
Consumer Math

Curriculum Guide

Scranton School District

Scranton, PA



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Curriculum Guide

Consumer Math

Prerequisite : Geometry 11 or Applied Geometry 11

Intended Audience: This course is designed for the student who has successfully completed (Geometry 11 or Applied Geometry 11) by the end of the (eleventh) grade.

Course Description: This course is dedicated to real world applications of basic math concepts. This course is designed to expose students to facets of running their own household and prepare them for College Accuplacer and ASVAB tests.

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Year-at-a-glance

Subject: Consumer Math	Grade Level: 12	Date Completed: 2/2015
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1st Quarter

Topic	Resources	CCSS
Time	Consumer Math by Kathleen M. Harmeyer Judy clocks	HSN.Q.A.1 HSN.Q.A.2
Money	Consumer Math by Kathleen M. Harmeyer Trays of play money	HSN.Q.A.1 HSN.Q.A.2
Percents and Decimals	Consumer Math by Kathleen M. Harmeyer Tiles	HSN.Q.A.1 HSN.Q.A.2

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2nd Quarter

Topic	Resources	CCSS
Gross pay	Consumer Math by Kathleen M. Harmeyer	8.F.4, HS.A-SSE.3.c, HS. A-CED.1, HS.A-CED.2, HS.A-CED.3,HS.A-CED.4, HS.A-REI.1HS.A-REI.2,HS.A-REI.3
Net Pay	Consumer Math by Kathleen M. Harmeyer	HS.F-BF.1,HS.F-LE.2,HS.F-LE.5
Benefits	Consumer Math by Kathleen M. Harmeyer	HS.A-REI.1,HS.A-REI.2, HS.A-REI.3,
Paying taxes	Consumer Math by Kathleen M. Harmeyer	HSN.Q.A.1 HSN.Q.A.2
Banking	Consumer Math by Kathleen M. Harmeyer Everfi.com	HSN.Q.A.1 HSN.Q.A.2

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3rd Quarter

Topic	Resources	CCSS
Owning A home	Consumer Math by Kathleen M. Harmeyer	HSN.Q.A.1 HSN.Q.A.2
Area and Perimeter	Consumer Math by Kathleen M. Harmeyer Geo Boards	HSN.Q.A.1 HSN.Q.A.2
Improving Your Home	Consumer Math by Kathleen M. Harmeyer	HSG.MG.A.3 HSN.Q.A.1 HSN.Q.A.2

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4th Quarter

Topic	Resources	CCSS
Travel	Consumer Math by Kathleen M. Harmeyer	HSN.Q.A.1 HSN.Q.A.2
Proportions And Unit Analysis	Consumer Math by Kathleen M. Harmeyer	HSN.Q.A.1 HSN.Q.A.2
Working with Food	Consumer Math by Kathleen M. Harmeyer	HSN.Q.A.1 HSN.Q.A.2
Review for Final	Consumer Math by Kathleen M. Harmeyer	

