

## Lesson Description

Using examples of three types of cars as a reference—an economy car, a moderately priced car and a luxury car—students learn about the decisions involved in purchasing a car. The students work in groups to compare different car deals, using three criteria—the income test, the down-payment option and the time option. The students analyze the terms of a sample car contract and consider the effects of signing the contract without understanding the terms. The students use an online calculator to collect information for informed decision-making.

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## Concepts

Collateral  
Contract  
Gross pay  
Interest  
Lien  
Net pay  
Opportunity cost  
Principal  
Secured loan  
Truth in Lending Act

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## Objectives

Students will:

- Define the terms listed in the Concepts section of the lesson.
- Analyze the price of consumer credit.
- Identify the factors that affect the total price for a car including the interest rate, the length of a contract and the size of a down payment.
- Evaluate the costs and benefits of car purchase options.
- Identify an advantage and a disadvantage of secured loans.
- Analyze a car contract.

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## Content Standards

### National Standards in K-12 Personal Finance

#### National Standards in K-12 Personal Finance

**Financial Responsibility and Decision Making:** Apply reliable information and systematic decision making to personal financial decisions.

- **Standard 1:** Take responsibility for personal financial decisions.

- Eighth-grade expectation 1: Identify ways to be a financially responsible young adult.
  - Eighth-grade expectation 2: Give examples of the benefits of financial responsibility and the costs of financial irresponsibility.
  - Twelfth-grade expectation 1: Explain how individuals demonstrate responsibility for financial well-being over a lifetime.
- **Standard 2:** Find and evaluate financial information from a variety of sources.
    - Twelfth-grade expectation 3: Given a scenario, identify relevant financial information needed to make a decision.
  - **Standard 3:** Summarize major consumer protection laws.
    - Twelfth-grade expectation 1: Match consumer protection laws to descriptions of the issues that they address and the safeguards that they provide.
  - **Standard 4:** Make financial decisions by systematically considering alternatives and consequences.
    - Eighth-grade expectation 3: Evaluate the results of a financial decision.
    - Eighth-grade expectation 4: Use a financial or online calculator to determine the cost of achieving a medium-term goal.
  - **Standard 5:** Develop communication strategies for discussing financial issues.
    - Twelfth-grade expectation 3: Give examples of contracts between individuals and between individuals and businesses, and identify each party's basic responsibilities.
- Credit and Debt:** Maintain creditworthiness, borrow at favorable terms and manage debt.
- **Standard 1:** Identify the costs and benefits of various types of credit.
    - Eighth-grade expectation 2: Explain how interest rate and loan length affect the cost of credit.
    - Twelfth-grade expectation 5: Given a scenario, apply systematic decision making to identify the most cost-effective option for purchasing a car.
  - **Standard 4:** Summarize major consumer credit laws.
    - Eighth-grade expectation 1: Give examples of protections derived from consumer credit law.
    - Twelfth-grade expectation 1: Summarize consumer credit laws and the protections that they provide.

### National Standards in Economics

- **Standard 1:** Productive resources are limited. Therefore, people cannot have all the goods and services they want; as a result, they must choose some things and give up others.
  - Benchmark 7, Grade 4: The opportunity cost of a choice is the value of the best alternative given up.
  
- **Standard 12:** Interest rates, adjusted for inflation, rise and fall to balance the amount saved with the amount borrowed, thus affecting the allocation of scarce resources between present and future uses.
  - Benchmark 1, Grade 12: An interest rate is a price of money that is borrowed or saved.
  - Benchmark 6, Grade 12: Riskier loans command higher interest rates than safer loans because of the greater chance of default on the repayment of risky loans.
  - Benchmark 7, Grade 12: Higher interest rates reduce business investment spending and consumer spending on housing, cars and other major purchases.

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### Time Required

180-240 minutes

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### Materials

- Three toy cars—one economy model, one moderately priced model and one luxury model (Alternatively, use photographs of cars from magazines or printed out from the Internet.)
- A copy of Handouts 4.1, 4.2 and 4.3 for each student, assembled and stapled together to form a “Car Deal Package” for each student
- A calculator for each student
- A copy of Handouts 4.1, 4.2, 4.3, 4.5, 4.6 and 4.9—Answer Keys for the teacher
- A copy of Handouts 4.4, 4.5, 4.6, 4.8 and 4.9 for each student
- Computers with Internet access
- A copy of Handout 4.7 for every four students, cut apart to make enough cards to provide one card for each student in the class

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### Procedures

1. Display three toy cars or three pictures of cars: one economy car, one moderately priced car and one luxury car. Do not mention the price of each car. Call on various students, asking which of the cars they would like to buy and why.

