Standard	#	Skill Description	Proficiency Tasks To be followed by an exemplar and quiz.
NS 1.2	1	Real Number Operations	1. Define: Whole number, Natural number, Integer, Rational Number, Irrational Number, Real Number 2. 5 examples each operation with all possible combinations of positive and negatives. Integers and rationals. Example: pos + pos, pos + neg, neg + pos, neg + neg 3. What are the rules for adding integers?
AF 1.3	2	Real Number Properties	1. List all the properties and give a definition. 2. Show 5 examples of each property.
NS 2.2	3	Rational Number operations	1. What is a fraction? Identify its parts. 2. What is a common denominator? 3. How do you know if the common denominator is the lowest? 4. List 3 numbers and find the lowest common multiple. 5. Show 10 examples of finding the lowest common denominator.
NS 1.3	4	Fraction-decimal-percents	1. Memorize all fraction-decimal-percent conversions for denominators 2-10
NS 1.5	5	Convert decimals to fractions	1. 10 examples of fraction to decimal. 2. 10 examples of decimal to fraction.
NS 2.4	6	Square roots	1. Give an example of a square root. 2. 10 examples of numbers that have a whole number square root. 3. 10 examples of numbers that don't have a whole number square root. 4. 10 square root approximations
NS 1.4	7	Identify rational and irrational numbers	1. What is a rational number? 2. What is an irrational number? 3. 10 examples of rationals. 10 examples of irrationals.
NS 2.3	8	Exponent rules	1. Define: base, exponent, power 2. Give 10 examples labeling each part. 3. What does the exponent mean? 4. Show 5 examples of exponents as repeated multiplication. 5. Define all exponent rules (including negative exponents). 6. Show an example of each.
AF 2.2	9	Multiply and divide monomials	1. What is a monomial? 2. Give 10 examples of monomial multiplication and 10 of monomial division.
NS 1.1	10	Scientific Notation	1. What happens to a number when you multiply by 10? When you divide by 10? 2. What does a negative exponent mean? 3. 10 examples of sci notation to standard (positive exponents). 10 examples with neg. exponents. 4. 10 examples of standard to sci notation (pos. exponents). 10 examples with neg.

			exponents.
NS 1.6	11	Percent change	1. Rule for calculating percent change. 2. Give 5 examples of a positive change. Show work. 3. Give 5 examples of negative change. Show work. 4. Give 5 examples when the change is over 100%. 5. Give 2 real life examples of positive and negative change.
NS 1.7	12	Markups and discounts	1. Define: markup, discount, commission, wholesale, retail, sale. 2. Give 5 examples of each of them. 3. Give an example of finding a markup, discount and commission given a percentage. 4. Give an example of how to calculate the percentage if you know the amount of markup, discount and commission.
	13	Interest	1. Define simple interest, compound interest. 2. Give 5 examples of each. 3. How are they the same? How are they different? 4. Which would you rather have in your savings account? Why?
NS 2.5	14	Absolute value	1. Define absolute value. 2. Give 10 examples of expressions involving absolute value and simplify them. 3. When is the absolute value of a number greater than zero? When is it less than zero?
AF 1.2	15	Order of operations	1. Name all operations and give an example of each. 2. List the order of operations. 3. Show 5 examples of using order of operations with two different operations. 4. 5 examples using 4 different operations. 5. 5 examples using all operations.
AF 1.1	16	Translating from English to math	1. List all words that have a math symbol and match them. 2. 10 examples of English to math.
	17	Translating from math to English	1. 10 examples of math to English.
AF 1.2	18	Simplify variable expressions	1. Define variable, expression and variable expression. 2. Give 10 examples of variable expressions and identify the variable. 3. Create 10 examples of variable expressions that use at least four different operations. 4. Evaluate for 2 different values of the variable.
AF 1.3	19	Distributive property	1. Show distributive property by multiplying a two digit number by a one digit number. 2. 10 examples of distributive property
AF 4.1	20	CLT simple expressions	1. Define term 2. Show 10 examples of like terms. 10 examples of un-like terms. 3. Create 10 expressions with like terms that are not simplified. 4. Simplify them.

