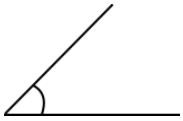
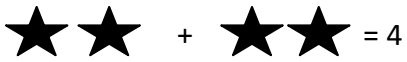
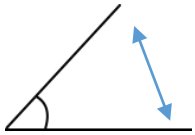
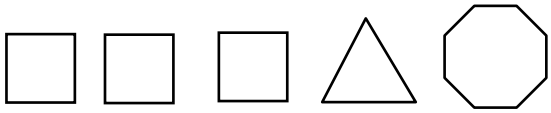
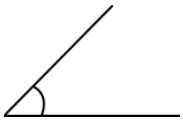
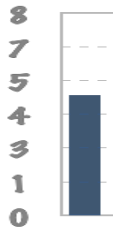
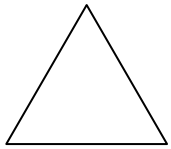
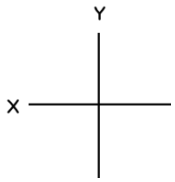
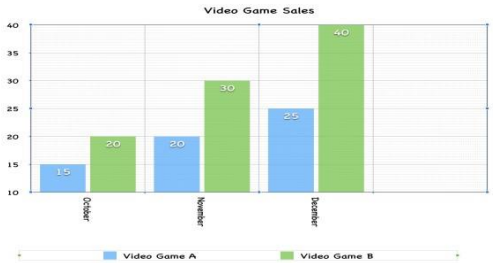
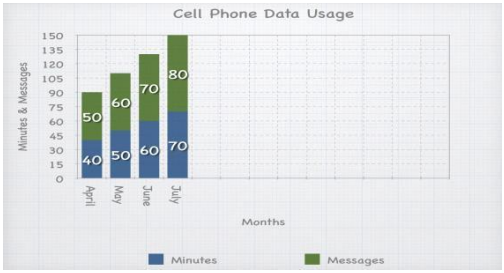
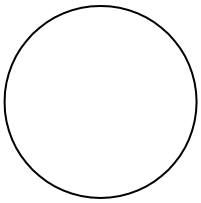
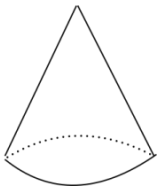
Academic Vocabulary
Mathematics

Word	Definition	Examples
acute angle	A mathematical term that refers to an angle less than 90°.	
add	A mathematical term used when two more objects are combined to make a new total.	
adjacent	A mathematical term that means next to each other.	
all	A mathematical term that cues students to add a group of items.	How many polygons are there in *all*? 
angle	A mathematical term that refers to the amount of space between two straight lines that have a common end point. Angles are measured in degrees.	
approximate	A mathematical term that means not exact but close enough.	
area	A mathematical term used to describe the square units of a surface.	Find the *area* of the rectangle. A=bh  3in. 5 in.

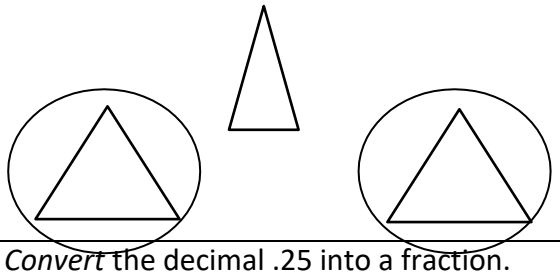
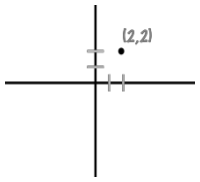
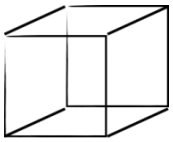
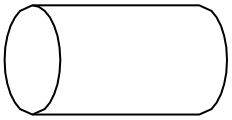
Academic Vocabulary
Mathematics

arrange	A mathematical term that means to move objects/items into a specific order or position.	*Arrange* the following numbers from greatest to least: 8, 3, 9 Answer: <u>9, 8, 3</u>
array	A mathematical term that refers to the placement of objects, pictures, or numbers in columns and rows.	Draw an *array* for 3 x 5. X X X X X X X X X X X X X
attributes	A mathematical term that focuses on the characteristics an object (i.e., color, shape, & size).	 A triangle has 3 sides.
average	A mathematical term that means a number that is calculated by adding quantities together and then dividing the total by the number of quantities.	Find the *average* for the following numbers: 2, 3, 5, 9 Step 1: Add all of the numbers in a set 2 + 3+ 5+ 6 = 16 Step 2: Divide that answer by the total number of quantities in the set (4) 16/4=4 Answer: <u>4</u>
axis	Axis is a mathematical term that refers to a reference line drawn on a graph. x- axis - horizontal number line y-axis – vertical number line	
bar graph	A bar graph is a visual representation of data using bars of different heights.	