2. After the students have made their choices, explain that there are many factors to consider when buying a car. Tell the students that prospective car buyers are often asked if they can make the monthly payment when they consider buying a car. Explain that the monthly payment is not all that is important when buying a car. Another factor to consider is the price of the car.
3. Provide the following estimated price for each car:
  - Economy car: \$17,000
  - Moderately priced car: \$24,000
  - Luxury car: \$55,000
4. Ask the students to think about paying for the car they chose. Explain that most people cannot afford to pay the full price of a car at the time they purchase the car. Most people finance a car—they borrow the money to pay for the car—over many months and make a monthly payment.
5. Explain that financing is often obtained through the dealership that sells the car. This means the buyer signs a contract with the dealership. Define **contract** as an exchange, promise or agreement between parties that is enforceable by law. Under the terms of a financing contract, a car buyer agrees to pay the amount financed, at an agreed-upon interest rate, for the length of the contract. One advantage of dealer financing is that sometimes the dealership offers manufacturer promotions and incentives for purchases.
6. Explain that a consumer's **net pay** is the amount received after all deductions have been subtracted from a paycheck. Discuss types of payroll deductions, such as Social Security tax, Medicare tax, income tax and other optional deductions such as insurance premiums. Point out that **gross pay** is the amount earned before any taxes or other deductions are subtracted and that net pay can be much less than the gross pay. Income available to purchase a car can be reduced further when monthly payments such as credit card payments and home equity loans are subtracted.
7. Point out that, according to GMAC Financial Services, generally a vehicle payment should be no more than 20 percent of a car-buyer's net pay after first subtracting monthly payments such as credit cards and home equity loans.  
([www.gmacfs.com/SmartEdge/en/general/budgeting/shopbudget.html](http://www.gmacfs.com/SmartEdge/en/general/budgeting/shopbudget.html))
8. Returning to the example of the three types of cars and tell the class to consider that each car is available through a loan with an interest rate of 8 percent, for a 48-month term. Based on this information, write the following estimated monthly payments for each model on the chalkboard:
  - Economy car: \$415
  - Moderately priced car: \$586
  - Luxury car: \$1,343

9. Demonstrate how to calculate the monthly net pay needed for each of these cars using a 20 percent rule of thumb. Since  $5 \times 20\% = 100\%$ , multiply each of the monthly payments by five, as follows:
- Economy car: If  $\$415 = 20\%$ , then  $100\% = \$2,075$  ( $5 \times \$415$  equals the amount of monthly net pay needed)
  - Moderately priced car: If  $\$586 = 20\%$ , then  $100\% = \$2,930$  ( $5 \times \$586$  equals the amount of monthly net pay needed)
  - Luxury car: If  $\$1,343 = 20\%$ , then  $100\% = \$6,715$  ( $5 \times \$1,343$  equals the amount of monthly net pay needed)

These net pay amounts are what is required after other monthly payments such as credit card bills and mortgage payments have been made.

10. Discuss the fact that choosing and buying a car requires a decision-making process. People must first decide if they can afford to pay for a car. This entails identifying all expenses associated with buying a car and determining whether they can afford those expenses.
11. Ask the students what the phrase “living within your means” has to do with car buying. (*“Living within your means” implies keeping your expenses below your income. Expenses often include a car payment.*)
12. Write the term “opportunity cost” on the board. Define **opportunity cost** as the highest-valued alternative given up when a choice is made. Ask the students to name possible opportunity costs when a person purchases a car. Compile a list of the possible opportunity costs on the chalkboard. (*Answers may vary depending on individual tastes and preferences, but might include eating out or going to movies or concerts.*) Explain the importance of weighing the opportunity cost and the perceived benefits of having the car before making the purchase.
13. Explain that another factor to consider when buying a car is the type of loan involved. A car loan is a secured loan. Define a **secured loan** as a loan that is backed with collateral, a loan for which the lender requires and the borrower offers property as a guarantee of repayment. Because car loans are secured loans, interest rates are usually lower because there is less risk to the lender.
14. Explain that collateral is property that will be taken in the event that payments are not made on a loan. Define **collateral** as property required by a lender and offered by a borrower as a guarantee of payment on a loan. The collateral for the loan is the car. When a vehicle is financed, the finance company holds a lien on the vehicle until the loan has been paid in full. Define a **lien** as the legal right to take or sell property as security for a debt. The lender can repossess the car if the borrower does not make the payments, and the creditor (the lender) can sell the vehicle to apply the proceeds from the sale to the outstanding balance on the loan. If the vehicle is sold for less than what is owed, the consumer is responsible for the difference. In some states, the law allows creditors to repossess a vehicle without going to court.

15. Ask the students to reconsider which car they would choose to buy and explain why, based on the monthly payment, the net pay required to make the payment and the type of loan. Allow time for discussion. *(Answers may vary but should include information on opportunity cost and the risk of having the car repossessed if payments cannot be made.)*
16. Tell the students that the effective annual interest rate is another factor to consider. Define **interest** as the price of using someone else's money. The interest rate is the amount of interest charged, expressed as an annual percentage of the amount borrowed. The total amount of interest paid on a loan will vary depending on the interest rate. Model calculating interest by using examples of simple interest, such as the following:

$$10\% \text{ of } \$1,000 \text{ borrowed for a year} = .10 \times \$1,000 = \$100$$

$$5\% \text{ of } \$1,000 \text{ borrowed for a year} = .05 \times \$1,000 = \$50$$

Thus if a consumer borrows \$1,000 and repays the full amount within one year, the difference between borrowing the money at 10 percent interest and borrowing the money at 5 percent interest is \$50.

