

## Consumer Math

State Goals	Learning Standards	Benchmarks	Unit Name	Course Topic Description	
<b>6</b> Demonstrate and apply a knowledge and sense of numbers, including numeration and operations (addition, subtraction, multiplication, division), patterns, ratios and proportions.	<b>6.A</b> Demonstrate knowledge and use of numbers and their representations in a broad range of theoretical and practical settings.	<b>6.A.5</b> Perform addition, subtraction and multiplication of complex numbers and graph the results in the complex plane.			
	<b>6.B</b> Investigate, represent and solve problems using number facts, operations (addition, subtraction, multiplication, division) and their properties, algorithms and relationships.	<b>6.B.5</b> Identify, represent and apply numbers expressed in exponential, logarithmic and scientific notation using contemporary technology.			
	<b>6.C</b> Compute and estimate using mental mathematics, paper-and-pencil methods, calculators and computers.		<b>6.C.5</b> Determine the level of accuracy needed for computations involving measurement and irrational numbers.	Review of Fractions	Addition and Subtraction of Common Fractions
				Transportation	Busses, Trains, Subways, and Taxis
					Distance
					Estimating Using Mileage Charts
	<b>6.D</b> Solve problems using comparison of quantities, ratios, proportions and percents.		<b>6.D.5</b> Solve problems involving loans, mortgages and other practical applications involving geometric patterns of growth.	Credit	Using Tables to Find Monthly Payments
				Checking and Savings Accounts	Loans
					Checking Accounts
				Housing	The Mortgage
				Buying a House	

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				Taxes and Insurance	
			All about jobs	Computing Pay by Hourly Wages	
			Deductions, Taxes, and Insurance	Payroll Deductions	
			Transportation	Auto Loans	
				Buying a New Automobile	
<b>7</b> Estimate, make and use measurements of objects, quantities and relationships and determine acceptable levels of accuracy.	<b>7.A</b> Measure and compare quantities using appropriate units, instruments and methods.	<b>7.A.5</b> Apply nonlinear scales (e.g., Richter, decibel, pH) to solve practical problems.			
	<b>7.B</b> Estimate measurements and determine acceptable levels of accuracy.	<b>7.B.5</b> Estimate perimeter, area, volume, and capacity of irregular shapes, regions and solids and explain the reasoning supporting the estimate.	Housing	Decorating and Remodeling	
	<b>7.C</b> Select and use appropriate technology, instruments and formulas to solve problems, interpret results and communicate findings.	<b>7.C.5a</b> Use dimensional analysis to determine units and check answers in applied measurement problems.		Housing	Scale Drawings
		<b>7.C.5b</b> Determine how changes in one measure may affect other measures (e.g., what happens to the volume and surface area of a cube when the side of the cube is halved).		Personal Finances	Net Worth and Purchasing Power
				Budgeting Expenses	
<b>8</b> Use algebraic and analytical methods to identify and describe patterns and relationships in data, solve problems and predict results.	<b>8.A</b> Describe numerical relationships using variables and patterns.	<b>8.A.5</b> Solve mathematical problems involving recursive patterns and use models that employ such relationships.			
	<b>8.B</b> Interpret and describe numerical relationships using tables, graphs and symbols.	<b>8.B.5</b> Use functions including exponential, polynomial, rational, parametric, logarithmic, and trigonometric to describe numerical relationships.	Wages	Review of Equations	
				Evaluating Expressions and Formulas	
				Solving Equations: Addition and Subtraction	
				Solving Equations: Multiplication and Division	



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				Solving Two-Step Equations	
			Checking and Savings Accounts	Working with Exponential Equations	
				Graphing Exponential Equations	
				Plotting a Decay Curve	
				Compound Interest	
				Savings and Graphs	
	Housing	Buying a House			
	<b>8.C</b> Solve problems using systems of numbers and their properties.	<b>8.C.5</b> Use polynomial, exponential, logarithmic and trigonometric functions to model situations.		Checking and Savings Accounts	Working with Exponential Equations
					Graphing Exponential Equations
					Plotting a Decay Curve
					Compound Interest
					Savings and Graphs
Housing				Buying a House	
<b>8.D</b> Use algebraic concepts and procedures to represent and solve problems.	<b>8.D.5</b> Formulate and solve nonlinear equations and systems including problems involving inverse variation and exponential and logarithmic growth and decay.		Checking and Savings Accounts	Plotting a Decay Curve	
				Exponential Graphs	
				Graphing Exponential Equations	
				Compound Interest	
				Savings and Graphs	
			Housing	Buying a House	
<b>9</b> Use geometric methods to analyze, categorize and	<b>9.A</b> Demonstrate and apply geometric concepts involving points, lines, planes and space.	<b>9.A.5</b> Use geometric figures and their properties to solve problems in the arts, the physical and life sciences and the building trades, with and without the use of technology.	Housing	Decorating and Remodeling	

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draw conclusions about points, lines, planes and space.	<b>9.B</b> Identify, describe, classify and compare relationships using points, lines, planes and solids.	<b>9.B.5</b> Construct and use two- and three-dimensional models of objects that have practical applications (e.g., blueprints, topographical maps, scale models).	Housing	Decorating and Remodeling	
			<b>9.C</b> Construct convincing arguments and proofs to solve problems.	<b>9.C.5a</b> Perform and describe an original investigation of a geometric problem and verify the analysis and conclusions to an audience.	Decorating and Remodeling Scale Drawings
				<b>9.C.5b</b> Apply physical models, graphs, coordinate systems, networks and vectors to develop solutions in applied contexts (e.g., bus routing, areas of irregular shapes, describing forces and other physical quantities).	Personal Finances
	Automobile Expenses	Comparing Costs			
	Checking and Savings Accounts	Graphing Exponential Equations Plotting a Decay Curve Exponential Graphs			
	<b>9.D</b> Use trigonometric ratios and circular functions to solve problems.	<b>9.D.5</b> Analyze and solve problems involving periodic patterns (e.g., sound waves, tide variations) using circular functions and communicate results orally and in writing.			
<b>10</b> Collect, organize and analyze data using statistical methods; predict results; and interpret uncertainty using concepts of probability.	<b>10.A</b> Organize, describe and make predictions from existing data.	<b>10.A.5</b> Construct a statistics-based presentation, individually and as members of a team, to communicate and justify the results of a project.			
	<b>10.B</b> Formulate questions, design data collection methods, gather and analyze data and communicate findings.	<b>10.B.5</b> Design a statistical experiment to answer a question about a realistic situation, conduct the experiment, use statistics to interpret the data, and communicate the results, individually and as members of a team.			