

PREALGEBRA		Mastery
Student Learning Targets		
Big Idea: Number Sense		
1.	I can add, subtract, multiply, and divide with integers, and explain why the corresponding algorithms work.	
2.	I can add, subtract, multiply, and divide with fractions (including negative fractions), and explain why the corresponding algorithms work.	
3.	I can add, subtract, multiply, and divide with decimals (including negative decimals), and explain why the corresponding algorithms work.	
4.	I can predict whether a starting value will be increased or decreased when performing operations on it involving fractions, decimals, percents, and integers.	
5.	I can place rational numbers of various forms (fractions, decimals, percents, integers, scientific notation with positive and negative exponents) on a number line.	
6.	I can compare and order rational numbers (including numbers written in scientific notation form).	
7.	I can recognize and use algebraic properties of addition and multiplication.	
8.	I can compute squares and square roots of whole numbers.	
9.	I can define absolute value and take the absolute value of a number.	
10.	I can simplify numerical expressions, including those with exponents and absolute values, using the order of operations.	
11.	I can determine the reasonableness of an answer using estimation.	
12.	I can solve real world problems involving rational numbers.	
Big Idea: Ratios, Proportions, and Similarity		
13.	I can compare ratios to determine if they are equivalent.	
14.	I can compare ratios using the unit rate.	
15.	I can solve ratio and rate problems.	
16.	I can set up and solve problems involving proportional reasoning using variables.	
17.	I can represent percents as ratios based on 100. Use proportions to solve percentage problems (including discounts, interest, taxes, tips, and percent increase/decrease).	
18.	I can define similar polygons.	
19.	I can determine whether polygons are similar by their corresponding angles and sides. I can use proportions to find missing lengths in similar figures.	
20.	I can use proportions to create, interpret, and approximate map distances for scale drawings.	
21.	I can use proportions to solve problems involving measurement conversion.	
Big Idea: Algebra Preparation Part 1 – Patterns, Expressions, and Solving Equations		
22.	I can compare representations of a relation using tables, graphs, algebraic symbols, and mathematical rules.	
23.	I can describe patterns using a mathematical rule or algebraic expression.	
24.	I can create and extend numerical and visual patterns.	
25.	I can evaluate algebraic expressions, including those with exponents when given values for the variables.	
26.	I can simplify algebraic expressions using the order of operations, algebraic properties, and exponent rules.	
27.	I can solve multi-step linear equations and inequalities, including those that must be simplified on one side or those with variables on both sides of an equation.	
Big Idea: Algebra Preparation Part 2		
28.	I can identify, graph, and approximate the location of ordered pairs of rational numbers on a rectangular coordinate system.	
29.	I can graph linear equations using ordered pairs or tables. I can determine whether an equation will produce a graph that is linear or not.	
30.	I can define slope and show that the slope of a line is constant using similarity of right triangles. I can connect slope and unit rate.	
31.	I can model real-world problems using tables, graphs, algebraic symbols, equations, manipulatives, and pictures, and compare these different representations.	

Big Idea: Probability and Statistics	
32. I can solve counting problems using the Fundamental Counting Principle.	
33. I can calculate the probability of an event or sequence of events with and without replacement.	
34. I can recognize that the sum of the probability of an event and its complement is equal to one.	
35. I can make predictions using theoretical probability and proportions.	
36. I can collect and interpret data to determine what happens as the number of trials in an experiment increases.	
37. I can formulate questions that can be answered through data collection; gather, graph, and analyze corresponding data (emphasis on histograms and box-and-whisker plots).	
38. I can calculate the mean, median, and mode of a set of data and connect these measures to various graphs of the data.	
39. I can determine the 25 th and 75 th percentiles (first and third quartiles) in order to obtain information about the spread of the data.	
Big Idea: Geometry and Measurement	
40. I can derive formulas for and calculate surface area and volume of right prisms and cylinders.	
41. I can find the lengths, areas, and volumes of similar figures using a scale factor. I can compare how the lengths, areas, and volumes of similar figures are related.	
42. I can solve real world problems involving perimeter, area, circumference, volume, and surface area of two- and three- dimensional shapes.	