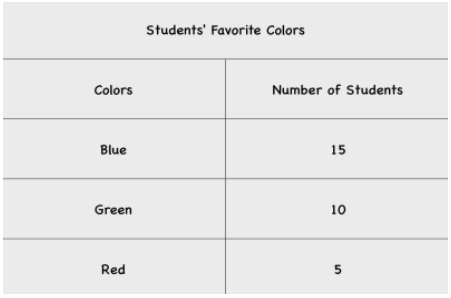
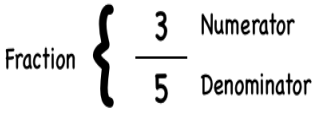
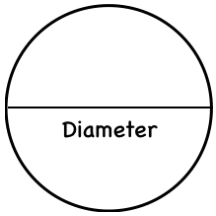
Academic Vocabulary
Mathematics

beginning	A mathematical term that means the first part of something.	Which of the following is the *beginning* number? 3, 7, 9 Answer: 3
bivariate	A mathematical term that means data for two variables that are usually related.	
categorize	A mathematical term that means to arrange objects into certain groups.	Which of these measurements is a right angle? a.) 75° b.) 90° c.)180°
circle	A mathematical term that refers to a shape in which all points are the same distance from the center.	
coins	A mathematical term used to refer to metals shaped as a circle used as a way to pay for goods and services.	P N D Q
compare	A mathematical term that means to find similarities among a set of data or objects.	*Compare* the following numbers: 3, 5, 5, 7. Which two are equal? Answer: 5
cone	A mathematical term used to refer to a three-dimensional figure that has one circular base that tapers smoothly from the bottom to a point called the apex or vertex.	

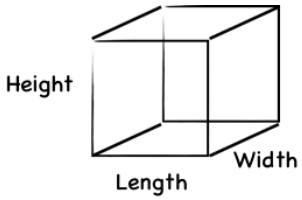
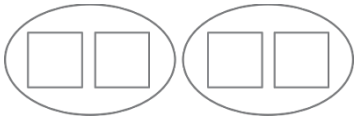
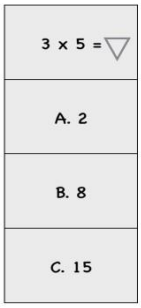
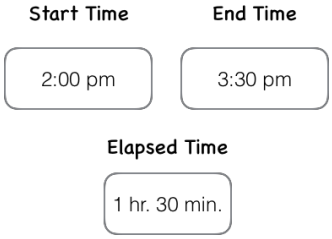
Academic Vocabulary
Mathematics

congruent	A mathematical term that means exactly equal in size and shape.	Circle the two triangles that are congruent. 
convert	A mathematical term that means to change something into a different form.	*Convert* the decimal .25 into a fraction. Answer: ¼
conversion table	A mathematical term that refers to an arrangement of equivalent values.	<table><tr><th>Quart</th><th>Gallon</th></tr><tr><td>1</td><td>.25</td></tr><tr><td>4</td><td>1</td></tr></table>
coordinate	A mathematical term that refers to a number in an ordered pair that names the location of a point on the coordinate plane.	x y (3, 5)
coordinate plane	A mathematical term that refers to a plane containing the "x" axis and "y" axis.	Plot the ordered pairs (2, 2) on the *coordinate plane*. 
counting	A mathematical term used to determine the total number of a group of items. Counting does not include the following: zero, negative numbers, fractions, or decimals.	 1 2 3
cube	A cube is a solid object that has six identical square faces and looks like a box.	
cylinder	A cylinder is a solid object with 2 circular ends that are the same. It also has one curved side.	

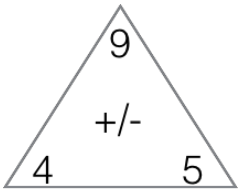
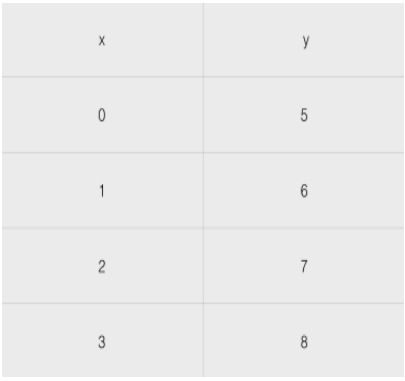
Academic Vocabulary
Mathematics

data	A mathematical term that means a collection of facts (i.e., numbers, words, measurements, observations or even just descriptions of things).	
decimal	A mathematical term that refers to a point that represents a fraction with an unwritten denominator of 10 or some power of 10.	.7 is = to 7/10
demonstrate	A mathematical term that means to prove something by showing evidence or showing one's work.	*Demonstrate* the whole number 250 in two ways. 245 +5 =250 252-2= 250
denominator	A mathematical term used to refer to the number below the line of a fraction. It represents the total set of objects (the divisor).	
diameter	A straight line going through the center of a circle.	
difference	A mathematical term that signals to students to subtract.	The *difference* between a number and 15 is 4. Find the number. x-15=4 Answer: x = 19
digit	A mathematical term that refers to any of the numerals from 0 to 9.	Which of these represents a three (3) *digit* number? a. 8 b. 27 c. 345

