AVENTA LEARNING

Alignment Document
State of Wyoming and Aventa Learning Algebra II

Algebra II

Standards	Benchmarks	Unit Name	Course Topic Description
1 Students use numbers, number sense, and number relationships in a problem-solving situation.	**1.1** Students represent and apply real numbers in a variety of forms.		
	1.2 Students apply the structure and properties of the real number system.		
	1.3 Students explain their choice of estimation and problem solving strategies and justify results of solutions in problem-solving situations involving real numbers.		
	1.4 Students use proportional reasoning to solve problems.		
2 Students apply geometric concepts, properties, and relationships in a problem-solving situation.	**2.1** Students use transformations, congruency, symmetry, similarity, perpendicularity, parallelism, and the Pythagorean Theorem to solve problems.		
	2.2 Students communicate, using mathematical language, to:		
	2.2.a Interpret, represent, or create geometric figures;		
	2.2.b Draw or build figures from a mathematical description;		
	2.2.c Analyze properties and determine attributes of 2- and 3-dimensional objects.		
	2.3 Students communicate the reasoning used in identifying geometric relationships in problem-solving situations.		
	2.4 Students solve problems involving the		

	coordinate plane such as the distance between two points, the midpoint, and slope.		
	2.5 Students connect geometry with other mathematical topics.		
3 Students use a variety of tools and techniques of measurement in a problem-solving situation.	**3.1** Students apply estimation and measurement using the appropriate methods and units to solve problems involving length, weight/mass, area, surface area, volume, and angle measure.		
	3.2 Students demonstrate an understanding of both metric and U. S. customary systems. Students are able to convert within each system.		
	3.3 Students identify and apply scale, ratios, and proportions in solving measurement problems.		
	3.4 Students solve problems of angle measure including those involving polygons or parallel lines cut by a transversal.		
	3.5 Students solve indirect measurement problems.		
4 Students use algebraic methods to investigate, model, and interpret patterns and functions involving numbers, shapes, data, and graphs in a problem-solving situation.	**4.1** Students use algebraic concepts, symbols, and skills to represent and solve real-world problems.		
	4.2 Students write, model, and evaluate expressions, functions, equations, and inequalities.	Composition of Functions Composition of Functions Composition of Functions Composition of Functions	Function Notation Definition of Functions Review of Functions Horizontal Line Test
	4.3 Students graph linear equations and interpret the results in solving algebraic problems.		
	4.4 Students solve, graph, or interpret systems of linear equations.	Systems of Linear Equations	Using your calculator to solve systems of linear equations

		Systems of Linear Equations	Inconsistent Systems of Equations
		Systems of Linear Equations	Gauss - Jordan Elimination Method
		Systems of Linear Equations	Underdetermined Systems of Equations
		Systems of Linear Equations	Introduction
		Systems of Linear Equations	Systems having three linear equations
		Systems of Linear Equations	Systems of two linear equations with two variables
		Systems of Linear Equations	Substitution Method to solve a system
		Systems of Linear Equations	Gauss - Jordan Elimination for systems with three equations and three variables
		Systems of Linear Equations	Addition Method of Solving Systems of Equations
	4.5 Students connect algebra with other mathematical topics.		
5 Students use data analysis and probability to analyze given situations and the results of experiments.	**5.1** Students apply knowledge of mean, median, mode, and range to interpret and evaluate information and data.		
	5.2 Students draw reasonable inferences from statistical data and/or correlation/best fit line to predict outcomes.		
	5.3 Students communicate about the likelihood of events using concepts from probability.		
	5.3.a sample space		
	5.3.b evaluate simple probabilities	Counting	Probability: An introduction
	5.3.c evaluate experimental vs. theoretical	Counting	Probability: More examples
	5.4 Students determine, collect, organize, and		

	analyze relevant data needed to make conclusions.		