17. Explain that borrowing a larger amount also affects the amount of interest paid.

$$10\% \text{ of } \$1,000 \text{ borrowed for a year} = .10 \times \$1,000 = \$100$$

$$10\% \text{ of } \$2,000 \text{ borrowed for a year} = .10 \times \$2,000 = \$200$$

Thus a person borrowing \$2,000 and repaying the amount in full within a year at 10 percent interest would pay twice as much interest as a person borrowing \$1,000 at the same rate of interest.

18. Ask the students if they would be more likely to buy a car when their loan has a higher interest rate or when their loan has a lower interest rate. Would car dealers be more likely to sell more cars at higher or lower interest rates on car loans? Why? *(The students should indicate they would be more likely to buy a car, and car dealers would likely sell more cars, when the interest rates are lower. Higher interest rates reduce consumer spending because the total expense of the purchase would be higher.)*
19. Tell the students that another factor to consider is the length of the term of the loan. Explain that when a loan has a longer term—a longer period of time for paying off the loan—the amount of total interest paid is greater. Provide the following example:

$$10\% \text{ of } \$2,000 \text{ borrowed for one year} = .10 \times \$2,000 = \$200 \text{ interest for one year}$$

$$\$200 \text{ interest per year} \times 2 \text{ years} = \$400 \text{ interest for two years}$$

20. Explain that the above calculation is only an estimate because after the first year a borrower will have repaid some of the principal of the loan. Define **principal** as the original amount of money borrowed or still owed on which interest is charged. When the borrower repays some of the principal, the amount of money subject to interest is reduced, and thus the amount of interest charged is also reduced.
21. Emphasize that a car loan and making payments on the car loan are a package deal: purchasing and paying. Tell the students that factors to consider when purchasing a car include the income test, the down-payment option and the time option.
22. Distribute a “Car Deal Package” and a calculator to each student. Divide the class into pairs. Instruct each pair of students to work together to complete the Car Deal Package.
23. After all the pairs of students have completed the Car Deal Package, discuss the following questions with the class:
  - What are some advantages and disadvantages of a longer-term contract? What are some advantages and disadvantages of a shorter-term contract? *(Answers may vary but should include information on the amount of the monthly payment and the total cost of the car. For example, a longer-term contract will usually result in lower monthly payments, but the total cost of the car will usually be greater. The monthly payment for a shorter-term contract will usually be greater, but the total cost of the car will usually be less. Emphasize the importance of analyzing individual contracts to make this determination.)*
  - What are some advantages and disadvantages of making a down payment? *(Answers may vary. The initial cash down payment may be difficult to make because of income limits. Making a down payment will usually reduce the total cost of the car because less is paid in finance charges. Emphasize the importance of analyzing individual contracts to make this determination.)*
  - Why is it important to consider the “income test”—the 20 percent rule of thumb—when choosing a car? *(Answers may vary but should include information on “living within your means” and the opportunity cost of buying a car.)*
24. Share with the students the Latin phrase “caveat emptor,” which means “let the buyer beware.” Explain that this phrase means the consumer is responsible for knowing and understanding the terms of the agreement in a car contract. After signing a contract, the consumer becomes obligated to the terms of the contract.
25. Distribute a copy of *Handout 4.4: Sample Car Contract and Security Agreement* to each student. Allow time for the students to read the contract and then point out the Truth in Lending Disclosures on the contract. Tell students that the **Truth in Lending Act** is a federal law that requires disclosure of information about the cost of credit. Both the finance charges and the annual percentage rate (APR) must be displayed prominently on forms and statements used by creditors.

26. Tell the class that the interest rate charged on car contracts varies from one consumer to another, based on consumers' credit reports and credit histories. Although a secured loan usually has a lower interest rate than an unsecured loan because of lower risk for the lender, some consumers may be charged higher interest rates because they are credit risks based on their past credit behavior.
27. Divide the class into pairs. Provide each student with a calculator and a copy of *Handout 4.5: It's in the Contract*. Instruct the students to refer to Handout 4.4 to find the information needed to answer the questions on Handout 4.5. Have each pair of students work together to complete the activity.
28. When all pairs of students have completed the work on Handout 4.5, review student answers using *Handout 4.5: It's in the Contract—Answer Key*.
29. Ask the students to refer to Handout 4.4 again. Review the specific terms of the contract, as indicated on the handout: interest rate, number of payments, monthly payment amounts, total amount of finance charges, late charges, amount financed and the collateral for the contract. Tell the students to use this information to write a paragraph defending a decision to sign or not sign this contract. *(Answers may vary. The completed paragraphs should demonstrate that the students have analyzed the contract, in the spirit of "caveat emptor." Besides the fact that the number of payments is missing from the contract, the students should analyze the amount of finance charges stemming from the high interest rate. Another consideration might be the \$585.04 monthly payment. Using the income test, a person needs approximately \$2,925 in monthly income to be able to afford the monthly payment.)*

