AVENTA LEARNING

Alignment Document
State of Hawaii and Aventa Learning Consumer Math

Consumer Math

2005-2007 Benchmark Blueprint

Strand	Standard	Topic	Benchmark	Unit Name	Course Topic Description
Numbers and Operations	**AI.1** Understand numbers, ways of representing numbers, relationships among numbers, and number systems	Numbers and Number Systems	**MA.AI.1.1** Recognize situations that can be represented by matrices		
Numbers and Operations	**AI.2** Understand the meaning of operations and how they relate to each other		There are no benchmarks for this standard for this Grade/Course		

Numbers and Operations	**AI.3** Use computational tools and strategies fluently and, when appropriate, use estimation	Computational Fluency	**MA.AI.3.1** Apply arithmetic properties to operate on and simplify expressions that include radicals and other real numbers	Wages All about jobs All about jobs All about jobs	Evaluating Expressions and Formulas Decimal Review Percent Review Percent to Decimals and Fractions Order of Operations
			MA.AI.3.2 Apply the laws of exponents to perform operations on expressions with integral exponents	Checking and Savings Accounts Checking and Savings Accounts Checking and Savings Accounts	Working with exponential equations Exponential Graphs Plotting a Decay Curve
			MA.AI.3.3 Use addition, subtraction, and scalar multiplication of matrices to solve problems		
Measurement	**AI.4** Understand attributes, units, and systems of units in measurement; and develop and use techniques, tools, and formulas for measuring	Measurement Formulas	**MA.AI.4.1** Use formulas, functions, or conversion equations to solve problems dealing with determining a measurement based on another derived or given measurement	Housing Housing	Decorating and Remodeling Scale Drawings
Geometry and Spatial Sense	**AI.5** Analyze properties of objects and relationships among the properties		There are no benchmarks for this standard for this Grade/Course.		
Geometry and Spatial Sense	**AI.6** Use transformations and symmetry to analyze mathematical situations		There are no benchmarks for this standard for this Grade/Course.		

Geometry and Spatial Sense	**AI.7** Use visualization and spatial reasoning to solve problems both within and outside of mathematics		There are no benchmarks for this standard for this Grade/Course.		
Geometry and Spatial Sense	**AI.8** Select and use different representational systems, including coordinate geometry	Coordinate Geometry	**MA.AI.8.1** Graph linear equations using slope-intercept, point-slope, and x- and y-intercept techniques	Checking and Savings Accounts	Plotting a Decay Curve
				Checking and Savings Accounts	Graphing Exponential Equations
				Personal Finances	Graphing Using Slope and Y-Intercept
				Personal Finances	Graphing an Equation Using Points
				Personal Finances	Writing Linear Equations
			MA.AI.8.2 Determine the slope of a line when given the graph of a line, two points on the line, or the equation of the line	Personal Finances	Graphing Using Slope and Y-Intercept
				Personal Finances	Graphing an Equation Using Points

Patterns, Functions, and Algebra	**AI.9** Understand various types of patterns and functional relationships	Patterns	**MA.AI.9.1** Determine if a linear pattern exists in a set of data and represent the data algebraically and graphically	Personal Finances	Graphing an Equation Using Points
				Personal Finances	Graphing Using Slope and Y-Intercept
			MA.AI.9.2 Compare and contrast the concepts of direct and inverse variation of a relation		
		Functions	**MA.AI.9.3** Determine the zeros of a linear or quadratic function algebraically and graphically	Checking and Savings Accounts	Graphing Exponential Equations
				Checking and Savings Accounts	Plotting a Decay Curve
				Checking and Savings Accounts	Exponential Graphs
				Personal Finances	Graphing Using Slope and Y-Intercept
			MA.AI.9.4 Compare and contrast the properties of linear functions and exponential functions		
Patterns, Functions, and Algebra	**AI.10** Use symbolic forms to represent, model, and analyze mathematical situations	Numeric and Algebraic Representations	**MA.AI.10.1** Solve linear equations and inequalities in one variable using a variety of strategies (e.g., algebraically, by graphing, by using a graphing calculator)	Personal Finances	The Costs of Raising a Family
				Wages	Solving Equations: Addition and Subtraction
			MA.AI.10.2 Translate between verbal mathematical situations and algebraic expressions and equations	Wages	Review of Equations
			MA.AI.10.3 Justify the steps used in simplifying expressions and solving equations and inequalities	Wages	Evaluating Expressions and Formulas
				Wages	Review of Equations

			MA.AI.10.4 Determine the equation of a line when given the graph of the line, the slope and a point on the line, or two points on the line	Personal Finances Personal Finances Personal Finances	Graphing an Equation Using Points Graphing Using Slope and Y-Intercept Graphs of Equations
			MA.AI.10.5 Solve systems of two linear equations in two variables algebraically and graphically **MA.AI.10.6** Factor first- and second-degree binomials and trinomials in one or two variables **MA.AI.10.7** Solve quadratic equations in one variable algebraically, graphically, or by using graphing technology **MA.AI.10.8** Select and use a variety of strategies (e.g., concrete objects, pictorial representations, algebraic manipulation) to perform operations on polynomials **MA.AI.10.9** Analyze transformations of lines and understand how the transformation are represented in equations	Automobile Expenses	Comparing Costs
Data Analysis, Statistics, and Probability	**AI.11** Pose questions and collect, organize, and represent data to answer those questions		There are no benchmarks for this standard for this Grade/Course.		
Data Analysis, Statistics, and Probability	**AI.12** Interpret data using methods of exploratory data analysis	Data Interpretation	**MA.AI.12.1** Compare data sets using statistical techniques (e.g., measures of central tendency, standard deviation, range, stem-and-leaf plots, and box-and-whisker graphs)	Automobile Expenses Deduction, Taxes and Insurance	Comparing Costs Mean, Median and Mode

			MA.AI.12.2 Display bivariate data in a scatter plot, describe its shape, and determine the line of best fit that models a trend (if a trend exists)		
Data Analysis, Statistics, and Probability	**AI.13** Develop and evaluate inferences, predictions, and arguments that are based on data		There are no benchmarks for this standard for this Grade/Course.		
Data Analysis, Statistics, and Probability	**AI.14** Understand and apply basic notions of chance and probability		There are no benchmarks for this standard for this Grade/Course.		