Academic Vocabulary
Mathematics

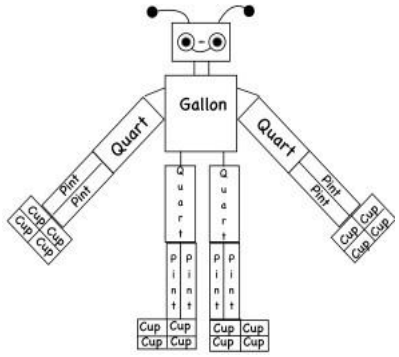
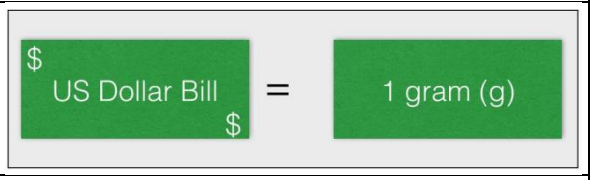
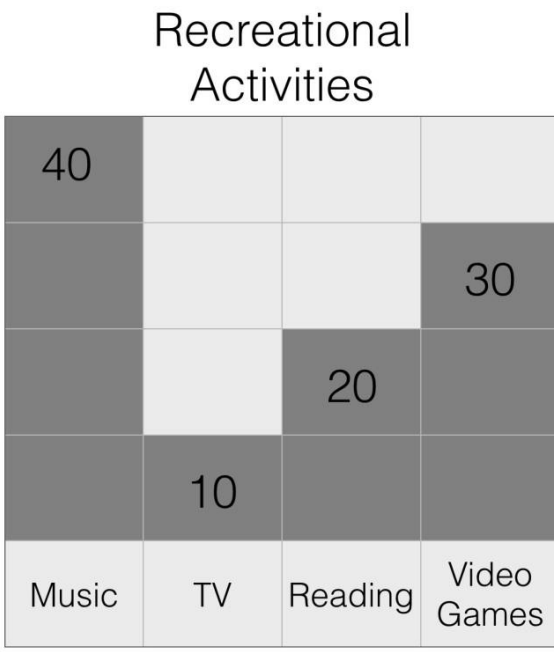
dimensions	A dimension is the measure of the length, width, or height of a figure in one direction.	
divide	A mathematical term that means the opposite of multiplying. Division refers to splitting a group of objects into equal parts ("fair sharing").	*Divide* 4 by 2. 
drop down menu	A mathematical term that means a horizontal list of options that appears on a computer screen when clicking a button.	Use the *drop down menu* to answer the question. 
elapsed time	A mathematical term that refers to the amount of time that passes from the beginning of an event to its end.	
end	A mathematical term that means the last part of a set of data.	Which of these numbers is located at the *end*? 3, 5, 7, 13 Answer: 13
equal or equivalent	A mathematical term that means having the same value.	85% = 85/100
evaluate	A mathematical term used to determine the fixed value of something (solve).	*Evaluate*. 4x + 3 = 23 x= 5

Academic Vocabulary
Mathematics

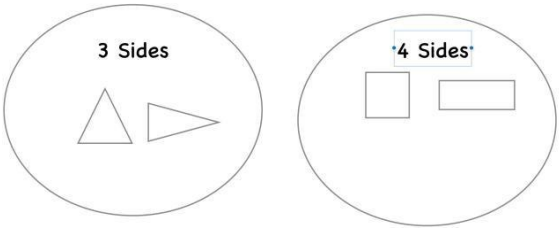
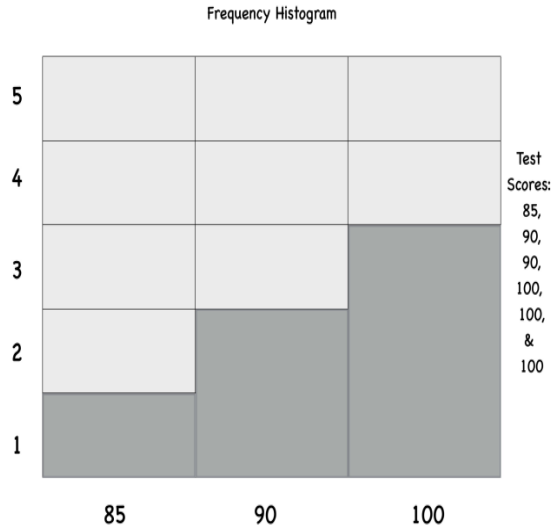
exponents	A mathematical term that refers to the small number written above the base number on the right-hand side. Also known as power, this small number indicates how many times to use that number in multiplication.	$3 \times 3 \times 3 \times 3 = 3^4$ 3^{4} Exponent Base
expression	A mathematical term that refers to numbers, symbols and operators (such as + and ×) grouped together that show the value of something.	2 x 3 =
fact families	A mathematical term that refers to related addition and subtraction facts, or multiplication and division facts, made from the same numbers.	
factor	A mathematical term that means a number that evenly divides a larger number.	List the *factors* of 24. Answer: <u>1, 2, 3, 4, 6, 8, 12, & 24</u>
false	A mathematical term that means not true or not accurate.	3 is bigger than 7. True or ***False***
fraction	A mathematical term that means a part of a whole. The numerator is the number on top represent the parts • the bottom number (the denominator) says how many parts the whole is divided into • the top number (the numerator) says how many.	Fraction $\left\{ \frac{3}{5} \right.$ Numerator Denominator
function table	A mathematical term that refers to a visual display of the input, relationship, and output of a function.	

x	y
0	5
1	6
2	7
3	8

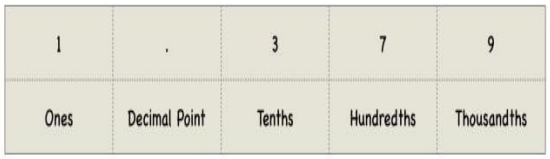
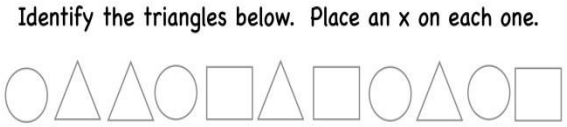
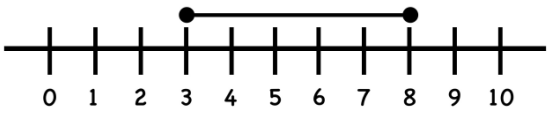
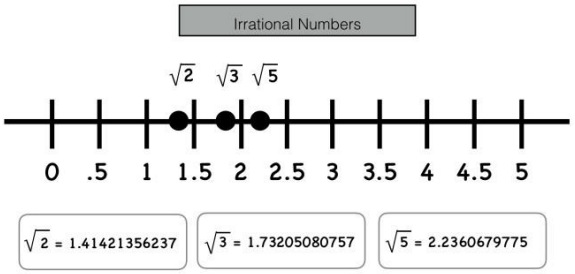
Academic Vocabulary
Mathematics