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### Closure

30. Give each student a copy of *Handout 4.6: Car Deals*. Instruct the students to complete the chart on the handout and determine which of the car deals would be the best choice by using a calculator and an online calculator found at [www.bankrate.com/calculators/auto/auto-loan-calculator.aspx](http://www.bankrate.com/calculators/auto/auto-loan-calculator.aspx). Ask the students to write an explanation defending this decision. Review the answers using *Handout 4.6: Car Deals—Answer Key*.
31. Review key concepts in the lesson by asking the following questions.
  - What is the difference between gross and net pay? *(Gross pay is income earned prior to deductions. Net pay is income remaining after all deductions [required and voluntary].)*
  - What is interest? *(the price of using someone else's money; the price of borrowing money)*
  - What is collateral? *(property required by a lender and offered by a borrower as a guarantee of payment on a loan)*
  - What is a lien? *(the legal right to take or sell property as security for a debt)*



- What is opportunity cost? (*the highest-valued alternative given up when a decision is made*)
- What is the opportunity cost of purchasing a new pair of jeans? (*Answers will vary, but students should know that the opportunity cost is the other goods/ services that they could have purchased with the same amount of money now or in the future.*)
- What is principal? (*the original amount of money borrowed or still owed on which interest is charged*)
- What is a secured loan? (*a loan backed by collateral*)
- What is an advantage and a disadvantage of a secured loan? (*advantage: lower interest rate on the loan; disadvantage: collateral for the loan can be repossessed and sold if payments aren't made*)
- What is a contract? (*an exchange, promise or agreement between parties that is enforceable by law*)
- What factors affect the total price of a car? (*interest rate, length of contract and size of down payment*)
- What is the Truth in Lending Act? (*It's a federal law that requires disclosure of information about the cost of credit. Both the finance charges and the annual percentage rate [APR] must be displayed prominently on forms and statements used by creditors.*)
- What is the recommended maximum percent of net pay that should be spent on a monthly car payment? (*20 percent*)

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### Assessment

32. Tell the students they are going to be involved in a role-play activity. They are going to play the part of staff at a car dealership, promoting a special car deal.
33. Divide the class into four groups. Distribute one car-deal card, cut out from *Handout 4.7: Promotion Deals* to each group member. Distribute Deal 1 cards to group one, Deal 2 cards to group 2, Deal 3 cards to group 3 and Deal 4 cards to group 4. Instruct each group to prepare to present the car deal on its card to the class, attempting to convince the class to accept the deal. Each group should prepare its presentation as an advertisement for its special promotion.
34. Provide a copy of *Handout 4.8: Deals to Think About* to each student. Tell the students that as each group makes its presentation, the rest of the class should identify at least one advantage and one disadvantage of each car deal presented and write the advantages and disadvantages on the handout alongside the deal described.
35. Allow time for each group to make its presentation.

36. After all four groups have made their presentations, ask the class to vote for the deal that they would choose based on the presentations. Write the number of votes on the board as follows:

Deal	Number Voting for Deal
1	_____
2	_____
3	_____
4	_____

37. Give each student a copy of *Handout 4.9: Special Deals*. Tell the students that these are the same deals as those heard in the presentations. Instruct the students to complete the chart on the handout and analyze the financial effects of different car deals by using an online calculator found at [www.bankrate.com/calculators/auto/auto-loan-calculator.aspx](http://www.bankrate.com/calculators/auto/auto-loan-calculator.aspx).
38. Tell the students to compare the choices they made during the group presentations with the facts in the completed chart in Handout 4.9. Call on students to answer the following questions:
- How did the presentation influence your decision?
  - What terms of the deals were most influential in making your decision?
  - What did you learn from analyzing the different deals?
  - How can you take what you have learned from this activity and apply it to other financial decisions throughout your lifetime?
  - What was the total price of the car, based on your choice? Could you have saved money by making another choice? If so, how much?

*(Answers to the above questions may vary but should include the ideas that zero interest is not always better than other options; the length of a contract does not always determine the best deal; and the amount of the monthly payment does not reflect the best deal. The students should note that making a financial commitment is important and should be studied carefully before entering into a contract.)*

### Handout 4.1: Cars: The Time Option

You are buying a car, and the dealer has offered several options for the length of the contract. The dealer has computed the amounts in the first three columns but has left the last two columns blank. Complete the last two columns.

**Total price of car—\$20,000**

**Down payment—\$0**

CHART A: Amount Financed \$20,000				
APR	Length of Contract	Monthly Payment	Total Price of Car	Total Finance Charge
9.75%	24 months	\$921		
9.75%	36 months	\$643		
9.75%	48 months	\$505		
9.75%	60 months	\$422		
9.75%	72 months	\$368		

Answer the following questions by referring to the completed Chart A above:

1. How much money would you save if you chose to finance the car for 36 months instead of 60 months?
2. How much money would you save if you chose to finance the car for 48 months instead of 72 months?
3. How much more in finance charges would you pay if you chose to finance the car for 72 months instead of 24 months?
4. What is the difference in the monthly payment between 36-month financing and 72-month financing?

