

Syllabus

Consumer Mathematics

Course Overview

When you buy goods and services, you are acting as a consumer. For example, you might buy a sandwich for lunch or pay a hair stylist for a haircut. Consumer Mathematics is designed to teach you about real-life financial situations that require everyday math skills. As a consumer, you will be earning, spending, and saving money. This course will help you make educated and responsible decisions regarding your finances.

In this course, you will learn practical applications of math. You will learn how to plan a budget, manage bank accounts, and figure the cost of a good or service. You will also learn about taxes, payroll deductions, and how to invest and borrow money. This course will help you make informed decisions about buying or renting a home or car and teach you how to protect your purchases and investments with insurance. Finally, you will study economics, or the science of the creation, distribution, and consumption of goods and services. You'll see how economics affects you as an individual and how it affects the country as a whole.

Course Goals

By the end of this course, you will be able to do the following:

- Calculate discounts, tips, and sales tax on consumer purchases and services.
- Analyze the parts of an earnings statement or paycheck.
- Plan a budget.
- Examine the benefits of savings and checking accounts.
- Balance a checkbook.
- Differentiate between payroll taxes and federal income tax.
- Learn how to invest money.
- Define the terms associated with borrowing money.
- Understand simple and compound interest.
- Provide examples of the benefits and disadvantages of using a credit card.
- Make decisions about buying or renting a home or automobile.
- Evaluate mortgage options and compute the cost of owning a home.
- Describe the purpose of insurance and reasons for securing different types of insurance.
- Study basic economic concepts and explain their influence on individuals and the nation.

Math Skills

Middle school mathematics is a prerequisite for Consumer Mathematics. Before beginning this course, you should be able to do the following:

- Solve problems involving operations with real numbers.
- Understand linear relationships through your work with ratios, proportions, and rates.
- Know the meaning of a line and be able to make predictions from linear relationships.

General Skills

To participate in this course, you should be able to perform online research using various search engines and library databases.

For a complete list of general skills that are required for participation in online courses, refer to the Prerequisites section of the Plato Student Orientation document, found at the beginning of this course.

Credit Value

Consumer Mathematics is a 0.5-credit course.

Course Materials

- Notebook
- Basic calculator
- Computer with Internet connection and speakers or headphones

Course Pacing Guide

This course description and pacing guide is intended to help you keep on schedule with your work. Note that your course instructor may modify the schedule to meet the specific needs of your class.

Unit 1: Mathematics Review

Summary

This unit explains how four basic mathematical operations—addition, subtraction, multiplication, and division—can be used to solve real-life problems. It discusses how calculators simplify the process of solving such problems. Because you will come across situations in this course in which you will have to use fractions, decimals, and percentages, this section talks about the relationships between those elements and explains how they should be solved.

| Day | Activity/Objective | Type |
|--------------|---|--------------------|
| 1 day: 1 | Syllabus and Plato Student Orientation <i>Review the Plato Student Orientation and Course Syllabus at the beginning of this course.</i> | Course Orientation |
| 1 day: 2 | Using a Calculator <i>Demonstrate the ability to use a calculator.</i> | Exploration |
| 1 day: 3 | Using a Scientific Calculator <i>Demonstrate the ability to use a scientific calculator and its advanced functions.</i> | Tutorial |
| 1 day: 4 | Solving Addition and Subtraction Story Problems <i>Practice solving real-life problems using addition and subtraction.</i> | Courseware |
| 1 day: 5 | Solving Multiplication Story Problems <i>Study how to solve real-life problems using: multiplication.</i> | Courseware |
| 1 day: 6 | Solving Division Story Problems <i>Study how to solve real-life problems using division.</i> | Courseware |
| 1 day: 7 | Solving Fraction Story Problems <i>Study how to solve real-life problems using fractions.</i> | Courseware |
| 1 day: 8 | Solving Decimal Story Problems <i>Study how to solve real-life problems using decimal numbers.</i> | Courseware |
| 1 day: 9 | Relating Decimals, Fractions, and Mixed Numbers <i>Study how certain numbers can be written as a decimal number, a fraction, or a mixed number.</i> | Courseware |
| 1 day: 10 | Relating Fractions, Decimals, and Percents <i>Study how to change percents into decimals and fractions into percents.</i> | Courseware |
| 1 day: 11 | Finding a Percent of a Whole Number <i>Study how to find a percent of a whole number.</i> | Courseware |
| 1 day: | Finding a Percent of a Decimal Number | Courseware |

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| 12 | <i>Study how to find a percent of a decimal number.</i> | |
| 2 days: 13–14 | Solving Ratio, Proportion, and Percent Story Problems <i>Study how to solve real-life problems using ratio, proportion, and percent.</i> | Courseware |
| 1 day: 15 | Posttest—Unit 1 | Assessment |

Unit 2: Consumer Mathematics Skills

Summary

This unit presents the factors that decide the cost and price of an item and discusses how paying sales tax and discounts affect the total price of an item. This unit also explains how to calculate sales tax and consumer discounts. In addition, it explains the necessity of giving tips to certain service providers and offers guidelines for determining the amount of a tip.

