Pre-Algebra Readiness Checklist If you can check all the boxes, then you are ready. If not, then use this list as a way to identify the areas you need to work on.

☐ 6.RP.A.1: I can use what I know about ratios to describe the relationship between two quantities.

☐ 6.RP.A.2: I can understand how to find a rate when given a specific ratio.

☐ 6.RP.A.3: I can use reasoning to solve word problems involving rate and ratios.

☐ 6.RP.A.3.A: I can make tables of equivalent ratios, find missing values in the tables and use the tables to compare ratios.

☐ 6.RP.A.3.B: I can solve unit rate problems including those involving unit pricing and constant speed. For example, 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 lawns being mowed?

☐ 6.RP.A.3.C: I can solve problems involving finding the whole if I am given a part and the percent.

☐ 6.RP.A.3.D: I can use what I know about ratios to convert units of measurement.

☐ 6.RP.A.3.D: I can change units of measurement correctly when multiplying or dividing quantities. The Number System

☐ 6.NS.A.1: I can divide two fractions.

☐ 6.NS.A.1: I can solve word problems involving the division of fractions by fractions.

☐ 6.NS.B.2: I can easily divide multi-digit numbers.

☐ 6.NS.B.3: I can easily add, subtract, multiply and divide multi-digit numbers involving decimals.

☐ 6.NS.B.4: I can find the greatest common factor of two whole numbers less than or equal to 100.

☐ 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.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.6: 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.

☐ 6.NS.C.6: I can extend coordinate axes to show positive and negative numbers in the plane.

☐ 6.NS.C.6.A: I can recognize opposite signs of numbers as showing places on opposite sides of 0. on the number line.

☐ 6.NS.C.6.A: I can recognize that the opposite of the opposite of a number is actually the number itself (Ex: $-(-3) = 3$).

☐ 6.NS.C.6.A: I can recognize that 0 is its own opposite on the number line.

☐ 6.NS.C.6.B: I can understand that the signs ($-$ or $+$) of numbers in ordered pairs indicate locations in quadrants of the coordinate plane.

☐ 6.NS.C.6.C: I can find and place integers and other rational numbers on a number line diagram.

☐ 6.NS.C.6.C: I can find and place ordered pairs on a coordinate plane.

☐ 6.NS.C.7: I can order rational numbers.

☐ 6.NS.C.7: I can understand absolute value of rational numbers.

☐ 6.NS.C.7.A: I can understand statements of inequality (ex: $-3 > -7$) and explain their positions and distances apart on a number line.

☐ 6.NS.C.7.B: I can write, understand and explain how the order of rational numbers applies in real-world situations (Ex: -3 degrees C > -7 degrees C to show that -3 degrees C is warmer than -7 degrees C).

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

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

☐ 6.NS.C.7.D: I can tell the difference between comparisons of absolute value from statements of order (Ex: An account balance less than -30 dollars is a debt greater than 30 dollars).

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

☐ 6.NS.C.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.

☐ 6.EE.A.1: I can write and figure out numerical expressions that have whole-number exponents.

☐ 6.EE.A.2: I can write, read and figure out expressions in which letters stand for numbers.

☐ 6.EE.A.2.A: I can write expressions with numbers and with letters standing for numbers.

☐ 6.EE.A.2.B: I can name the parts of an expression using mathematical words (sum, term, product, factor, quotient, coefficient).

☐ 6.EE.A.2.B: I can look at one or more parts of an expression in different ways (Ex: $8 + 7$ can be seen as the addition sentence or as the number 15).

☐ 6.EE.A.2.C: I can figure out different answers to expressions when given specific values for the variable.

☐ 6.EE.A.2.C: I can solve real-world math problems involving expressions that arise from formulas.

☐ 6.EE.A.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.A.3: I can apply what I know about the properties of operations (associative, commutative and distributive) to create equivalent (or equal) expressions.

☐ 6.EE.A.4: I can recognize when two expressions are equivalent.

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

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

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

☐ 6.EE.B.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 non-negative rational numbers).

☐ 6.EE.B.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.

☐ 6.EE.B.8: I can show the answers to problems involving inequalities on number line diagrams.

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

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

☐ 6.EE.C.9: I can use graphs and tables to show the relationship between dependent and independent variables. Statistics and Probability

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

☐ 6.SP.A.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.A.3: I can 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 can understand that in a set of numerical data, the measure of variation describes how its values vary with a single number.

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

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

☐ 6.SP.B.5.A: I can summarize data by stating the number of observations.

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

☐ 6.SP.B.5.C: I can summarize data by giving numerical measures of center and variability.

☐ 6.SP.B.5.C: I can summarize data by describing the overall pattern of the data and noticing unusual deviations from the overall pattern.

☐ 6.SP.B.5.D: I can summarize data by explaining how the distribution of the data on a graph relates to the choice of measures of center and variability. Geometry

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

☐ 6.G.A.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.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.3: I can draw polygons in the coordinate plane when I am given the coordinates for the vertices.

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

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

☐ 7.G.A.1: I can compute lengths and areas of a scale drawing.

☐ 7.G.A.1: I can reproduce a scale drawing at a different scale.

☐ 7.G.A.2: I can draw a triangle from three measures of angles or sides.

☐ 7.G.A.3: I can describe the two dimensional figure that results from slicing a three-dimensional figure.

☐ 7.G.A.3: I can solve mathematical problems involving angle measure, area, surface area, and volume.

☐ 7.G.B.4: I know the formula for the area and circumference of a circle.

☐ 7.G.B.4: I can explain what the number π is and how it is useful.

☐ 7.G.B.5: I can define supplementary, complementary, vertical, and adjacent angles.

☐ 7.G.B.5: I can use known angles to solve for an unknown angle in a figure.

☐ 7.G.B.6: I can solve problems involving area and volume of two- and three-dimensional objects composed of triangles and other polygons.

☐ 7.RP.A.1: I can compute unit rates associated with ratios of fractions, including ratios of lengths, areas and other quantities measured in like or different units.

☐ 7.RP.A.2: I can recognize and represent proportional relationships between quantities.

☐ 7.RP.A.2.A: I can decide whether two quantities are in a proportional relationship, e.g., by testing for equivalent ratios in a table or graphing on a coordinate plane and observing whether the graph is a straight line through the origin.

☐ 7.RP.A.2.B: I can identify the constant of proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships.

☐ 7.RP.A.2.C: I can represent a proportional relationship by an equation.

☐ 7.RP.A.2.D: I can explain what a point (x, y) on the graph of a proportional relationship means in terms of the situation, with special attention to the points $(0, 0)$ and $(1, r)$ where r is the unit rate.

☐ 7.RP.A.3: I can use proportional relationships to solve multistep ratio and percent problems.