### Handout 4.1: Cars: The Time Option—Answer Key

You are buying a car, and the dealer has offered several options for the length of the contract. The dealer has computed the amounts in the first three columns but has left the last two columns blank. Complete the last two columns.

**Total price of car—\$20,000**

**Down payment—\$0**

CHART A: Amount Financed \$20,000				
APR	Length of Contract	Monthly Payment	Total Price of Car	Total Finance Charge
9.75%	24 months	\$921	\$22,104	\$2,104
9.75%	36 months	\$643	\$23,148	\$3,148
9.75%	48 months	\$505	\$24,240	\$4,240
9.75%	60 months	\$422	\$25,320	\$5,320
9.75%	72 months	\$368	\$26,496	\$6,496

Answer the following questions by referring to the completed Chart A above:

- How much money would you save if you chose to finance the car for 36 months instead of 60 months? ( $\$25,320 - \$23,148 = \$2,172$  saved)
- How much money would you save if you chose to finance the car for 48 months instead of 72 months? ( $\$26,496 - \$24,240 = \$2,256$  saved)
- How much more in finance charges would you pay if you chose to finance the car for 72 months instead of 24 months? ( $\$6,496 - \$2,104 = \$4,392$ )
- What is the difference in the monthly payment between 36-month financing and 72-month financing? ( $\$643 - \$368 = \$275$ )

### Handout 4.2: The Down Payment Option

Making a down payment on the car will reduce your monthly payments. You decide to make a down payment of \$2,000 on the \$20,000 car. Complete the last three columns in the table below. Remember to include the \$2,000 down payment in the total price of the car in the last column.

CHART B: Amount Financed \$18,000					
APR	Length of Contract	Monthly Payment	Total Cost of Payments	Total Finance Charge	Total Price of Car Including Down Payment
9.75%	24 months	\$829			
9.75%	36 months	\$579			
9.75%	48 months	\$454			
9.75%	60 months	\$380			
9.75%	72 months	\$331			

Answer the following questions by comparing Chart A on Handout 4.1 and Chart B above:

1. If you finance the car for 36 months, how much would you save by making the \$2,000 down payment?
2. If you finance the car for 48 months, how much would you save by making the \$2,000 down payment?
3. If you finance the car for 60 months, how much would you save by making the \$2,000 down payment?
4. If you finance the car for 72 months, how much would you save by making the \$2,000 down payment?

**Handout 4.2: The Down Payment Option—Answer Key**

Making a down payment on the car will reduce your monthly payments. You decide to make a down payment of \$2,000 on the \$20,000 car. Complete the last three columns in the table below. Remember to include the \$2,000 down payment in the total price of the car in the last column.

<b>CHART B: Amount Financed \$18,000</b>					
APR	Length of Contract	Monthly Payment	Total Cost of Payments	Total Finance Charge	Total Price of Car Including Down Payment
9.75%	24 months	\$829	\$19,896	\$1,896	\$21,896
9.75%	36 months	\$579	\$20,844	\$2,844	\$22,844
9.75%	48 months	\$454	\$21,792	\$3,792	\$23,792
9.75%	60 months	\$380	\$22,800	\$4,800	\$24,800
9.75%	72 months	\$331	\$23,832	\$5,832	\$25,832

Answer the following questions by comparing Chart A on Handout 4.1 and Chart B above:

1. If you finance the car for 36 months, how much would you save by making the \$2,000 down payment? ( $\$23,148 - \$22,844 = \$304$ )
2. If you finance the car for 48 months, how much would you save by making the \$2,000 down payment? ( $\$24,240 - \$23,792 = \$448$ )
3. If you finance the car for 60 months, how much would you save by making the \$2,000 down payment? ( $\$25,320 - \$24,800 = \$520$ )
4. If you finance the car for 72 months, how much would you save by making the \$2,000 down payment? ( $\$26,496 - \$25,832 = \$664$ )

### Handout 4.3: The Income Test

Easy financing can be tempting, especially when you get caught up in the excitement of buying a new car. But before you drive that car off the dealer's lot, make sure you can afford it. Cars should be purchased based on your wants AND your wallet! The bottom line is that car payments should fit your budget.

**Rule of thumb:** Your vehicle payment should be no more than 20 percent of your net pay after subtracting monthly bills such as credit card payments and home equity payments.

The charts below have options for length of contract and monthly payments based on the amount financed. If your monthly car payment is 20 percent of your net pay, calculate the minimum net pay you should have for each payment in the charts below.

Amount Financed: \$20,000		
Length of Contract	Monthly Payment	Minimum Monthly Net Pay
24 months	\$921	
36 months	\$643	
48 months	\$505	
60 months	\$422	
72 months	\$371	

Amount Financed: \$18,000		
Length of Contract	Monthly Payment	Minimum Monthly Net Pay
24 months	\$829	
36 months	\$579	
48 months	\$454	
60 months	\$380	
72 months	\$331	

**Problems:**

1. You work an average of 170 hours a month at \$20 per hour. Approximately 15 percent of your gross income is withheld for taxes and other deductions. What is your monthly net pay?
  
