"I Can" Mascoma Standards
# 6ᵗʰ Grade Math

I Can Use Ratios & Proportional Relationships to Help Me Understand Math

✓ I can understand ratios and the language used to describe two amounts. (6.RP.A.1)

✓ I can understand how to find a rate when given a specific ratio. (Ex: We paid $75 for 15 hamburgers, which is a rate of $5 per hamburger.) (6.RP.A.2)

✓ I can solve word problems related to ratios in order to figure out the rate.(6.RP.A.3)

✓ I can make tables of equivalent ratios, find missing values in the tables, plot those values on a coordinate plane, and use the tables to compare ratios. (6.RP.A.3a)

✓ I can solve unit rate problems. (Ex: If it took 7 hours to mow 4 lawns, then at that rate, how many lawns could be mowed in 35 hours? At what rate were the lawns being mowed?) (6.RP.A.3b)

✓ I can find a percent of a quantity as a rate per 100. (Ex: 30% of a quantity means 30/100 times the quantity). (6.RP.A.3C)

✓ I can solve problems involving finding the whole if I am given a part and the percent. (6.RP.A.3C)
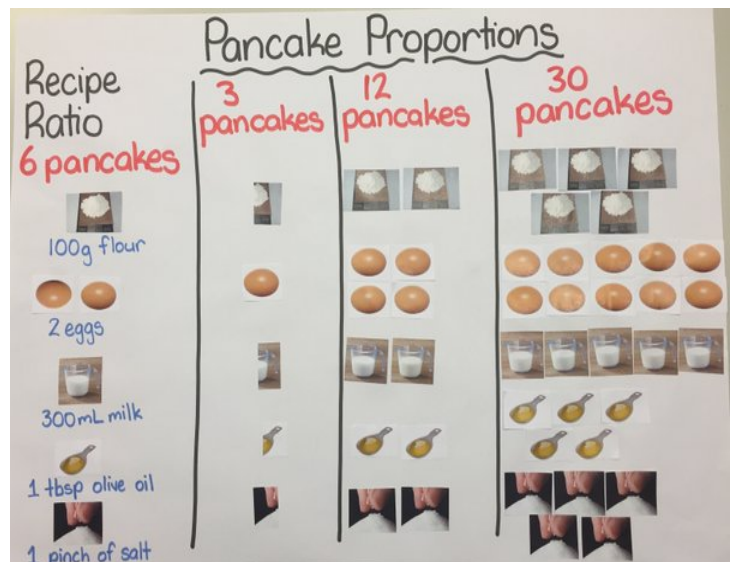
✓ I can use what I know about ratios to convert units of measurement. (6.RP.A.3d)

I Can Use the Number System to Help Me Understand Math

✓ I can divide two fractions. (6.NS.A.1)
✓ I can solve word problems involving the division of fractions by fractions. (6.NS.A.1)
✓ I can divide multi-digit numbers. (6.NS.B.2)
✓ I can add, subtract, multiply and divide multi-digit numbers involving decimals. (6.NS.B.3)
✓ I can find the greatest common factor of two whole numbers less than or equal to 100. (6.NS.B.4)
✓ I can find the least common multiple of two whole numbers less than or equal to 12. (6.NS.B.4)
✓ I can use the distributive property to show the sum of two whole numbers 1-100 in different ways. (EX: show 36 + 8 as 4(9+2). (6.NS.B.4)

Multiples of 3:

0, 3, 6, 9, 12, 15, 18, 21, 24 ...

Multiples of 4:

0, 4, 8, 12, 16, 20, 24, 28 ...

The LCM of 3 and 4 is 12.

