



Alignment Document
State of North Carolina and Aventa Learning Pre-Algebra

Pre-Algebra

Goals	Standards	Unit Name	Course Topic Description
0 Number and Operations 1 The learner will understand and compute with real numbers.	1.01 Develop number sense for the real numbers.	Basics	Integer Math
	1.01.a Define and use irrational numbers.	Number Basics	Number Properties
	1.01.b Compare and order.	Basics	Overview
	1.01.c Use estimates of irrational numbers in appropriate situations.	Number Basics	Number Properties
	1.02 Develop flexibility in solving problems by selecting strategies and using mental computation, estimation, calculators or computers, and paper and pencil.	Word Problems	Strategies
0 Measurement 2 The learner will understand and use measurement concepts.	2.01 Determine the effect on perimeter, area or volume when one or more dimensions of two- and three-dimensional figures are changed.	Basic Geometry	Factoring and Geometric Formulas
	2.02 Apply and use concepts of indirect measurement.	Basic Geometry	Overview
0 Geometry 3 The learner will understand and use properties and relationships in geometry.	3.01 Represent problem situations with geometric models.	Basic Geometry	Overview
	3.02 Apply geometric properties and relationships, including the Pythagorean theorem, to solve problems.	Basic Geometry	Factoring and Geometric Formulas
	3.03 Identify, predict, and describe dilations in the coordinate plane.	Geometric Concepts	Dilations
		Geometric Concepts	Coordinate Plane, Points
	Geometric Concepts	Overview	

0 Data Analysis and Probability 4 The learner will understand and use graphs and data analysis.	4.01 Collect, organize, analyze, and display data (including scatter plots) to solve problems.	Probability and Data Analysis	Data Analysis Projects
	4.02 Approximate a line of best fit for a given scatter plot; explain the meaning of the line as it relates to the problem and make predictions.	Probability and Data Analysis Probability and Data Analysis	Data Analysis Projects Probability
	4.03 Identify misuses of statistical and numerical data.	Probability and Data Analysis	Probability
0 Algebra 5 The learner will understand and use linear relations and functions.	5.01 Develop an understanding of function.	Equations	Overview
	5.01.a Translate among verbal, tabular, graphic, and algebraic representations of functions.	Equations	Graph Lines
	5.01.b Identify relations and functions as linear or nonlinear.	Equations	Overview
	5.01.c Find, identify, and interpret the slope (rate of change) and intercepts of a linear relation.	Equations	Linear Equations
	5.01.d Interpret and compare properties of linear functions from tables, graphs, or equations.	Equations	Linear Equations
	5.02 Write an equation of a linear relationship given: two points, the slope and one point on the line, or the slope and y-intercept.	Equations	Linear Equations
	5.03 Solve problems using linear equations and inequalities; justify symbolically and graphically.	Equations Equations	Linear Equations Solving Simple Equations
	5.04 Solve equations using the inverse relationships of addition and subtraction, multiplication and division, squares and square roots, and cubes and cube roots.	Equations Equations	Solving Complex Equations Overview