gallon	A mathematical term that refers to the customary unit of volume for liquid measure. 1 gallon = 4 quarts.	
gram	A mathematical term that refers to the unit of measure in the metric system that equals one thousandth of a kilogram.	
graph	A mathematical term that refers to a visual representation of information in which students use to answer questions.	Look at the graph below. How many students chose music as their favorite recreational activity?  Answer: 40

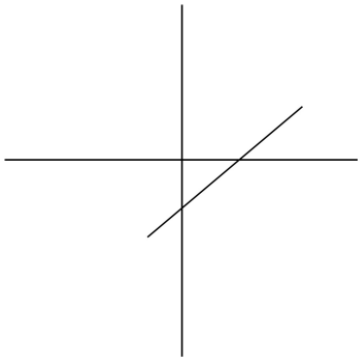
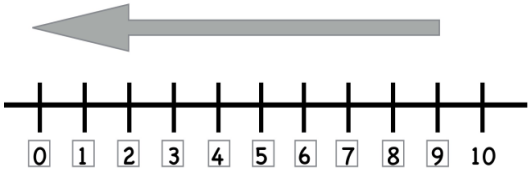
Academic Vocabulary
Mathematics

greatest	A mathematical term used to describe the largest number.	Place the numbers found below in order from least to *greatest*. 3, 9, 5, 2 Answer: <u>2, 3, 5, 9</u>
greater than	A mathematical term that requires students to compare two or more numbers and identify the largest one. The symbol for greater than is >.	45>33
grouping	A mathematical term that means to put objects into categories based on similarities.	
histogram	A mathematical term used to describe a visual display of data using bars of different heights. Histograms are a great way to show continuous data.	

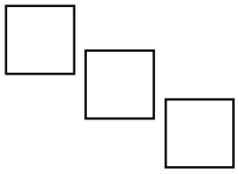
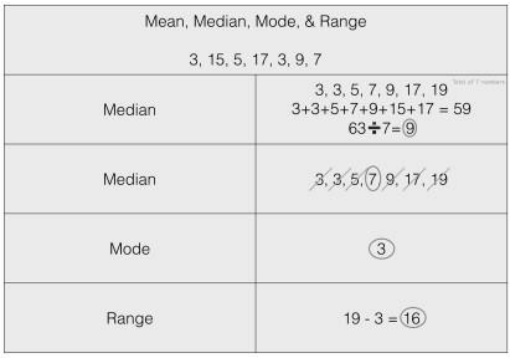
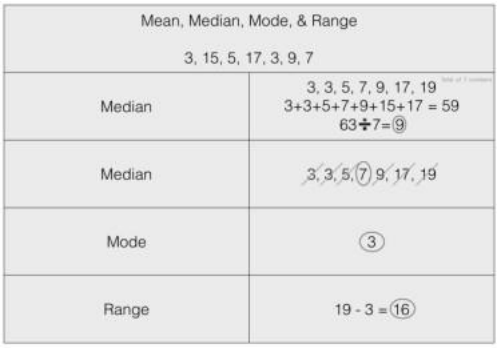
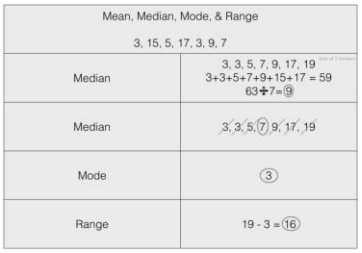
Academic Vocabulary
Mathematics

hundredths	A mathematical term that refers to the second digit to the right of the decimal point; one out of 100 equal parts of a whole.	
identify	A mathematical term that means to show what something is.	
integers	A mathematical term that refers to a number with no fractional part. Integers include the following: counting numbers, zero, and negative counting numbers	1,2, 3, 4…..
intervals	A mathematical term that refers to the distance between one number and the next on the scale of a graph.	
irrational	A mathematical term in which is a real number that cannot be written as a simple fraction (i.e., π = 3.14159265358979323846264338327 95).	
largest	A mathematical term used to describe the biggest number in a set of data.	Which number is the *largest*? 7 or 12 Answer:<u>12</u>