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II. Money A. Value of denominations B. Rounding money C. Operations with money D. Buying Food (all 12 lessons of Chapter 2) E. Counting back change (pg 306 and 307)	HSN.Q.A.1 HSN.Q.A.2	Use units as a way to understand problems and to guide the solution of multi-step problems; choose and interpret units consistently in formulas; choose and interpret the scale and the origin in graphs and data displays. Define appropriate quantities for the purpose of descriptive modeling.	Consumer Math by Kathleen M. Harmeyer Trays of play money		18 Days
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<p>III. Percents and Decimals</p> <p>A. Introduction to percents</p> <p>B. Given a percent multiply</p> <p> 1. Sales tax (pg 304 and 305)</p> <p> 2. Down Payments (pg 77)</p> <p>C. To find a percent divide</p> <p> 1. Test Scores</p> <p> a) given number right</p> <p> b) given number wrong</p> <p> 2. Budget</p> <p> a) Using budget guidelines to prepare a budget (pg 232)</p> <p> b) Balancing a budget (group effort) (pg239)</p> <p> c) What % of your net income was spent? (pg 235)</p> <p> d) two ways to make a budget</p> <p> 3. RDA pg 136</p> <p> 4. Property tax (pg 295 - 297)</p> <p>D. Percent of whole is part</p>	<p>HSN.Q.A.1</p> <p>HSN.Q.A.2</p>	<p>Use units as a way to understand problems and to guide the solution of multi-step problems; choose and interpret units consistently in formulas; choose and interpret the scale and the origin in graphs and data displays.</p> <p>Define appropriate quantities for the purpose of descriptive modeling.</p>	<p>Consumer Math by Kathleen M. Harmeyer</p> <p>Tiles</p>		<p>12 Days</p>
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<p>IV. Gross Pay (all 13 lessons of Chapter 1)</p> <ul style="list-style-type: none"> A. Hourly B. Salary C. Regular Pay D. Overtime pay <ul style="list-style-type: none"> 1. Time worked 2. Overtime 3. Wages plus overtime E. Holiday Pay F. Tips G. Piecework H. Commission <ul style="list-style-type: none"> 1. Straight Commission 2. Graduated Commission 3. Commission plus salary 	<p>8.F.4, HS.A-SSE.3.c,</p>	<p>Construct a function to model a linear relationship between two quantities. Determine the rate of change and initial value of the function from a description of a relationship or from two (x, y) values, including reading these from a table or from a graph. Interpret the rate of change and initial value of a linear function in terms of the situation it models, and in terms of its graph or a table of values.</p> <p>Use the properties of exponents to transform expressions for exponential functions. <i>For example the expression 1.15^t can be rewritten as $(1.15^{1/12})^{12t} \approx 1.012^{12t}$ to reveal the approximate equivalent monthly interest rate if the annual rate is 15%.</i></p>	<p>Consumer Math by Kathleen M. Harmeyer</p>		<p>18 Days (Includes a test for IV, V, and VI)</p>
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	<p>HS. A-CED.1, HS.A-CED.2, HS.A-CED.3, HS.A-CED.4,</p>	<p>Create equations and inequalities in one variable and use them to solve problems. <i>Include equations arising from linear and quadratic functions, and simple rational and exponential functions.</i></p> <p>Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.</p> <p>Represent constraints by equations or inequalities, and by systems of equations and/or inequalities, and interpret solutions as viable or nonviable options in a modeling context. <i>For example, represent inequalities describing nutritional and cost constraints on combinations of different foods.</i></p> <p>Rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations. <i>For example, rearrange Ohm's law $V = IR$ to highlight resistance R.</i></p>			
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	HS.A-REI.1, HS.A-REI.2, HS.A-REI.3,	Explain each step in solving a simple equation as following from the equality of numbers asserted at the previous step, starting from the assumption that the original equation has a solution. Construct a viable argument to justify a solution method. Solve simple rational and radical equations in one variable, and give examples showing how extraneous solutions may arise. Solve linear equations and inequalities in one variable, including equations with coefficients represented by letters.			
