



# monarch

2018 - 2019 Curriculum Catalog

Consumer Math

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## Consumer Math Course Overview

Consumer Math is an introduction to the many ways in which math can be used in everyday life. The course gives practical advice on how to handle situations that involve money and math principles. Consumer Math focuses on the basic skills and methods of arithmetic and provides students the opportunity to develop experience with algebraic techniques of evaluating variables and equations, including geometric formulas and interest equations. Students will also be introduced to topics in statistics.

Upon completion of the course, students should be able to do the following:

- Use basic math operations on fractions, decimals, and percents.
- Interpret graphs and charts.
- Understand sets and basic set theory.
- Calculate simple probabilities.
- Calculate statistical measures of variation.
- Use similarity and right triangle ratios for indirect measurement.
- Calculate taxes, discounts, and interest amounts.
- Apply math to everyday concerns, as well as to the realms of business and government.

The major areas of study in this course are as follows:

### **Number Skills**

Number Skills lessons consist of basic math review. They emphasize non-algebra-related topics, such as decimals, fractions, and percentages, topics that are typically covered before high school.

### **Statistics**

Statistics lessons are fairly advanced, providing instruction on sets and probability; measures of variation and distribution (such as standard deviation and z-scores); accurate sampling and confidence intervals; data interpretation; and graph creation and interpretation.

### **Geometry**

Geometry lessons teach about measurement, focusing on applying measurement in the construction/building trades. These lessons cover ratio and proportion; perimeter, area, and volume of two- and three-dimensional figures (including pyramids, cones, cylinders, and spheres); and indirect measurement using similarity and right triangle relationships (including sine, cosine, and tangent).

### **Personal Finance**

Consumer Math also offers instruction on personal finance, covering topics like job acquisition, payroll deduction, commissions and tips, buying/leasing/renting goods and equipment, health insurance, asset depreciation, vacation and travel costs, retirement, life insurance, and will and estate planning.

### **Taxes**

Some lessons address the issue of taxes, discussing federal, state, and local taxes, and also FICA and miscellaneous taxes.

### **Banks and Financial Instruments**

Consumer Math explores the world of banks and financial instruments, covering topics like savings and checking accounts; interest rates; stocks, bonds, and mutual funds; loan financing; credit cards; and mortgages.

Unit 1: Basic Math Review		
Assignments		
Consumer Math	1. Course Overview	17. Quiz 3: Operations With Fractions
	2. Introduction	18. A Ratio Scale, Decimals, and Number Bases
	3. Number Skills	19. Operations and Decimals
	4. Signed Numbers and Measurement Scales	20. Consumer Application, Metrics
	5. A Consumer Application	21. Quiz 4: Decimals
	6. Division Review	22. Percent
	7. Quiz 1: Basic Operations	23. Base, Rate, Percentage
	8. Prime Numbers and Factors	24. Problem Solving
	9. Factors and Products	25. Quiz 5: Percent
	10. Fractions, LCM, and GCF	26. Mental Problem Solving
	11. Fractions	27. Final Review
	12. Quiz 2: Fractions	28. Special Project*
	13. Adding and Subtracting Fractions	29. Test: Basic Math Review
	14. Multiplying and Dividing Fractions	30. Alternate Test: Basic Math Review*
	15. Operations with Mixed Numbers	31. Reference
	16. Consumer Applications	

Unit 2: Personal Finance		
Assignments		
Consumer Math	1. Money	12. Quiz 2: Wages
	2. Finding a Job	13. Self-Employment: Piecework
	3. Job Skills: Using Standard Units	14. Commission and Tips
	4. Job Skills: Using Metric Units	15. Retirement Planning
	5. Converting Systems	16. Quiz 3: Other Income
	6. Quiz 1: Job Skills	17. Story Problems with Review
	7. Part- and Full-Time Jobs	18. Special Project*
	8. Wages	19. Test: Personal Finance
	9. Payroll	20. Alternate Test: Personal Finance*
	10. Payroll Deductions	21. Reference
	11. Other Deductions	

Unit 3: Statistics		
Assignments		
Consumer Math	1. Home Budget	13. Using the Standard Normal Distribution
	2. Organizing Data	14. Z-Scores and the Normal Distribution
	3. Sets and Probability (I)	15. Quiz 3: Measures of Variation
	4. Sets and Probability (II)	16. Sampling and Estimation
	5. Representing Data	17. A Balance Sheet
	6. Quiz 1: Data	18. Quiz 4: Balance Sheet
	7. Preparing a Cash Budget	19. Confidence Intervals
	8. Using Records in Planning	20. Unit Review
	9. A Home Business Application	21. Special Project*
	10. Quiz 2: Records	22. Test: Statistics
	11. Planning with Measures of Variations	23. Alternate Test: Statistics*
	12. Project: Using Statistics*	24. Reference

<b>Unit 4: Taxes and Insurance</b>		
<b>Assignments</b>		
Consumer Math	1. Life Insurance	11. Quiz 2: Withholding
	2. Premiums	12. Taxes: Local
	3. Loans and Cash Value	13. Taxes: Other
	4. Health Insurance	14. Quiz 3: Taxes
	5. Project: Insurance*	15. Review
	6. Other Insurance	16. Special Project*
	7. Quiz 1: Insurance	17. Test: Taxes and Insurance
	8. Taxes: Federal 1040	18. Alternate Test: Taxes and Insurance*
	9. Taxes: FICA	19. Reference
	10. Taxes: State	