| Day | Activity/Objective | Type |
|------------------|---|-------------|
| 2 days: 16–17 | Understanding Cost and Price <i>Describe the difference between an item's cost and its price.</i> | Exploration |
| 2 days: 18–19 | Calculating Sales Tax <i>Recognize the effect of sales tax on consumer purchases.</i> | Tutorial |
| 2 days: 20–21 | Calculating Discounts <i>Evaluate discounts on various consumer purchases.</i> | Tutorial |
| 2 days: 22–23 | Calculating Tips <i>Determine the amount of a tip for certain consumer services.</i> | Exploration |
| 1 day: 24 | Posttest—Unit 2 | Assessment |

Unit 3: Wages, Income Tax, and Money Management

Summary

Once you start earning their own money, you will need to understand various options to manage it. This unit will teach you how to correctly interpret a paycheck and understand paycheck deductions. It also presents the importance of paying taxes, the requirements for filing income tax returns, and the steps involved in calculating tax. This unit explains how you can regulate your income and expenditures by creating and following a budget. It discusses how you can use checking and savings accounts to protect and manage your money. It also shows how you can increase your money and plan a financially secure future by choosing a good investment strategy.

| Day | Activity/Objective | Type |
|------------------|--|-------------|
| 2 days: 25–26 | Understanding Your Paycheck <i>Analyze the various parts of an earnings statement or paycheck.</i> | Exploration |
| 2 days: 27–28 | Creating a Budget <i>Plan a budget.</i> | Courseware |
| 2 days: 29–30 | Money’s Worth <i>Examine the benefits of savings and checking accounts.</i> | Courseware |
| 2 days: 31–32 | Balancing a Checkbook <i>Illustrate the correct method for balancing a checkbook.</i> | Tutorial |
| 2 days: 33–34 | Paying Taxes <i>Explain and differentiate between payroll taxes and federal income tax.</i> | Exploration |
| 2 days: 35–36 | Investing Money <i>Explore the concept of investing money.</i> | Exploration |
| 2 days: 37–38 | Making Personal Investments <i>Evaluate different types of personal investments.</i> | Exploration |
| 1 day: 39 | Posttest—Unit 3 | Assessment |

Unit 4: Interest and Credit

Summary

This unit deals with obtaining and repaying loans, as well as the various types of interest on loans and how interest is calculated. This unit also discusses the concept of credit, including how credit should be correctly used and managed and how building a good credit history has important benefits.

| Day | Activity/Objective | Type |
|------------------|---|-------------|
| 2 days: 40–41 | Borrowing Money <i>Define and evaluate terms associated with borrowing money.</i> | Exploration |
| 2 days: 42–43 | Paying Interest on Loans <i>Describe the difference between simple and compound interest.</i> | Exploration |
| 2 days: 44–45 | Understanding Time Value of Money <i>Summarize the concept of time value of money.</i> | Tutorial |
| 2 days: 46–47 | Using a Credit Card <i>Explain and provide examples of the benefits and disadvantages of using a credit card.</i> | Exploration |
| 2 days: | Protecting Your Credit | Exploration |

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| 48–49 | <i>Explain credit scores and credit reporting.</i> | |
| 1 day: 50 | Posttest—Unit 4 | Assessment |

Unit 5: Large Purchases

Summary

This unit will help you make important decisions about buying or leasing a car and buying or renting a home. It presents the factors you should consider—such as costs, requirements, and personal preferences—that will help you make an informed choice. This unit also discusses the importance of insurance, different types of insurance, and how different insurance plans suit different purposes.

| Day | Activity/Objective | Type |
|------------------|---|-------------|
| 2 days: 51–52 | Buying or Leasing a Car <i>Assess important considerations related to buying or leasing a car.</i> | Tutorial |
| 2 days: 53–54 | Buying or Renting a Home <i>Recognize important considerations when buying a house or renting an apartment.</i> | Exploration |
| 2 days: 55–56 | Obtaining a Mortgage <i>Evaluate mortgage options and calculate the total monthly cost of owning a home.</i> | Exploration |
| 2 days: 57–58 | Buying Insurance <i>Describe the purpose of insurance and identify the reasons for securing different types of insurance.</i> | Exploration |
| 1 day: 59 | Posttest—Unit 5 | Assessment |

Unit 6: Economics and Finance

Summary

This unit explores how economics affects society, from a personal to a global level. This unit addresses the relevance of economic principles in everyday life and why you should be aware of them. It describes the concept of supply and demand and explains how the relationship between supply and demand affects the price you pay for goods and services. On a larger scale, this unit presents the economic indicators that describe a nation's economy. It also explains how the interaction between nations through international trade affects the global economy.

| Day | Activity/Objective | Type |
|------------------|---|-------------|
| 2 days: 60–61 | Defining Economics <i>Define basic economic concepts and explain their influence on daily life.</i> | Tutorial |
| 2 days: 62–63 | Defining Supply and Demand <i>Describe the relationship between supply and demand.</i> | Tutorial |
| 2 days: 64–65 | Examining the Nation's Economy <i>Examine the factors that indicate the health or strength of a nation's economy, such as its gross domestic product (GDP), unemployment rate, and per capita income.</i> | Exploration |
| 2 days: 66–67 | Understanding the Global Economy <i>Describe the interdependency of nations in a global economy and how it affects individuals.</i> | Tutorial |
| 1 day: 68 | Posttest—Unit 6 | Assessment |
| 5 days: 69–73 | Course Project <i>Demonstrate an understanding of the math skills you will need as a savvy consumer in the real world. This project will help you set up and live within a reasonable budget.</i> | Offline |
| 1 day: 74 | Semester Review | |
| 1 day: 75 | End-of-Semester Test | Assessment |