✓ I can understand that positive and negative numbers are used to describe amounts having opposite values. (6.NS.C.5)
✓ I can use positive and negative numbers to show amounts in real-world situations and explain what the number 0 means in those situations. (6.NS.C.5)
✓ I can understand that a rational number is a point on a number line. (6.NS.C.6)
✓ I can extend number line diagrams to show positive and negative numbers on the line and in the plane. (6.NS.C.6)
✓ I can recognize opposite signs of numbers as indicating places on opposite sides of zero on the number line.) (6.NS.C.6a)

✓ I can understand signs of numbers in ordered pairs as indicating locations in quadrants of the coordinate plane. (Ex: when two ordered pairs differ only by signs, the locations appear to be reflections of each other on the coordinate plane.)(6.NS.C.6b)

✓ I can place integers and other numbers on a number line diagram. (6.NS.C.6c)

✓ I can place ordered pairs on a coordinate plane. (6.NS.C.6c)

✓ I can order positive and negative numbers. (6.NS.C.7)

✓ I can understand absolute value of rational numbers. (6.NS.C.7)

✓ I can understand the distance between two numbers (positive or negative) on a number line. (6.NS.C.7a)

✓ I can write, understand and explain what rational numbers mean in real-world situations. (Ex: -3 ¢XC > -7¢XC to show that -3 ¢XC is warmer than -7¢XC) (6.NS.C.7b)

✓ I can find absolute value of the number as positive distance from 0 on the number line. (6.NS.C.7c)

✓ I can understand absolute values as they apply to real-world situations. (Ex: for an account balance of -30 dollars, write (-30) =30 to describe the size of the debt in dollars.) (6.NC.C.7C)

✓ I can tell the difference between comparing absolute values and ordering positive and negative numbers. (6.NS.C.7d)

✓ I can graph in all four quadrants of the coordinate plane to help me solve real world and mathematical problems. (6.NS.C.8)

✓ I can determine the distance between points in the same first coordinate or the same second coordinate. (6.NS.C.8)

I Can Use Expressions and Equations to Help Me Understand Math

✓ I can write and understand numerical expressions involving whole number exponents. (6.EE.A.)
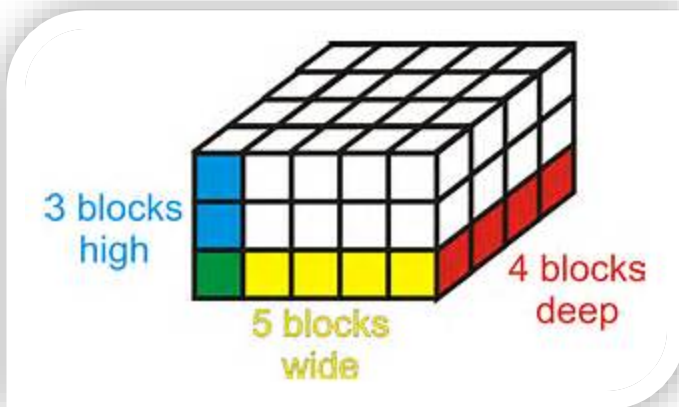
- ✓ I can write, read and figure out expressions in which letters stand for numbers. (6.EE.A.2)
- ✓ I can write expressions using numbers and letters (with the letters standing for numbers.) (6.EE.A.2a)
- ✓ I can identify the parts of an expression using mathematical words (sum, term, product, factor, quotient, co-efficient.) (6.EE.A.2b)
- ✓ I can understand that in 2(8 + 7), (8 + 7) can be thought of as two separate numbers or as 15. (6.EE.A.2b)
- ✓ I can understand that in 2(8 + 7), (8 + 7) can be thought of as two separate numbers or as 15. (6.EE.A.2b)
- ✓ I can determine the answer to expressions when given the specific value of a variable. (6.EE.A.2c)
- ✓ I can use my knowledge of the order of operations to evaluate expressions. (6.EE.A.2)
- ✓ I can use my knowledge of the order of operations to create equivalent expressions. (6.EE.A.3)
- ✓ I can identify when two expressions are equivalent. (6.EE.A.4)
- ✓ I can understand that solving an equation or inequality is like answering a question. (6.EE.B.5)
- ✓ I can use variables to represent numbers and write expressions when solving real world problems. (6.EE.B.6)
- ✓ I can solve real-world and mathematical problems by writing and solving equations. (6.EE.B.7)
- ✓ I can write an inequality which has many solutions and represent these solutions on a number line (where x>c or x<c). (6.EE.B.8)
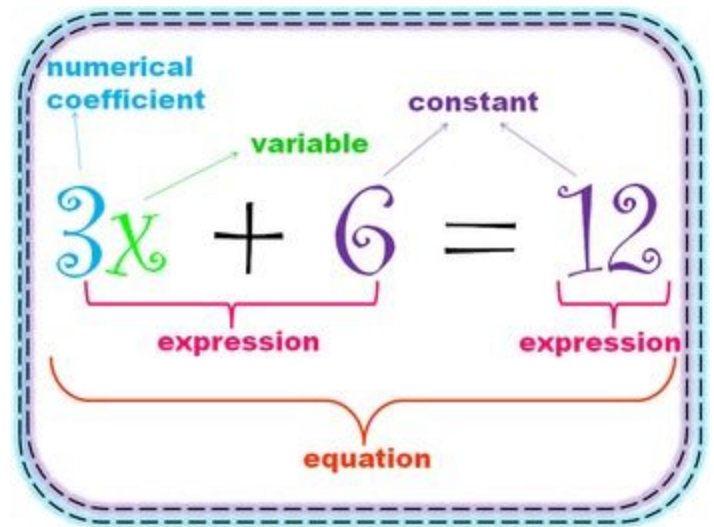
- ✓ I can use variables to represent two quantities in a real world problem and write an equation to express the quantities. (6.EE.C.9)
- ✓ I can use graphs and tables to show the relationship between dependent and independent variables. (6.EE.C.9)

