



Alignment Document  
 State of North Carolina and Aventa Learning Integrated Math  
**Integrated Math**

Goals	Standards	Unit Name	Course Topic Description
1 The learner will perform operations with numbers and expressions to solve problems.	1.01 Write equivalent forms of algebraic expressions to solve problems.	Algebra Sense	Evaluate and Algebraic Expressions
		Algebra Sense	Solve Systems of Equations
	1.01.a Apply the laws of exponents.	Number Sense	Exponents
	1.01.b Operate with polynomials.	Algebra Sense	Evaluate and Algebraic Expressions
	1.01.c Factor polynomials.	Algebra Sense	Evaluate and Algebraic Expressions
2 The learner will use properties of geometric figures to solve problems.	1.02 Use algebraic expressions, including iterative and recursive forms, to model and solve problems.	Algebra Sense	Evaluate and Algebraic Expressions
		Algebra Sense	Solve Systems of Equations
	2.01 Use the length, area, and volume of geometric figures to solve problems. Include arc length, area of sectors of circles; lateral area, surface area, and volume of three-dimensional figures; and perimeter, area, and volume of composite figures.	Measurement	Volume
		Measurement	Area
3 The learner will analyze data and apply probability concepts to solve problems.	2.02 Develop and apply properties of solids to solve problems.	Measurement	Overview
	3.01 Use graph theory to model relationships and solve problems.	Probability Intro	Overview
	3.02 Use theoretical and experimental probability to model and solve problems.	Probability Intro	Overview
	3.02.a Use addition and multiplication principles.	Number Sense	Integers
		Probability Intro	Calculate Data's Central Tendencies
	3.02.b Calculate and apply permutations and	Probability 2	Permutations

	combinations.	Probability 2	Combinations
	<b>3.02.c</b> Create and use simulations for probability models.	Probability 2	Overview
	<b>3.02.d</b> Find expected values and determine fairness.	Probability Intro Probability Intro Probability 2	Examine Data Bias Calculate Data's Central Tendencies Overview
	<b>3.03</b> Create linear and exponential models, for sets of data, to solve problems.	Probability 2 Probability Intro	Solve Complex Problems Using Geometric Concepts Overview
	<b>3.03.a</b> Interpret the constants, coefficients, and bases in the context of the data.	Probability Intro Probability 2	Calculate Data's Central Tendencies Overview
	<b>3.03.b</b> Check the model for goodness-of-fit and use the model, where appropriate, to draw conclusions or make predictions.	Probability Intro Probability Intro Probability 2	Examine Data Bias Calculate Data's Central Tendencies Overview
<b>4</b> The learner will use relations and functions to solve problems.	<b>4.01</b> Use linear functions or inequalities to model and solve problems; justify results.	Algebraic Sense	Linear Equations
		Algebra Sense	Check for Reasonableness of Solutions
		Algebra Sense	Write and Evaluate Single-Step Equations
	<b>4.01.a</b> Solve using tables, graphs, and algebraic properties.	Algebraic Sense	Number Patterns
	<b>4.01.b</b> Interpret the constants and coefficients in the context of the problem.	Algebraic Sense	Number Patterns
	<b>4.02</b> Use exponential functions to model and solve problems; justify results.	Algebraic Sense	Solve Systems of Equations and Inequalities
Algebraic Sense		Check for Reasonableness of Solutions	
Algebra Sense		Write and Evaluate Multi-Step Equations	
<b>4.02.a</b> Solve using tables, graphs, and	Algebraic Sense	Graph Lines and Inequalities	



	algebraic properties.	Algebraic Sense	Overview
	<b>4.02.b</b> Interpret the constants, coefficients, and bases in the context of the problem.	Algebraic Sense	Recognize Sequences Representing a Linear Function
		Algebraic Sense	Overview
	<b>4.03</b> Use systems of linear equations or inequalities in two variables to model problems and solve graphically.	Algebraic Sense	Graph Lines and Inequalities
		Algebraic Sense	Overview
		Algebra Sense	Linear Functions