Academic Vocabulary
Mathematics

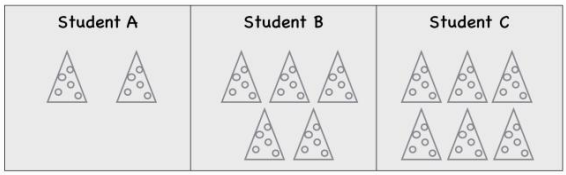
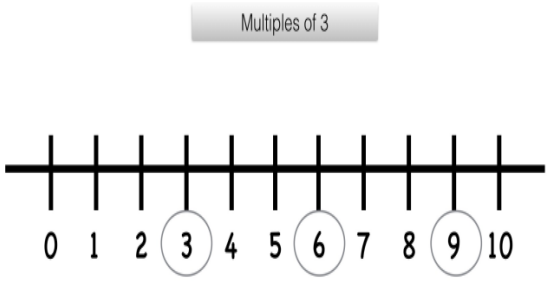
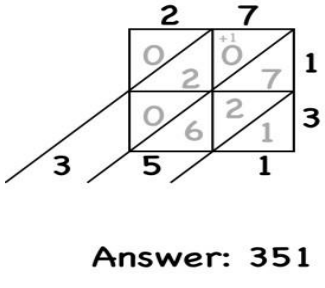
linear equation	A mathematical term that refers to an equation that makes a straight line when it is graphed.	
least	A mathematical term used to describe the smallest number.	9, 4, 8, 1 Place the numbers in order from **least** to greatest. Answer: <u>1, 4, 8, & 9</u>
less than	A mathematical term that requires students to compare two or more numbers and identify the smallest one. The symbol for less than is <.	Identify the numbers **less than** 10. 
length	A mathematical term that refers to the distance from end of an object to the other end.	
liter	A mathematical term that refers to a metric unit of volume. Mostly used to measure liquids. The abbreviation is L. 1 *liter* = 1,000 milliliters (ml).	

Academic Vocabulary
Mathematics

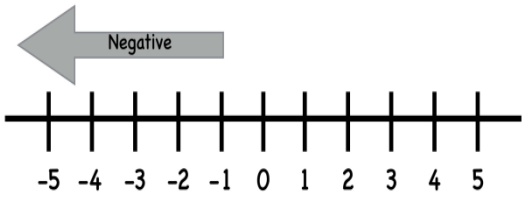
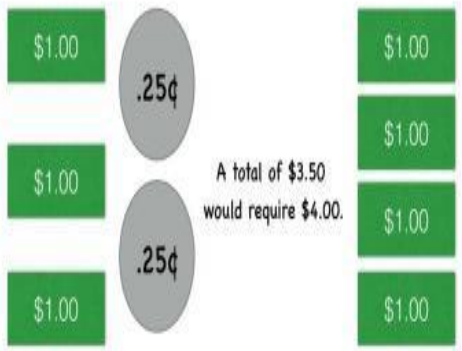
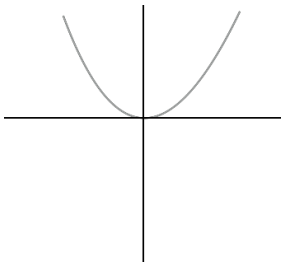
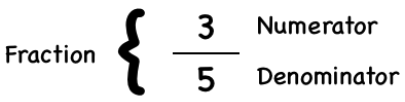
locate	A mathematical term that means to find or pinpoint.	*Locate* all of the negative numbers on the number line.
manipulatives	A mathematical term that provides a way for students to learn concepts in a hands-on way.	
middle	A mathematical term that refers to place between two things or numbers.	
mean	A mathematical term used to refer to the "average" of a set of data.	
median	A mathematical term that refers to the "middle" value in the list of numbers in numerical order.	
mode	A mathematical term that refers to the value that occurs most often in a set of data.	

2016 (AMF)

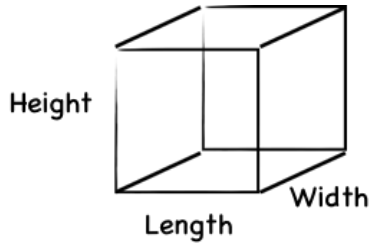
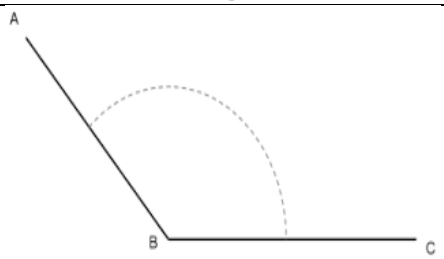
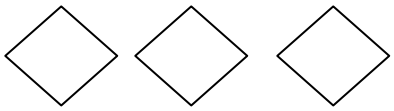
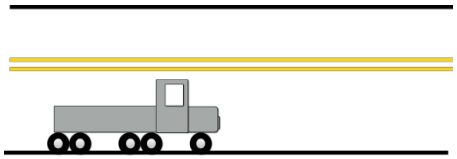
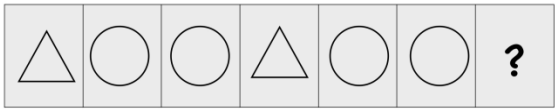
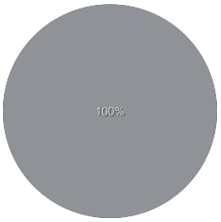
Academic Vocabulary
Mathematics

money	A mathematical term that refers to coins or bills used as a way to pay for services.	
more	A mathematical term used to signal students to subtract.	 Which student has more pizza? Student A Student B Student C
multi-digit	A mathematical term that refers to two or more numerals from 0 to 9.	357
multiple	A mathematical term that refers to a number is the product of that number and any other whole number.	
multiply	A mathematical term that refers to the operation that involves repeated addition. The answer is the product.	 Answer: 351