2. If your other monthly bills are \$850, which options in the charts above can you afford, based on your income?

### Handout 4.3: The Income Test—Answer Key

Easy financing can be tempting, especially when you get caught up in the excitement of buying a new car. But before you drive that car off the dealer's lot, make sure you can afford it. Cars should be purchased based on your wants AND your wallet! The bottom line is that car payments should fit your budget.

**Rule of thumb:** Your vehicle payment should be no more than 20 percent of your net pay after subtracting monthly bills such as credit card payments and home equity payments.

The charts below have options for length of contract and monthly payments based on the amount financed. If your monthly car payment is 20 percent of your net pay, calculate the minimum net pay you should have for each payment in the charts below.

Amount Financed: \$20,000		
Length of Contract	Monthly Payment	Minimum Monthly Net Pay
24 months	\$921	\$4,605
36 months	\$643	\$3,215
48 months	\$505	\$2,525
60 months	\$422	\$2,110
72 months	\$371	\$1,855

Amount Financed: \$18,000		
Length of Contract	Monthly Payment	Minimum Monthly Net Pay
24 months	\$829	\$4,145
36 months	\$579	\$2,895
48 months	\$454	\$2,270
60 months	\$380	\$1,900
72 months	\$331	\$1,655

**Problems:**

- You work an average of 170 hours a month at \$20 per hour. Approximately 15 percent of your gross income is withheld for taxes and other deductions. What is your monthly net pay?  
 $170 \text{ hours} \times \$20.00 = \$3,400$   
 $\$3,400 \times .15 = \$550.00$   
 $\$3,400 - \$550.00 = \$2,850$
- If your other monthly bills are \$850, which options in the charts above can you afford, based on your income? (*without the \$2,000 down payment, only the 72-month option; with the \$2,000 down payment the 60-month and the 72-month option*)  
 $\$2,850 - \$850 = \$2,000$



## Handout 4.4: Sample Car Contract and Security Agreement

<b>Retail Installment Contract and Security Agreement</b>	<b>Seller</b> XYZ Auto Sales 100 Any Street Any City, USA	<b>Buyer</b> Jane Doe 200 Any Street Any City, USA		
<b>SALE:</b> You agree to purchase from us, on a time basis, subject to the terms and conditions of this contract and security agreement, the Motor Vehicle and services described below.				
Description of motor vehicle purchased	Year 20XX Make USA Motors Model Joybug	VIN 234567890abcdefg		
<b>SECURITY:</b> To secure your payment and performance under the terms of this contract, you give us a security interest in the Vehicle, all accessions, attachments, accessories and equipment placed in or on the Vehicle, together called Property, and proceeds of the Property.				
<b>TRUTH IN LENDING DISCLOSURES:</b>				
<b>Annual Percentage Rate</b>	<b>Finance Charge</b>	<b>Amount Financed</b>	<b>Total of Payments</b>	<b>Total Sale Price</b> The total cost of your purchase on credit, including your down payment of
17.83%	\$14,291.13	\$24,321.51	\$38,612.64	\$2,857.40
				\$41,470.04
<b>PAYMENT SCHEDULE:</b> Your payment schedule will be				
<b>Number of Payments</b>	<b>Amount of Payments</b>	<b>When Payments are Due</b>		
	\$585.04	Monthly Beginning July 30, 20XX		
<b>Security:</b> You are giving a security interest in the Motor Vehicle purchased.				
<b>Late Charge:</b> If a payment is more than 10 days late, you will be charged \$1.00 or 5%, whichever is greater.				
		<b>NOTICE TO BUYER:</b> <b>Do not sign this agreement before you read it or if it contains any blank spaces. By signing below, buyer agrees to the terms of this contract and acknowledges receipt of a copy of this contract.</b>  Buyer: _____ Signature Date  Seller: _____ Signature Date		

### Handout 4.5: It's in the Contract

Jane Doe read the contract and refused to sign it. She contends that XYZ Auto Sales has not complied with **The Truth in Lending Act**, which requires creditors to give written notice of terms of the credit agreement:

- Annual percentage rate
- Finance charge
- Number of payments
- Amount of payments
- Total of payments
- Payment due dates
- Amount financed
- Total sale price
- Late-payment fees

1. Is Jane correct? If so, fill in the missing information on the contract. Show your work.
2. Jane had some unexpected expenses in September and had to wait until she got her paycheck on Oct. 10 to mail in her September payment. How much was the late fee? Show your work.
3. If Jane had paid cash for the Joybug, how much would the price of the car have been? Show your work.
4. The rule of thumb is that a vehicle payment should be no more than 20 percent of net pay. Jane's annual salary is \$35,000, and 29 percent of this is withheld for taxes and other deductions. If Jane follows the rule of thumb, can she afford this car? Show your work.
5. Jane made her payments on time for several months and received a special invitation from the finance company. The special offer stated that, as a way of saying thanks for being one of the company's best clients, she qualified to skip her next payment. To take advantage of the special offer, Jane must return a Skip-a-Payment Certificate and a check for \$65 to the finance company before the expiration date on the certificate. The certificate stated that her loan contract would be amended to be extended one month and that her account would continue to accrue interest at the contract rate. What advice would you give Jane?

