



Alignment Document

State of Maryland And Aventa Learning Consumer Math

Consumer Math 2005-2007 Benchmark Blueprint

State Standard Number	State Standard Area / Description	Unit Name	Course Topic Description
1	The student will demonstrate the ability to investigate, interpret, and communicate solutions to mathematical and real-world problems using patterns, functions, and algebra.		
1.1	The student will analyze a wide variety of patterns and functional relationships using the language of mathematics and appropriate technology.		
1.1.1	The student will recognize, describe, and/or extend patterns and functional relationships that are expressed numerically, algebraically, and/or geometrically.		
1.1.2	The student will represent patterns and/or functional relationships in a table, as a graph, and/or by mathematical expression.	Wages	Evaluating Expressions and Formulas
		Wages	Review of Equations
		Personal Finances	Graphing Using Slope and Y-Intercept
		Personal Finances	Graphing an Equation Using Points
		Checking and Savings Accounts	Plotting a Decay Curve
		Checking and Savings Accounts	Exponential Equations
		Checking and Savings Accounts	Exponential Graphs

		Checking and Savings Accounts	Graphing Exponential Equations
1.1.3	The student will apply addition, subtraction, multiplication, and/or division of algebraic expressions to mathematical and real-world problems.	Wages	Review of Equations
		Wages	Evaluating Expressions and Formulas
1.1.4	The student will describe the graph of a non-linear function and discuss its appearance in terms of the basic concepts of maxima and minima, zeros (roots), rate of change, domain and range, and continuity.	Checking and Savings Accounts	Exponential Graphs
		Checking and Savings Accounts	Graphing Exponential Equations
		Checking and Savings Accounts	Plotting a Decay Curve
		Personal Finances	Graphing Using Slope and Y-Intercept
1.2	The student will model and interpret real-world situations using the language of mathematics and appropriate technology.		
1.2.1	The student will determine the equation for a line, solve linear equations, and/or describe the solutions using numbers, symbols, and/or graphs.	Wages	Solving Equations: Addition and Subtraction
		Wages	Commission
		Wages	Salary and Commission
		Wages	Solving Equations: Multiplication and Division
		Wages	Solving Two-Step Equations
		Personal Finances	The Costs of Raising a Family
		Personal Finances	Graphing an Equation Using Points
		Personal Finances	Graphing Using Slope and Y-Intercept
		Checking and Savings Accounts	Exponential Equations
1.2.2	The student will solve linear inequalities and describe the solutions using numbers, symbols, and/or graphs.		

1.2.3	The student will solve and describe using numbers, symbols, and/or graphs if and where two straight lines intersect.	Personal Finances	Open Response: Making Consumer Choices
1.2.4	The student will describe how the graphical model of a non-linear function represents a given problem and will estimate the solution.	Checking and Savings Accounts	Graphing Exponential Functions
		Checking and Savings Accounts	Growth and Decay
1.2.5	The student will apply formulas and/or use matrices (arrays of numbers) to solve real-world problems.	Recreation and Spending	Buying Clothes and Shopping
		Recreation and Spending	Buying Clothes
		Recreation and Spending	Eating Out
		Transportation	Distance
		Transportation	Estimating Using Mileage Charts
		Transportation	Busses, Trains, Subways, and Taxis
		Deductions, Taxes, and Insurance	Payroll Deductions
		Deductions, Taxes, and Insurance	Federal Income Tax
		Deductions, Taxes, and Insurance	Health and Life Insurance
		Personal Finances	Purchasing Power
		Housing	Taxes and Insurance
		Housing	Homeowner's Insurance
		Wages	Time Sheets And Time Cards
		Wages	Evaluating Expressions and Formulas
2	The student will demonstrate the ability to solve mathematical and real-world problems using measurement and geometric models and will justify solutions and explain processes used.		
2.1	The student will represent and analyze two- and three-dimensional figures using tools and technology when appropriate.		
2.1.1	The student will analyze the properties of geometric figures.	Housing	Decorating and Remodeling (area and perimeter of rectangles)

2.1.2	The student will identify and/or verify properties of geometric figures using the coordinate plane and concepts from algebra.		
2.1.3	The student will use transformations to move figures, create designs, and/or demonstrate geometric properties.		
2.1.4	The student will construct and/or draw and/or validate properties of geometric figures using appropriate tools and technology.	Housing	Decorating and Remodeling (scale drawing)
2.2	The student will apply geometric properties and relationships to solve problems using tools and technology when appropriate.		
2.2.1	The student will identify and/or verify congruent and similar figures and/or apply equality or proportionality of their corresponding parts.	Housing	Scale Drawings
2.2.2	The student will solve problems using two-dimensional figures and/or right-triangle trigonometry.		
2.2.3	The student will use inductive or deductive reasoning.		
2.3	The student will apply concepts of measurement using tools and technology when appropriate.		
2.3.1	The student will use algebraic and/or geometric properties to measure indirectly.	Housing	Decorating and Remodeling (ratio and proportion and scale drawing)
2.3.2	The student will use techniques of measurement and will estimate, calculate, and/or compare perimeter, circumference, area, volume, and/or surface area of two- and three-dimensional figures and their parts.	Housing	Decorating and Remodeling (Area and perimeter of rectangles only)
3	The student will demonstrate the ability to apply probability and statistical methods for representing and interpreting data and communicating results, using technology when needed.		
3.1	The student will collect, organize, analyze, and present data.		
3.1.1	The student will design and/or conduct an investigation that uses statistical methods to analyze data and communicate results.		



3.1.2	The student will use the measures of central tendency and/or variability to make informed conclusions.		
3.1.3	The student will calculate theoretical probability or use simulations or statistical inferences from data to estimate the probability of an event.		
3.2	The student will apply the basic concepts of statistics and probability to predict possible outcomes of real-world situations.		
3.2.1	The student will make informed decisions and predictions based upon the results of simulations and data from research.	Checking and Savings Accounts	Exponential Equations
		Checking and Savings Accounts	Exponential Graphs
3.2.2	The student will interpret data and/or make predictions by finding and using a line of best fit and by using a given curve of best fit.	Checking and Savings Accounts	Exponential Equations
		Checking and Savings Accounts	Exponential Graphs
3.2.3	The student will communicate the use and misuse of statistics.		