MATH 7 Course SOL & Topic List and Student Self-Tracker

I'm GOOD on this one	I'm OK on this I'll review	I struggle on this one I'll FOCUS here	**SOL Objective Codes and Specific Skills** - Use the columns on the left to assess your proficiency with each topic ***(Italicized text with* - SOL Objective we've already covered this year before the COVID-19 School closure)***
			7.1e Absolute Value *
			I can demonstrate absolute value on a number line
			I can determine the absolute value of a rational number
			I can show and calculate the distance between two rational numbers on a number line.
			7.1d Square Roots *
			I can identify perfect squares from 0 to 400.
			I can determine the positive square root of perfect squares from 0 to 400.
			7.1a Negative Powers of 10 *
			I can represent powers of 10 (with negative exponent) in fractional, decimal, and expanded form.
			7.1b Scientific Notation *
			I can convert numbers from scientific notation to standard form and vice versa
			I can compare and order numbers in scientific notation
			7.1c Ordering *
			I can convert fractions, decimals, and percents into equivalent forms.
			I can plot fractions, decimals, percents, and other rational numbers on a number line.
			I can compare and order rational numbers.
			7.2 Rational number Problem Solving *
			I can add, subtract, multiply, and divide integers, decimals, fractions, and mixed numbers
			I can solve practical problems involving rational numbers.
			7.11 Evaluating Expressions *
			I can represent algebraic expressions using concrete materials and pictorial representations.
			I can use order of operations to evaluate expressions when given values for variables.
			I can use properties of real numbers with evaluating expressions.
			7.4 Volume and Surface Area *
			I can identify which parts of the net relate to which parts of the formula.
			I can determine the surface area of a rectangular prism using concrete objects, nets, diagrams, and formulas.
			I can determine the surface area of a cylinder using concrete objects, nets, diagrams, and formulas.
			I can determine the volume of a rectangular prism using concrete objects, nets, diagrams, and formulas.
			I can determine the volume of a cylinder using concrete objects, nets, diagrams, and formulas.
			I can determine if volume or surface area is needed in a practical problem.
			I can solve practical problems involving volume and surface area.

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			***7.12 Solving Equations ***
			I can represent two step equations using concrete materials and pictorial representations.
			I can solve two step equations using concrete materials and pictorial representations.
			I can identify properties.
			I can apply properties of real number to solve equations.
			I can confirm algebraic solutions to equations.
			I can write verbal expressions as algebraic expressions or equations.
			I can write algebraic expressions or equations as verbal expressions.
			I can solve practical problems that require solving a two step equation.
			***7.13 Solving Inequalities ***
			I can solve one step inequalities.
			I can solve two step inequalities.
			I can represent solutions to inequalities algebraically or graphically.
			I can write verbal expressions as inequalities.
			I can write algebraic inequalities as verbal expressions.
			I can solve practical problems that require solving an one or two step inequality.
			I can identify numerical values that are part of a solution set given an inequality.
			***7.3 Proportions ***
			I can create and use a ratio table to determine missing values given a proportional relationship.
			I can set up a proportion.
			I can solve a proportion to find a missing value.
			I can apply proportional reasoning to convert units of measure between US customary and metric given a conversion factor.
			I can apply proportional reasoning to solve practical problems, including scale drawings.
			I can find 10% of any whole number.
			I can use 10% as a benchmark to compute 5%, 15%, or 20% of a given whole number.
			I can use 10% as a benchmark to compute 5%, 15%, or 20% in a practical situation such as tip, tax, and discount.
			I can solve problems involving tip, tax, and discount. (limit to one percentage computation per problem)
			***7.5 Similar Figures ***
			I can identify corresponding sides & corresponding congruent angles in similar quadrilaterals and triangles.
			I can write a similarity statement using proper symbols given two similar quadrilaterals or triangles.
			I can write proportions to express the relationship between the length of corresponding sides of similar quadrilaterals and triangles.
			I can solve a proportion to find a missing side length of a similar quadrilateral or triangle.
			I can determine unknown angle measures in a similar quadrilateral or triangle given some angle measures.