<b>Unit 5: Banking Services and Investments</b>		
<b>Assignments</b>		
Consumer Math	1. Selecting a Bank	13. Mutual Funds
	2. Checking Accounts	14. Quiz 3: Investments
	3. Savings Accounts	15. Wills and Estates
	4. Quiz 1: Accounts	16. Project: Wills*
	5. Reconciling Statements	17. Distributing an Estate
	6. ATM'S	18. Quiz 4: Estate Planning
	7. Simple and Compound Interest	19. Review
	8. Other Services	20. Special Project*
	9. Quiz 2: Services	21. Test: Banking Services and Investments
	10. Financial Planning	22. Alternate Test: Banking Services and Investments*
	11. Stocks	23. Reference
	12. Bonds	

<b>Unit 6: Banking and Credit Costs</b>		
<b>Assignments</b>		
Consumer Math	1. Overdraft Protection	10. Sequences, The Rule of 78
	2. Financing Large Purchases	11. Credit
	3. Interest First Loans	12. Credit Card Purchases
	4. Installment Loans	13. Quiz 3: Credit
	5. Quiz 1: Loans	14. Review
	6. The Annual Percentage Rate	15. Special Project*
	7. Automobile Loans	16. Test: Banking and Credit Costs
	8. Mortgages	17. Alternate Test: Banking and Credit Costs*
	9. Quiz 2: Mortgages	18. Reference

<b>Unit 7: Purchase and Sale of Goods</b>		
<b>Assignments</b>		
Consumer Math	1. Purchasing and Variables	14. Quiz 3: Graphing and Comparing
	2. Discounts	15. Tabular Data Interpretation
	3. More Discounts	16. Depreciation Trends
	4. Markup	17. Buy, Lease, Rent (I)
	5. Quiz 1: Discounts and Markup	18. Buy, Lease, Rent (II)
	6. Graphs and Trends	19. Advertisements
	7. Cost Per Unit	20. Quiz 4: Interpreting Data
	8. Project: Buying Equipment*	21. Review
	9. Tables As Variables	22. Special Project*
	10. Quiz 2: Graphs and Tables	23. Test: Purchase and Sale of Goods
	11. Graphs, Functions, Slope	24. Alternate Test: Purchase and Sale of Goods*
	12. Project: Data Summaries*	25. Reference
	13. A Comparison Technique	

  

<b>Unit 8: Leisure, Travel, and Retirement</b>		
<b>Assignments</b>		
Consumer Math	1. Leisure	11. Retirement Planning
	2. Free Activities	12. Comparing Travel Cost Benefits
	3. Hobbies	13. Project: Constructions*
	4. Angles	14. Quiz 3: Retirement and Comparing
	5. Outdoor Activities	15. Review
	6. Transportation and Travel	16. Special Project*
	7. Quiz 1: Leisure and Travel	17. Test: Leisure, Travel, and Retirement
	8. Physical Fitness	18. Alternate Test: Leisure, Travel, and Retirement*
	9. Vacations	19. Reference
	10. Quiz 2: Fitness and Vacations	

  

<b>Unit 9: Job Related Services</b>		
<b>Assignments</b>		
Consumer Math	1. Ratio and Proportion	13. Solid Figures with Curved Boundaries
	2. Food Services	14. Mixture Problems
	3. Personal Appearance Services	15. Architects and Interior Design
	4. Pricing of Services	16. Quiz 3: Area and Volume
	5. Perimeter and Area	17. Geometry and Indirect Measure
	6. Quiz 1: Ratio, Proportion, and Formulas	18. Consumer Applications
	7. Facility Capacity Estimation	19. Quiz 4: Application Problems
	8. Applications	20. Review
	9. Circles	21. Special Project*
	10. Area Applications	22. Test: Job Related Services
	11. Quiz 2: Area	23. Alternate Test: Job Related Services*
	12. Solid Figures with Plane Boundaries	24. Reference

Unit 10: Consumer Math Review	
Assignments	
Consumer Math	1. Review: Basic Math (I)
	2. Review: Basic Math (II)
	3. Review: Measurement
	4. Review: Personal Finance (I)
	5. Review: Personal Finance (II)
	6. Quiz 1: Basic Math, Measurement, Finances
	7. Review: Budgeting (I)
	8. Review: Budgeting (II)
	9. Review: Insurance
	10. Review: Taxes
	11. Quiz 2: Budgeting, Insurance, Taxes
	12. Review: Banking and Investment (I)
	13. Review: Banking and Investment (II)
	14. Review: Banking and Credit Costs (I)
	15. Review: Banking and Credit Costs (II)
	16. Quiz 3: Banking, Credit
	17. Review: Purchase and Sale of Goods (I)
	18. Review: Purchase and Sale of Goods (II)
	19. Review: Travel
	20. Quiz 4: Purchases, Sales, Travel
	21. Review: Leisure and Retirement
	22. Review: Geometry
	23. Review: Job Related Services
	24. Quiz 5: Leisure, Geometry, Services
	25. Extra Practice
	26. Final Review
	27. Special Project*
	28. Test: Consumer Math Review
	29. Alternate Test: Consumer Math Review*
	30. Reference

(\*) Indicates alternative assignment