I Can Use Geometry to Help Me Understand Math

- ✓ I can put together and take apart shapes to help me find the area of right triangles, other triangles, special quadrilaterals and polygons. I can make a line plot to display data sets of measurements in fractions. (6.G.A.1)
- ✓ I can apply what I know about taking apart and putting together shapes to find the area in real world situations. (6.G.A.1)

3 blocks high
5 blocks wide
4 blocks deep

- ✓ I can use unit cubes to find the volume of a right rectangular prism and I understand that the mathematical formula ($V = l$ w h or $V = b$ h) will give me the same result. (6.G.A.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.A.2)
- ✓ I can draw polygons in the coordinate plane when I am given the coordinates for the vertices. (6.G.A.3)
- ✓ I can use the coordinates of the vertices of a polygon on the coordinate plane to find the length of a side, joining points with the same first coordinate or the same second coordinate. (6.G.A.3)
- ✓ I can apply what I have learned about polygons on coordinate planes to real world and mathematical situations. (6.G.A.3)

- ✓ I can show how three dimensional figures can be made using two dimensional nets. (A net is the pattern made when the surface of a three dimensional figure is laid out flat). (6.G.A.4)
- ✓ I can figure out the surface area of a three dimensional shape by using a net. (6.G.A.4)

I Can Use Statistics to Help Me Understand Math

- ✓ I understand that the data in questions involving statistics is varied as it relates to the question and answers. (6.SP.A.1)
- ✓ I understand that a set of data collected to answer a statistical question has an overall shape, including a center and spread, when plotted on a graph. (6.SP.A.2)
- ✓ I understand that a set of numerical data has a measure of center (median and/or mean) that summarizes all of its values with a single number. (6.SP.A.3)
- ✓ I understand that in a set of numerical data, the measure of variation describes how its values vary with a single number. (6.SP.A.3)
- ✓ I can show numerical data on a number line. (6.SP.B.4)
- ✓ I can summarize sets of numerical data that are different. (6.SP.B.5)
- ✓ I can summarize data by stating the number of observations. (6.SP.B.5a)
- ✓ I can summarize data by describing the characteristics of what is being investigated, including how it was measured. (6.SP.B.5b)

- ✓ I can summarize data by giving numerical measures of center and variability. (6.SP.B.5c)
- ✓ I can summarize data by describing the overall pattern of the data and noticing unusual deviations from the overall pattern. (6.SP.B.5c)
- ✓ I can summarize data by explaining how the distribution of the data on a graph determines its measure of center (median and/or mean). (6.SP.B.5d)