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V. Net Pay A. Federal Withholding Tax B. Social Security Tax C. Medicare Tax D. Total Deductions	HS.F-BF.1, HS.F-LE.2, HS.F-LE.5	Write a function that describes a relationship between two quantities.* Construct linear and exponential functions, including arithmetic and geometric sequences, given a graph, a description of a relationship, or two input-output pairs (include reading these from a table). Interpret the parameters in a linear or exponential function in terms of a context.	Consumer Math by Kathleen M. Harmeyer		1 days
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VI. Benefits A. Total job Benefits B. Net job Benefits C. Comparing Jobs	HS.A-REI.1, HS.A-REI.2, HS.A-REI.3,	<p>Explain each step in solving a simple equation as following from the equality of numbers asserted at the previous step, starting from the assumption that the original equation has a solution. Construct a viable argument to justify a solution method.</p> <p>Solve simple rational and radical equations in one variable, and give examples showing how extraneous solutions may arise.</p> <p>Solve linear equations and inequalities in one variable, including equations with coefficients represented by letters.</p>	Consumer Math by Kathleen M. Harmeyer		3 Days
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<p>VII. Paying Taxes (parts of Chapter 11)</p> <p>A. Flat Income Taxes</p> <p>1. Scranton City Tax</p> <p>2. PA State Income Tax</p> <p>B. Graduated Income Taxes</p> <p>1. Federal Tax</p> <p>a) Exemptions and deductions (pg 287)</p> <p>b) Read the table (pg 289)</p> <p>c) Using a Tax Schedule (pg 291)</p> <p>C. Refund or Tax Due (pg 293)</p>	<p>HSN.Q.A.1</p> <p>HSN.Q.A.2</p>	<p>Use units as a way to understand problems and to guide the solution of multi-step problems; choose and interpret units consistently in formulas; choose and interpret the scale and the origin in graphs and data displays.</p> <p>Define appropriate quantities for the purpose of descriptive modeling.</p>	<p>Consumer Math by Kathleen M. Harmeyer</p>		<p>8 Days</p>
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<p>VIII. Banking (lessons 1 – 6 of Chapter 10)</p> <p>A. Checking Accounts</p> <p>1.Comparing Checking accounts</p> <p>2. Deposits</p> <p>a) Endorsing Checks</p> <p>b) Deposit Slips</p> <p>c) Recoding deposits in the register</p> <p>3. Writing Checks</p> <p>a) Recording checks in the register</p> <p>4. (ATM) Electronic Banking</p> <p>a) Recording withdrawals in the register</p> <p>b) Recording purchases in the register</p> <p>5. Online banking</p> <p>a) Expected or pending Payments</p> <p>6. Reconciling a Register</p> <p>B. Savings Accounts</p> <p>1. Simple Interest</p> <p>2. Compound Interest</p> <p>3. Doubling your money</p>	<p>HSN.Q.A.1</p> <p>HSN.Q.A.2</p>	<p>Use units as a way to understand problems and to guide the solution of multi-step problems; choose and interpret units consistently in formulas; choose and interpret the scale and the origin in graphs and data displays.</p> <p>Define appropriate quantities for the purpose of descriptive modeling.</p>	<p>Everfi.com</p> <p>Consumer Math by Kathleen M. Harmeyer</p>		<p>15 days</p>
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<p>IX. Owning a Home (lessons 1 – 5 of Chapter 4)</p> <p>A. Borrowing to buy a home</p> <ol style="list-style-type: none"> 1. Bankers Rule (pg 74) 2. Down Payments (pg 77) 3. Closing Costs 4. Mortgage Loan Interest Costs <ol style="list-style-type: none"> a) Finding monthly Payments b) Finding the total to be repaid c) Finding the Finance Charge 5. Refinancing a mortgage <p>B. Renting to Buy a home</p> <ol style="list-style-type: none"> 1. Renters rule (pg 72) 2. Costs of Property Rental <p>C. Comparing Renting and Owning a home</p>	<p>HSN.Q.A.1 HSN.Q.A.2</p>	<p>Use units as a way to understand problems and to guide the solution of multi-step problems; choose and interpret units consistently in formulas; choose and interpret the scale and the origin in graphs and data displays.</p> <p>Define appropriate quantities for the purpose of descriptive modeling.</p>	<p>Consumer Math by Kathleen M. Harmeyer</p>		<p>15 Days</p>
