



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
	1.02 Use algebraic expressions, including iterative and recursive forms, to model and solve problems.	Algebra Sense Algebra Sense	Evaluate and Algebraic Expressions Solve Systems of Equations
2 The learner will use properties of geometric figures to solve problems.	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
	2.02 Develop and apply properties of solids to solve problems.	Measurement	Overview
3 The learner will analyze data and apply probability concepts to solve problems.	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 Probability Intro	Integers Calculate Data's Central Tendencies
	3.02.b Calculate and apply permutations and	Probability 2	Permutations

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

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