

## Consumer Math

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

  

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. Special Project*
	7. Part- and Full-Time Jobs	18. Story Problems with Review
	8. Wages	19. Test
	9. Payroll	20. Alternate Test*
	10. Payroll Deductions	21. Glossary and Credits
	11. Other Deductions	

  

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

Unit 4: Taxes and Insurance		
Assignments		
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. Special Project*
	6. Other Insurance	16. Review
	7. Quiz 1: Insurance	17. Test
	8. Taxes: Federal 1040	18. Alternate Test*
	9. Taxes: FICA	19. Glossary and Credits
	10. Taxes: State	

Unit 5: Banking Services and Investments		
Assignments		
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
	10. Financial Planning	22. Alternate Test*
	11. Stocks	23. Glossary and Credits
	12. Bonds	

Unit 6: Banking And Credit Costs		
Assignments		
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
	5. Quiz 1	14. Review
	6. The Annual Percentage Rate	15. Special Project*
	7. Automobile Loans	16. Test
	8. Mortgages	17. Alternate Test*
	9. Quiz 2	18. Glossary and Credits

Unit 7: Purchase and Sale of Goods		
Assignments		
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: Part I
	5. Quiz 1: Discounts and Markup	18. Buy, Lease, Rent: Part 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
	11. Graphs, Functions, Slope	24. Alternate Test*
	12. Project: Data Summaries	25. Glossary and Credits
	13. A Comparison Technique	

  

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

  

Unit 9: Job Related Services		
Assignments		
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. Special Project*
	9. Circles	21. Review
	10. Area Applications	22. Test
	11. Quiz 2: Area	23. Alternate Test*
	12. Solid Figures with Plane Boundaries	24. Glossary and Credits

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