solve real-world and mathematical problems.

6.NS. 8 □ I can use what I know about coordinates and absolute values to figure out the distance between points with the same first coordinate or the same second coordinate.

Expressions & Equations

6th Grade—"I Can Do Math"

I can apply my understanding of arithmetic to algebraic expressions (number sentences that contain unknowns).



6. EE. 1 □ I can write and figure out numerical expressions that have whole-number exponents.
6. EE. 2 □ I can read, write, and figure out expressions in which letters stand for numbers.
6. EE. 2. a □ I can write expressions with numbers and with letters standing for numbers.
6. EE. 2. b □ I can name the parts of an expression using mathematical words (e.g. sum, term, product, factor, quotient, coefficient).
6. EE. 2. b □ I can look at one or more parts on an expression in different ways.
6. EE. 2. c □ I can figure out different answers to expressions when given specific values for the variable.
6. EE. 2. c □ I can solve real-world math problems involving expressions that arise from formulas.
6. EE. 2. c □ I can solve math problems including those with exponents, in the usual order (when no parentheses are there to give a particular order).
6. EE. 3 □ I can apply what I know about the properties of operations (associative, commutative, distributive) to create equivalent expressions.
6. EE. 4 □ I can recognize when two expressions are equivalent.

Expressions & Equations (cont.)

6th Grade—"I Can Do Math"

I can think about and solve one-variable equations and inequalities.

6. EE. 5 □ I can understand that solving an equation or inequality means that I find out which values can make the equation or inequality true.

6. EE. 5 □ I can try different numbers in place of a variable to figure out which makes the equation or inequality true.

6. EE. 6 □ I can use variables to represent numbers and write expressions to solve real-world problems.

6. EE. 6 □ I can understand that a variable can stand for an unknown number or any number in a given set of numbers.

6. EE. 7 □ I can solve real-world and mathematical problems by writing and solving equations of the form $x + p = q$ and $px = q$, where p, q, and x are all nonnegative rational numbers.

6. EE. 8 □ I can write an inequality ($x > c$ or $x < c$) to stand for a limitation or condition in a real-world or mathematical problem that has infinitely many solutions.

I can write and analyze numerical relationships between dependent and independent variables.

6. EE. 9 □ I can use variables that change in relationship to one another to represent two quantities in a real world problem.

6. EE. 9 □ I can write an equation to show one quantity (the dependent variable) in terms of the other quantity (the independent variable).

6. EE. 9 □ I can use graphs and tables to show the relationship between dependent and independent variables.

Statistics & Probability

6th Grade—"I Can Do Math"

I can develop an understanding of the variables involved in statistics.

6.SP.1 □ I can recognize a statistical question as one that expects variability in the data related to the question.

6.SP.2 □ I can understand that a set of data collected to answer a statistical question has a distribution that can be described by its center, spread, and overall shape when plotted on a graph.

6.SP.3 □ I can understand that a set of numerical data has a measure of center median and/or mean) that summarizes all of it's values with a single number.

I can summarize and describe distributions.

6.SP.4 □ I can understand that a distribution of a variable is the description of the relative number of times each possible outcome will occur.

6.SP.4 □ I can show numerical data in plots on a number line (including dot plots, histograms, and box plots).

6.SP.5 □ I can summarize sets of numerical data in relation to their circumstances.

6.SP.5.a □ I can summarize data by stating the number of observations.

6.SP.5.b □ I can summarize data by describing the characteristics of what is being investigated, including how it was measured.

6.SP.5.c □ I can summarize data by giving numerical measures of center and variability.

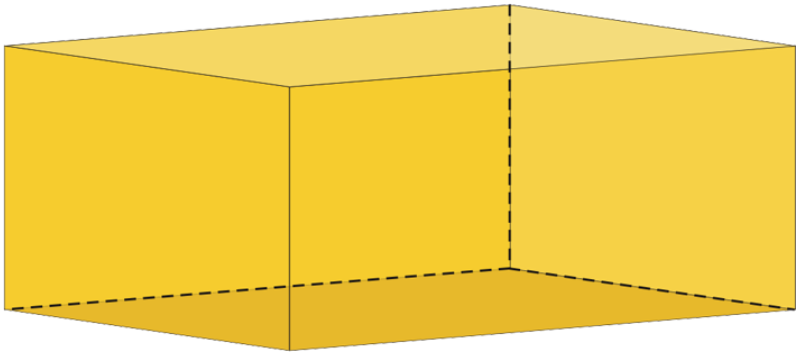
6.SP.5.c □ I can summarize data by describing the overall pattern of the data and noticing unusual deviations from the overall pattern.

6.SP.5.d □ I can summarize data by explaining how the distribution of the data on a graph relates to the choice of measures on center and variability.

Geometry

6th Grade—"I Can Do Math"

I can use geometry to help me understand math.



6.G. 1 □ I can put together and take apart shapes to help me find the area of right triangles, other triangles, special quadrilaterals, and polygons.

6.G. 1 □ I can apply what I know about taking apart and putting together shapes to find the area of objects or places in real world situations.

6.G. 2 □ I can use unit cubes to find the volume of any right rectangular prism.

6.G. 2 □ I can understand that the mathematical formula (v = l w h or v = b h) will give me the same result as using unit cubes to figure out the volume.

6.G. 2 □ I can use the mathematical formulas v= l w h or v=b h to determine the volume of real world objects.

6.G. 3 □ I can draw polygons in the coordinate plane when I am given the coordinates to find the length of a side of a polygon joining points with the same first coordinate or the same second coordinate.

6.G. 3 □ I can apply what I have learned about polygons on coordinate planes to real-world and mathematical situations.

6.G. 3 □ I can draw polygons on a coordinate plane when given the coordinate vertices.

6.G. 4 □ I can represent and figure out the surface area of a three dimensional shape by using nets made up of rectangles and triangles.

6.G. 4 □ I can apply my skills involving finding surface area with nets in real-world and mathematical problems.