### Handout 4.5: It's in the Contract—Answer Key

Jane Doe read the contract and refused to sign it. She contends that XYZ Auto Sales has not complied with **The Truth in Lending Act**, which requires creditors to give written notice of terms of the credit agreement:

- Annual percentage rate
- Finance charge
- Number of payments
- Amount of payments
- Total of payments
- Payment due dates
- Amount financed
- Total sale price
- Late-payment fees

1. Is Jane correct? If so, fill in the missing information on the contract. Show your work.  
*(Jane is correct. The number of payments is missing. The number of payments is 66.  
[ $\$38,612.64/\$585.04 = 66$ ])*
2. Jane had some unexpected expenses in September and had to wait until she got her paycheck on Oct. 10 to mail in her September payment. How much was the late fee? Show your work. ( $\$585.04 \times .05 = \$29.25$ )
3. If Jane had paid cash for the Joybug, how much would the price of the car have been? Show your work. ( $\$2,857.40$  down payment +  $\$24,321.51$  amount financed =  $\$27,178.91$ )
4. The rule of thumb is that a vehicle payment should be no more than 20 percent of net pay. Jane's annual salary is \$35,000, and 29 percent of this is withheld for taxes and other deductions. If Jane follows the rule of thumb, can she afford this car? Show your work.  
 $\$35,000$  salary  $\times .71$  not withheld =  $\$24,850$  annual net pay  
 $\$24,850/12$  months =  $\$2,071$  monthly net pay (rounded to the nearest whole dollar)  
 $\$2,071 \times .20 = \$414$ ; Jane can afford a maximum monthly payment of  $\$414$  (rounded to the nearest whole dollar).  
*Jane would have to have a monthly net pay of  $\$2,925.20$  to afford the current payment.*
5. Jane made her payments on time for several months and received a special invitation from the finance company. The special offer stated that, as a way of saying thanks for being one of the company's best clients, she qualified to skip her next payment. To take advantage of the special offer, Jane must return a Skip-a-Payment Certificate and a check for \$65 to the finance company before the expiration date on the certificate. The certificate stated that her loan contract would be amended to be extended one month and that her account would continue to accrue interest at the contract rate. What advice would you give Jane? *(The \$65 fee for one month would be in addition to the finance charges already in the contract. This means the skipped month's payment would be [ $\$585.04 + \$65.00 = \$650.04$ ] as the final payment. Instead of a reward, this would be another way to add more finance charges.)*

### Handout 4.6: Car Deals

Buying a car can be confusing, especially when different deals are available. You are in the market for a new car and will need to finance \$20,000. You have a good job with a monthly net pay of \$3,000 and want to make an informed decision. The dealer has presented different options as listed in the chart below. Use a calculator and the online calculator found at [www.bankrate.com/calculators/auto/auto-loan-calculator.aspx](http://www.bankrate.com/calculators/auto/auto-loan-calculator.aspx) to complete the chart and help determine which deal to choose. Round your answers to the nearest dollar.

	DEAL 1	DEAL 2	DEAL 3	DEAL 4
Amount of Loan	\$20,000	\$20,000	\$20,000	\$20,000
APR	5%	6%	8%	9%
Length of Loan	48 months	36 months	72 months	60 months
Est. Monthly Payment				
Total Price for Car				
Total Paid in Interest				

Based on the completed chart above, which deal would you choose? Give reasons to defend your decision, include something about your individual circumstance to support your decision.

Deal choice: \_\_\_\_\_

Reasons for choosing this deal:

1.

2.

3.

### Handout 4.6: Car Deals—Answer Key

Buying a car can be confusing, especially when different deals are available. You are in the market for a new car and will need to finance \$20,000. You have a good job with a monthly net pay of \$3,000 and want to make an informed decision in this purchase. The dealer has presented different options as listed in the chart below. Use a calculator and the online calculator found at [www.bankrate.com/calculators/auto/auto-loan-calculator.aspx](http://www.bankrate.com/calculators/auto/auto-loan-calculator.aspx) to complete the chart and help determine which deal to choose. Round your answers to the nearest dollar.

	DEAL 1	DEAL 2	DEAL 3	DEAL 4
Amount of Loan	\$20,000	\$20,000	\$20,000	\$20,000
APR	5%	6%	8%	9%
Length of Loan	48 months	36 months	72 months	60 months
Est. Monthly Payment	\$461	\$608	\$351	\$415
Total Price for Car	\$22,128	\$21,888	\$25,272	\$24,900
Total Paid in Interest	\$2,128	\$1,888	\$5,272	\$4,900

Based on the completed chart above, which deal would you choose? Give reasons to defend your decision, include something about your individual circumstance to support your decision.