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			7.10abe FUNCTIONS: Proportional Relationships *
			*I can **represent** a practical proportional relationship using a table, graph, and equation.*
			*I can **make connections** between and among representations of a proportional relationship between verbal descriptions, tables, equations, and graphs.*
			*I can **determine** the slope, m, as a rate of change in a proportional relationship between two quantities from a verbal description or a practical problem.*
			*I can **determine** the rate of change (slope) when given a table of values with a proportional relationship.*
			*I can **write** an equation in the form y = mx to represent a proportional relationship given a table, graph, or practical situation.*
			*I can **describe** how the rate of change (slope) affects the parent graph.*
			*I can **graph** a line representing a proportional relationship when given the equation of the line in the form y = mx.*
			*I can **graph** a line representing a proportional relationship when given an ordered pair on the line and the slope.*
			7.10cde: FUNCTIONS: Additive Relationships (* Partial)
			*I can **represent** a practical additive relationship using a table, graph, and equation. ****
			*I can **make connections** between and among representations of an additive relationship between verbal descriptions, tables, equations, and graphs. ****
			I can **determine** the y-intercept, b, in an additive relationship between two quantities when given a verbal description or practical problem.
			I can determine the y-intercept, b, when given a table of values with an additive relationship.
			I can write an equation in the form y = x + b, to represent an additive relationship given a table, graph, or practical situation.
			I can describe how the y-intercept affects the parent graph.
			I can graph a line representing an additive relationship given the equation in the form y = x + b with a slope of 1.
			I can graph a line representing an additive relationship when given an ordered pair on the line and the y-intercept.

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			7.10e: LINEAR FUNCTIONS CONNECTIONS
			*I can represent a practical relationship using a table, graph, and equation. **
			*I can make connections between and among representations of a linear relationship between verbal descriptions, tables, equations, and graphs. **
			*I can determine if a linear relationship is an additive or proportional relationship. **

NOTE: The SOL objectives listed above were covered prior to the school closure due to the COVID-19 (coronavirus) issue.

We were in the midst of working on SOL 7.10 Linear Functions (Proportional and Additive). I will provide online resources to help students reach proficiency in this objective.

The objectives below were scheduled to be covered before the end of the year and prior to SOL testing; however, we did not begin working on these topics before schools were closed. Please stay tuned and be on the lookout for plans to address these topics.

			7.6: Quadrilaterals
			I can compare and contrast properties (sides, angles, diagonals) of parallelograms, rectangles, squares, rhombi, and trapezoids.
			I can sort and classify quadrilaterals as of parallelograms, rectangles, squares, rhombi, and trapezoids based on their properties (sides, angles, diagonals).
			Given a diagram, I can determine an unknown angle measure in a quadrilateral, using the properties (sides, angles, diagonals) of quadrilaterals.
			Given a diagram, I can determine an unknown side length in a quadrilateral, using the properties (sides, angles, diagonals) of that quadrilateral.
			7.7: Transformations
			Given a preimage, I can identify the coordinates of the image of a right triangle or rectangle after it has been translated.
			Given a preimage, I can identify the coordinates of the image of a right triangle or rectangle after it has been translated and then reflected over the x- or y-axis OR reflected and then translated.
			I can sketch the images of a right triangle or rectangle that has been translated.

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			I can sketch the images of a right triangle or rectangle that has been reflected over the x- or y-axis.
			I can sketch the images of a right triangle or rectangle after it has been translated and then reflected over the x- or y-axis OR reflected and then translated.
			7.8: Probability
			I can determine the theoretical probability of an event.
			I can determine the experimental probability of an event.
			I can describe the changes in the experimental probability as the number of trials increases.
			I can sketch the images of a right triangle or rectangle that has been reflected over the x- or y-axis.
			I can sketch the images of a right triangle or rectangle after it has been translated and then reflected over the x- or y-axis OR reflected and then translated.
			I can investigate and describe the difference between the probability of an event through an experiment versus the theoretical probability of the same event.
			7.9: Histograms
			I can collect, organize, and represent data in a histogram.
			I can make observations and inferences about data represented in a histogram.

OTHER FUNDAMENTAL SKILLS I NEED TO WORK ON (ex. Place value, cross-multiplying, integer operations, fraction operations, decimal operations, rounding numbers, etc)