	21	CLT with distributive property	1. Show 10 examples of expressions with distributive property. 2. Simplify them.
	22	One step equations	1. Define equation. 2. Create 10 one step equations involving each of the four basic operations. 3. Solve them and explain what you are doing.
	23	Two step equations	1. Create 10 two step equations (ax + b =c) and solve them. Use combination of positives and negatives for a, b and c. 2. How is solving an equation like opening a present?
	24	Inequalities	1. What do <, >, $\leq$, $\geq$ mean? 2. Graph 10 inequalities in the form of: x < a, x > a, x $\leq$ a, x $\geq$ a. 3. Graph 10 inequalities n the form of ax+b< c, ax+b>c, ax+b$\leq$c, ax+b $\geq$c.
	25	Input output tables	1. What is an input? What is an output? 2. Define: independent variable, dependent variable, domain, range
	26	Plot points on coordinate plane	1. Identify the x and y axes. Define quadrant. Identify the four quadrants. 2. Plot and name 5 points in each quadrant and on each axis.
AF 1.5	27	Interpret Graphs	1. Draw the graph of how tall someone is over time. Explain the different parts of the graph. 2. Create your own scenario, graph it and explain your graph.
AF 3.3	28	Graph Linear relationships	1. How many points do you need to graph a line? 2. Define initial condition and rate of change. 3. Graph 10 lines and identify the initial condition and rate of change.
	29	Slope	1. Define slope. 2. Sketch a positive slope. Sketch a negative slope. Sketch a line with a slope of 0. Sketch a line with an undefined slope. 3. Plot two points and calculate the slope using graph paper. Do 4 positive and 4 negative slopes. 4. How is slope like rate of change? 5. Choose 10 pairs of points and find the slope between them.
	30	Slope intercept form	1. Define slope intercept form. 2. Write 10 equations in slope intercept form. Identify the slope and intercept. 3. Graph 5 lines: identify the slope and y-intercept.
AF 4.2	31	Direct variation	1. Define direct variation. 2. 10 direct variation word problems.
MG 1.3	32	Rates	1. Define rate, unit rate, person-hours. 2. Name 5 different rates you can find in everyday life. 3. Price of two different sizes of the same product: find the unit rate. Which one is the best deal?

AF 3.1	33	Identify quadratics and cubics	1. Look at 5 graphs, identify the quadratic and cubic.
	34	Graph quadratics and cubics	1. Sketch $y = x^2$, $y = -x^2$, $y = x^3$, $y = -x^3$, $y = (-x^2)$
MG 3.4	35	Congruence	1. Define congruence, corresponding parts. 2. Draw 5 pairs of shapes that are congruent. Draw 5 pairs of shapes that aren't congruent.
MG 3.6	36	3D: diagonals, skew, parallel, etc.	1. Define: parallel, perpendicular, skew, face, edge, vertex, point, line, plane 2. Draw an example of each. 3. Draw a 3D figure and identify each of the terms. 4. Draw a 3D figure that doesn't have any of the terms.
SDP 1.3	37	Box and whisker plots	1. Define: mean, median, mode, range, upper quartile, lower quartile, inner quartile range 2. Sketch a box and whisker plot and label all the terms. 3. Create a set of data and identify the mean, median, mode, range, UQ, LQ and IQR. 4. Sketch the box and whisker based on your data.

Advanced Tasks

Choose one task from each column. You must complete the task from column 1 before moving to column 2. Once you have completed your tasks from each column, you will be ready to take your final assessment for this standard.

Column 1	Column 2
• Create a mini lesson in order to teach an absent student the skills necessary to succeed with this standard. Be prepared to explain your lesson. • Find an example of how your skill may be used or found in the real world. Explain how this skill applies. • Produce an image (picture or video) that represents this skill. Be sure to demonstrate how this image is related to the skill. • Peer Tutor. Your task will be complete when the student you are tutoring becomes proficient in this skill. • Create your own project. Your teacher must agree to this project before you begin.	Answer one of the following questions: • What are the most common mistakes that a student might make when performing this skill? How would you advise them to avoid making these mistakes? • What is the most important thing a student must be able to do in order to be successful with this skill? What skills must a student learn before they can move on to this skill? • How would you decide to assess this skill? What would a student need to know to earn an A, B or C?