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X.	Area and Perimeter – (Square/Rectangle/Triangle/Circle) A. Perimeter B. Area C. Irregular Area D. Shaded Area E. Surface Area	HSN.Q.A.1 HSN.Q.A.2	<p>Use units as a way to understand problems and to guide the solution of multi-step problems; choose and interpret units consistently in formulas; choose and interpret the scale and the origin in graphs and data displays.</p> <p>Define appropriate quantities for the purpose of descriptive modeling.</p>	Consumer Math by Kathleen M. Harmeyer Geo boards	15 Days
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<p>XI. Improving your home (Chapter 7)</p> <ul style="list-style-type: none"> A. Insulation B. Covering the floor <ul style="list-style-type: none"> 1. Tile C. Covering the walls <ul style="list-style-type: none"> 1. Paint D. Molding E. Additions F. Furniture <ul style="list-style-type: none"> 1. Cash 2. 90 day same as cash <ul style="list-style-type: none"> a) Using calendars to count days 3. Lay-A-Way 4. Credit card 5. Rent to own G. Seeding and Feeding a lawn H. Fencing the yard 	<p>HSG.MG.A.3 HSN.Q.A.1 HSN.Q.A.2</p>	<p>Apply geometric methods to solve design problems (e.g., designing an object or structure to satisfy physical constraints or minimize cost; working with typographic grid systems based on ratios).</p> <p>Use units as a way to understand problems and to guide the solution of multi-step problems; choose and interpret units consistently in formulas; choose and interpret the scale and the origin in graphs and data displays.</p> <p>Define appropriate quantities for the purpose of descriptive modeling.</p>	<p>Consumer Math by Kathleen M. Harmeyer</p>		<p>15 Days</p>
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<p>XII. Travel (Chapter 8)</p> <p>A. By Car</p> <ol style="list-style-type: none"> 1. Reading a map 2. Estimating distances 3. Map quest 2. Google Earth 3. Renting a car 4. Parking Expenses <p>B. Taxi and Limousine Services</p> <p>C. By Bus</p> <ol style="list-style-type: none"> 1. Reading a Bus schedule 2. Computing Bus fare <p>D. By Subway</p> <ol style="list-style-type: none"> 1. Reading a subway schedule <p>E. By Airplane</p> <p>F. On a Cruise</p> <p>G. Staying in a hotel</p> <ol style="list-style-type: none"> 1. Cost for season <ol style="list-style-type: none"> a) calendars to tell elapsed time 2. Concierge and Staff you might meet 3. Room Service and Wakeup calls <p>H. Package Deals</p>	<p>HSN.Q.A.1 HSN.Q.A.2</p>	<p>Use units as a way to understand problems and to guide the solution of multi-step problems; choose and interpret units consistently in formulas; choose and interpret the scale and the origin in graphs and data displays.</p> <p>Define appropriate quantities for the purpose of descriptive modeling.</p>	<p>Consumer Math by Kathleen M. Harmeyer</p>		<p>20 Days</p>
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XIII. Proportions and Unit analysis A. Discovering Ratios B. Discovering Proportions C. Using Unit Analysis	HSN.Q.A.1 HSN.Q.A.2	Use units as a way to understand problems and to guide the solution of multi-step problems; choose and interpret units consistently in formulas; choose and interpret the scale and the origin in graphs and data displays. Define appropriate quantities for the purpose of descriptive modeling.	Consumer Math by Kathleen M. Harmeyer		5 days
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XIV. Working with Food (parts of Chapter 6) A. The Key to Ratio B. The key to Proportions C. Finding Calories with Proportions D. Fat grams and Calories E. Nutritional Information a) reading labels b) pg 135 F. Using Calories G. Losing Pounds H. Changing Recipe Yields I. Timing Food Preparation	HSN.Q.A.1 HSN.Q.A.2	Use units as a way to understand problems and to guide the solution of multi-step problems; choose and interpret units consistently in formulas; choose and interpret the scale and the origin in graphs and data displays. Define appropriate quantities for the purpose of descriptive modeling.	Consumer Math by Kathleen M. Harmeyer		12 Days
XV. Review for Final Exam					6 days