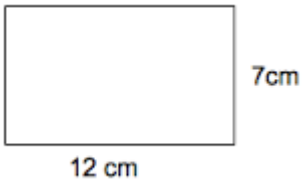
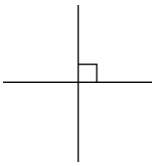
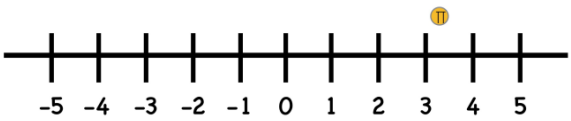
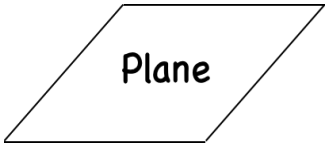
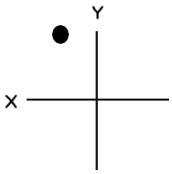
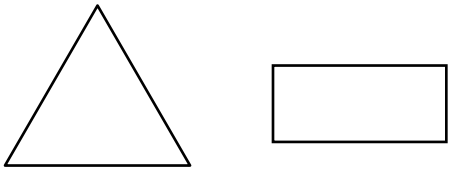
Academic Vocabulary
Mathematics

negative	A mathematical term that refers to a real number that is less than zero. Negative represents movement to the left on a number line.	
number line	A mathematical term that represents a straight line with a "zero" point in the middle with positive numbers to the right of the zero and negative numbers to the left of the zero.	Choose the number that represents Point A. 
next dollar strategy	A mathematical term that refers to a strategy that allows students, who may not be able to make change, to make purchases items. A student gives the cashier the number of dollars + one more to buy the item.	
non linear	A mathematical term that refers to a curve that does not trace a straight line.	
numerator	A mathematical term that refers to the number above the line of a fraction. It represents the parts.	

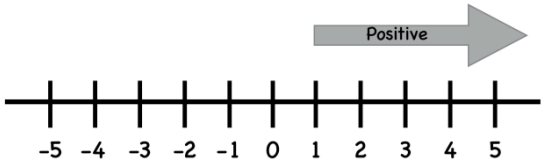
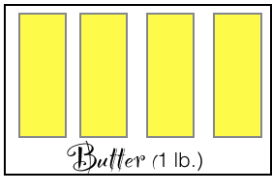
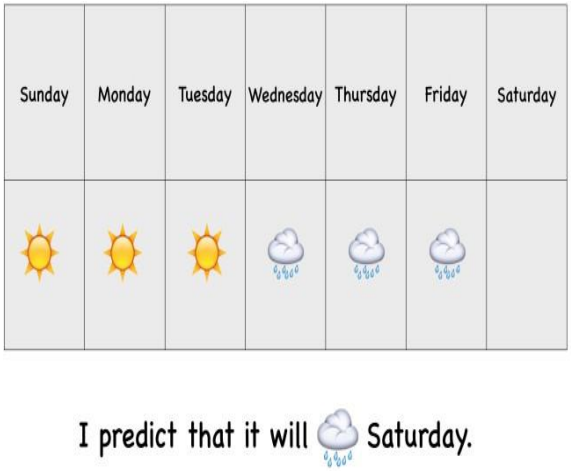
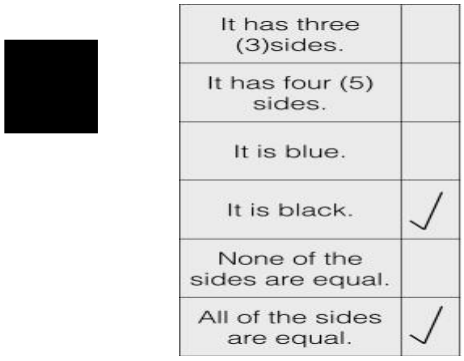
Academic Vocabulary
Mathematics

object	A mathematical term that refers to something that has height, width, and depth.	
obtuse angle	A mathematical term that refers to an angle greater than 90° but less than 180°	
operation	A mathematical term that refers to a process in which once can add, subtract, multiply and divide (+, −, ×, ÷) to solve a problem.	 Answer: 3
order	A mathematical term that refers to putting a set of data in a particular grouping or sequence.	5, 7, 1, 4, 9 Put the above numbers in order from least to greatest. Answer: 1, 4, 5, 7, & 9
parallel	A mathematical term that refers to two lines that are always the same distance apart and never touch.	
pattern	A mathematical term that refers to design that is repeated or a recurring sequence.	
percent	A mathematical term that refers to parts per 100.	

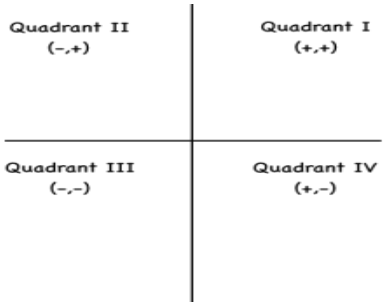
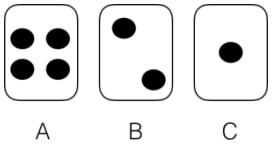
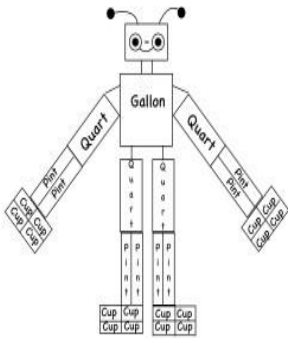
Academic Vocabulary
Mathematics

perimeter	A mathematical term used to refer to the total distance around the edge of the figure.	Find the *perimeter* of the following rectangle: 
perpendicular	A mathematical term used to refer to line meeting another at a right angle, or 90°.	
pi	A mathematical term that refers to the number π is a mathematical constant, the ratio of a circle's circumference to its diameter, π = 3.14159265358979323846264338327 95.	Identify *pi* on a number line. 
plane	A mathematical term used to refer to a flat surface with no thickness.	
plot	A mathematical term that means to draw on a graph.	 *Plot* (1,5) on the graph.
polygon	A mathematical term that refers to a two – dimensional shape that is a plane with straight sides (i.e., triangles, rectangles and pentagons). Note: a circle is not a *polygon* because it has a curved side.	