Deal choice: \_\_\_\_\_

Reasons for choosing this deal:

1.

2.

3

*(Answers may vary based on individual circumstances. For example, even though the total price of the car is less in Deal 2, the monthly payment of \$608 may not be affordable based on other financial obligations. In this case, Deal 1 may be chosen because the difference in the total price of the car is only \$240 and Deal 1 provides a more affordable monthly payment.)*

**Handout 4.7: Promotion Deals**

DEAL 1	
Car Price	\$20,000
Amount of Rebate	\$0
Amount of Loan	\$20,000
APR	0%
Length of Loan	36 months

DEAL 2	
Car Price	\$20,000
Amount of Rebate	\$3,000
Amount of Loan	\$17,000
APR	6%
Length of Loan	60 months

DEAL 3	
Car Price	\$20,000
Amount of Rebate	\$2,000
Amount of Loan	\$18,000
APR	5%
Length of Loan	72 months

DEAL 4	
Car Price	\$20,000
Amount of Rebate	\$1,000
Amount of Loan	\$19,000
APR	3%
Length of Loan	48 months

### Handout 4.8: Deals to Think About

DEAL 1		Advantages:
Car Price	\$20,000	
Amount of Rebate	\$0	
Amount of Loan	\$20,000	
APR	0%	
Length of Loan	36 months	
		Disadvantages:

DEAL 2		Advantages:
Car Price	\$20,000	
Amount of Rebate	\$3,000	
Amount of Loan	\$17,000	Disadvantages:
APR	6%	
Length of Loan	60 months	

DEAL 3		Advantages:
Car Price	\$20,000	
Amount of Rebate	\$2,000	
Amount of Loan	\$18,000	Disadvantages:
APR	5%	
Length of Loan	72 months	

DEAL 4		Advantages:
Car Price	\$20,000	
Amount of Rebate	\$1,000	
Amount of Loan	\$19,000	Disadvantages:
APR	3%	
Length of Loan	48 months	

### Handout 4.9: Special Deals

You are in the market for a new car that costs \$20,000. After being informed that the dealership is offering special promotions that include 0% interest, you are ready to buy. The salesman has informed you that there are other special promotions available that involve rebates with interest rates based on contract terms. Review the special promotions available as listed in the chart below. Use a calculator and the online calculator found at [www.bankrate.com/calculators/auto/auto-loan-calculator.aspx](http://www.bankrate.com/calculators/auto/auto-loan-calculator.aspx) to complete the chart and help determine which deal to choose. Round your answers to the nearest dollar.

	DEAL 1	DEAL 2	DEAL 3	DEAL 4
Car Price	\$20,000	\$20,000	\$20,000	\$20,000
Amount of Rebate	\$0	\$3,000	\$2,000	\$1,000
Amount of Loan	\$20,000	\$17,000	\$18,000	\$19,000
APR	0%	6%	5%	3%
Length of Loan	36 months	60 months	72 months	48 months
Est. Monthly Payment	\$556			
Total Price for Car	\$20,000			
Total Paid in Interest	\$0			

\*Because of rounding, the sum of the monthly payments and the total amount paid for the car will not be exact.

Which of the deals would be the best deal to accept? Explain your answer.



**Handout 4.9: Special Deals—Answer Key**

You are in the market for a new car that costs \$20,000. After being informed that the dealership is offering special promotions that include a 0% interest, you are ready to buy. The salesman has informed you that there are other special promotions available that involve rebates with interest rates based on contract terms. Review the special promotions available as listed in the chart below. Use a calculator and the online calculator found at [www.bankrate.com/calculators/auto/auto-loan-calculator.aspx](http://www.bankrate.com/calculators/auto/auto-loan-calculator.aspx) to complete the chart and help determine which deal to choose. Round your answers to the nearest dollar.

	DEAL 1	DEAL 2	DEAL 3	DEAL 4
Car Price	\$20,000	\$20,000	\$20,000	\$20,000
Amount of Rebate	\$0	\$3,000	\$2,000	\$1,000
Amount of Loan	\$20,000	\$17,000	\$18,000	\$19,000
APR	0%	6%	5%	3%
Length of Loan	36 months	60 months	72 months	48 months
Est. Monthly Payment	\$556	\$329	\$290	\$421
Total Price for Car	\$20,000	\$19,740	\$20,880	\$20,208
Total Paid in Interest	\$0	\$2,740	\$2,880	\$1,208

\*Because of rounding, the sum of the monthly payments and the total amount paid for the car will not be exact.

Which of the deals would be the best deal to accept? Explain your answer.

*(Answers may vary but should include the fact that Deal 2 is a better deal than Deal 1. Although Deal 2 has \$2,740 in interest, the total price of the car was only \$19,740 which is \$260 less than the total price of Deal 1. Although the payment for Deal 1 is for 36 months and the payment for Deal 2 is for 60 months, the monthly payment for Deal 2 is \$227 less. This payment would be much easier to make each month. Although in other examples in this lesson, the longer term of the loan increased the total price of the car, in this case the total price of the car is less because of the rebates.)*