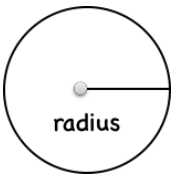
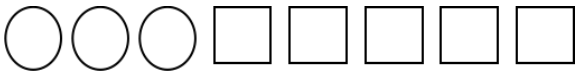
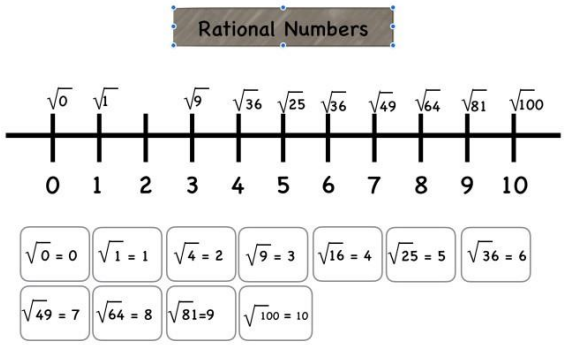
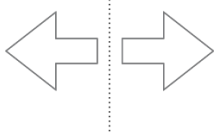
Academic Vocabulary
Mathematics

positive	A mathematical term that refers to a number greater than zero.	
pounds	A mathematical term that refers to a unit that is used to measure weight. One pound is equivalent to 16 ounces.	
prediction	A mathematical term that refers to a reasonable guess as to what will happen.	
product	A mathematical term that means the answer to a multiplication problem.	What is the *product* of 2 and 3? Answer:<u>6</u>
properties	A mathematical term that refers to characters or qualities of something (i.e., color, height, & weight).	Check two (2) *properties* for this shape. 

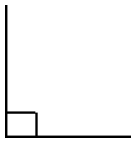
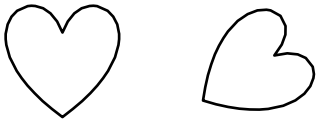
Academic Vocabulary
Mathematics

proportions	A mathematical term that refers to two ratios that are equal. A character or quality that something has. Such as color, height, weight, etc.	$\frac{1}{3} = \frac{2}{6}$
purchase	A mathematical term that means to acquire something by paying for it.	If Lucy *purchases* 3 music downloads for $1.00, what is her total? Answer: $3.00
quadrant	A mathematical term used to refer to any of the 4 areas made when we divide up a plane by an x and y axis (as shown).	Which of these *quadrants* contain positive numbers? 
quadratic function	A mathematical term where the highest exponent of the variable (usually "x") is a square (2).	$f(x) = ax^2 + bx + c$
quantities	How much there is of something.	Which one shows a *quantity* of 2? 
quarts	A mathematical term that refers to the unit of volume used to measure liquids equal to 2 pints or 32 ounces.	
quotient	A mathematical term that refers to the answer to a division problem.	What is the **quotient** of 15 divided by 5? Answer: 3

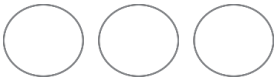
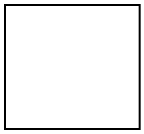
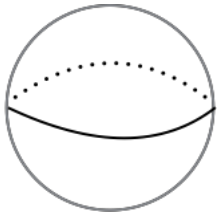
Academic Vocabulary
Mathematics

radius	A mathematical term that refers to the length of the line from the center of a circle to any point on its edge.	
range	A mathematical term used to refer the difference of largest and smallest values in a set of data.	3, 5, 8, 9 What is the *range* for the numbers above? Answer: 6
ratio	A mathematical term that is a comparison of two things. A ratio can be written as a to b, a : b or a/b. Ratios can be part-to-part, part-to-whole, or whole-to-part.	What is the *ratio* of circles to squares?  3 to 5
rational number	A mathematical term used to describe a number that can be written as a fraction.	
real world problems	A mathematical term used to refer to mathematical problems that require the application of multiple operations to solve. These problems require less abstract thinking because life experiences help students relate to what is being asked of them.	Lucy bought 4 candy bars for a $1.00. How much would 12 candy bars cost? .25 ¢ .25 ¢ .25 ¢ .25 ¢ = $1.00 .25 ¢ .25 ¢ .25 ¢ .25 ¢ = $1.00 .25 ¢ .25 ¢ .25 ¢ .25 ¢ = $1.00 Answer: $3.00
reflection	A mathematical term used to describe how a shape would look in a mirror.	

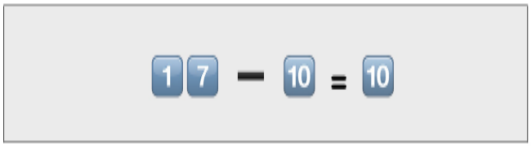
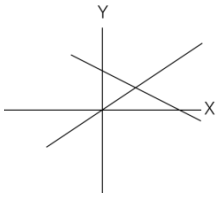
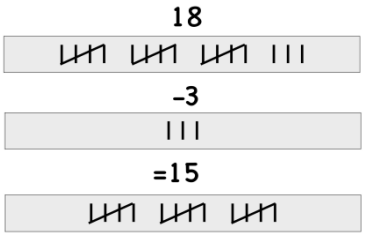
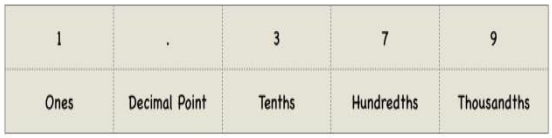
Academic Vocabulary
Mathematics

remainder	A mathematical term used to describe a part, number, or quantity that is left over.	
right angle	A mathematical term used to refer to an angle that measures 90°.	
rise over run	A mathematical term used to describe the steepness or slope of the line (in fraction form). Slope = rise / run.	
rotation	A mathematical term that refers to the turning around in a circular motion.	
round	A mathematical term that refers to a method used to shorten numbers. It involves either increasing or decreasing a number to the next digit.	*Round* 3.589 to the nearest whole number. Answer: <u>4</u>
sequential	A mathematical term that means to put things in numerical or logical order.	Place the following numbers in *sequential* order (least to greatest): 8, 2, 7, 3 Answer: <u>2, 3, 7, & 8</u>
shaded	A mathematical term used to indicate the number of parts colored in (numerator).	How many parts are *shaded*?  Answer: <u>2</u>

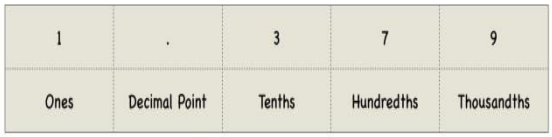
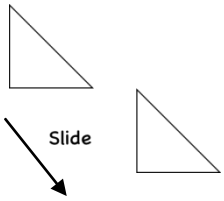
Academic Vocabulary
Mathematics

shape	A mathematical term that refers to the form of an object - how it is laid out in space (not what it is made of, or where it is).	
show	A mathematical term used as a way to prove or produce an answer.	*Show* the number 3. Answer: 2 +1
sides	A mathematical term that refers to any line segment used to form a polygon.	A square has four (4) sides. 
skip counting	A mathematical term that refers to counting forwards or backwards by a number other than 1.	1, 2, 3, 4, 5, 6, 7, 8, 9, 10
slope	A mathematical term that is a straight line that shows how steep a straight line is. The slope (m) is also called gradient.	The slope *m* of the line through the points (x_1, y_1) and (x_2, y_2) is given by: $m = \frac{y_2 - y_1}{x_2 - x_1}$
smallest	A mathematical term used to refer to low numerical value; little.	Which of these is the *smallest* number? 4, 7, 2, 1, 5, 9 Answer: 1
solve	A mathematical term that means to find the answer.	*Solve*. 4+6=____ Answer: 10
sphere	A mathematical term that refers to a 3-dimensional object (shaped like a ball) in which every point on the surface is the same distance from the center.	
square root	A mathematical term that is a value that, when multiplied by itself, gives the number.	$\sqrt{25} = 5$

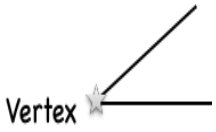
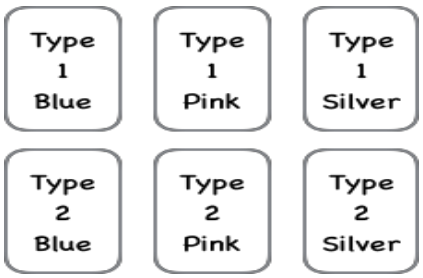
Academic Vocabulary
Mathematics

subtract	A mathematical term used the operation or process of finding the difference between two numbers.	*Subtract* 7 from 17. 
symbol	An image used instead of words.	= equal to
system of linear equations	A mathematical term in which two or more equations are dealt with at the same time.	
table	A mathematical term used to refer to an arrangement of words, numbers, or signs, or combinations of them, in parallel columns, to exhibit a set of facts.	Use the *table* to answer the following questions. 
take away	A mathematical term used the operation or process of finding the difference between two numbers.	If you *take away* 3 tally marks away from 18, how many are left? 
tenths	A mathematical term that refers to the first digit to the right of the decimal point; one out of 10 equal parts of a whole.	

Academic Vocabulary
Mathematics

thousandths	A mathematical term that refers to the third digit to the right of the decimal point; one part out of 1000 equal parts of a whole.	
time	A mathematical term that refers to the ongoing sequence of events taking place.	
total	A mathematical term that refers to the entire number or amount counted.	What is the *total* number of right angles?  Answer: 3
translation	A mathematical term that refers to the movement of a shape (sliding it).	
true	A mathematical term that means accurate or correct.	7 is bigger than 3. ***True*** or False
unit rate	A mathematical term that refers to the ratio of two measurements in which the second term is 1.	If a student walks 15 miles in 3 days, what is the unit rate? 
value	A mathematical term that refers how much something is worth.	What is the *value* of x? x + 5 = 10 Answer: 5

Academic Vocabulary
Mathematics

variable	A mathematical term that refers to a letter that is used to stand in for an unknown value.	What number does this *variable* represent? n + 5 = 12 Answer: 7
vertex	A mathematical term that refers to a corner or where two or more straight lines meet.	
vertical	A mathematical term used to describe a direction (up and down).	
whole	A mathematical term that means complete or full. In math, a whole number does not contain a fractional or decimal part. Negative numbers are not considered whole numbers.	Which of these is a whole number? ● 4 ○ 4/5 ○ 4.5
word problems	A mathematical term that refers to a problem presented as a text (narrative or story) in which key words signal the equation(s) that should be used to find the answer.	A store sells 2 types of smartphone. They have 3 colors of each type. How many choices of phones are there?  Answer: 6