**Financial Mathematics, First Semester**

**Textbook**


The textbook was carefully selected to provide you with a comprehensive course in financial math. This book was also selected because of the ease of reading of each lesson as well as the adequate explanations and sample problems. There is a glossary of terms and set of tables in the back of the book that you may find beneficial. Also, in the back of the book are the answers to the odd-numbered problems from each section.

**Nature and Purpose of the Course**

Welcome to Mathematics 421, *Financial Mathematics*. The purpose of this course is to teach you how to use mathematics effectively in your day-to-day life. The emphasis of this course is on topics that you would encounter in everyday living, such as personal banking, income, credit, loans, and budgets. After successfully completing this course, you should be familiar with and understand basic terminology relating to personal applications. You should also be able to apply basic math skills in order to solve real-life problems and use common math formulas to solve financial math problems.

Before starting the course, it is important that you are knowledgeable of certain key mathematics concepts. Among them are addition, subtraction, multiplication, and division of whole numbers, fractions, and decimal numbers. Throughout the course, you will need to understand how to round numbers correctly, estimate answers before actually working the problem, and work with percentages. If you are unsure about your skills, some additional help is provided in your textbook. At the beginning of your textbook, there are forty-two “workshop” sections. These pages have short lessons on specific review topics. For example, workshop 2 on page 6 presents a short lesson on rounding numbers.

**Preparation of Lesson Assignments**

It is important that you use a basic scientific calculator when working your lesson assignments and become proficient in using a calculator. Calculators are allowed on both the mid-course exam and final exam. (Any calculator is acceptable except those with a complete alphabet keyboard.) In each section of the textbook, you will see a step-by-step calculator guide to solving problems from that particular section. Even though you are using a calculator to get the answers to problems, you are required to show your work. In other words, you must show what was entered in the calculator to get your answer.
Your lesson assignments will be carefully graded. The problems in the multiple-choice section will be graded as either correct or incorrect. The problems section of your lesson assignment will be graded by checking your work as well as the answer. Partial credit is given only when the work is neatly shown. It is extremely important that you answer the question that is asked. You must remember this especially for multi-step problems.

When you complete a problem, be sure to put your answer on the blanks provided. It is also important that your answer be labeled with the correct units and a descriptor. For example, if you are asked for a person’s hourly wage, it is incorrect to put “10.” It is correct to write “$10 hourly wage.” The dollar sign ($) indicates the units, and “hourly wage” is a descriptor. The descriptor is used to help you make sure that you answer the question that is asked.

Additional examples of labeled responses:

7% increase in sales
$2600 annual premium
67 books of stamps

It is important that your work is organized very neatly and very carefully. There should be enough room next to your problems for corrections and individual notes.

Also, it is strongly recommended that you make a copy of each lesson assignment before it is submitted.

**Each lesson must be done in its entirety.** Incomplete lessons will be graded deducting points for missing problems. You will not be able to take the final exam if all lessons have not been submitted.

**Examinations and Grading Policy**

**YOU MUST PASS THE FINAL EXAMINATION IN ORDER TO PASS THE COURSE**

For those students who pass the final exam, the final course grade will be determined as described below:

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
</tr>
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<tbody>
<tr>
<td>Lesson Assignments</td>
<td>40%</td>
</tr>
<tr>
<td>Mid-Course Exam</td>
<td>20%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>40%</td>
</tr>
</tbody>
</table>

You may use a calculator on the mid-course and final exams. Any calculator is acceptable except those with a complete alphabet keyboard. The mid-course exam will cover major topics from the first six lessons from the text. The majority of the final exam will cover major topics from the remaining seven lessons. However, since the exam is cumulative, you will need to review topics from the first part of the course as well. Both exams will contain a selection of
problems similar to problems assigned in the lessons. The questions will be similar to the multiple-choice questions in the lesson assignments.

A ten-point grading scale is used to assign a letter grade to lessons and exams.

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>90%–100%</td>
<td>A = 4 points</td>
</tr>
<tr>
<td>80%–89%</td>
<td>B = 3 points</td>
</tr>
<tr>
<td>70%–79%</td>
<td>C = 2 points</td>
</tr>
<tr>
<td>60%–69%</td>
<td>D = 1 point</td>
</tr>
<tr>
<td>0%–59%</td>
<td>F = 0 points</td>
</tr>
</tbody>
</table>

**Completed Lesson Checklist**

Write your name at the top of each sheet.
All of the assigned problems are completed.
You must show your work for all problems, except multiple-choice problems.
All work is neat and organized in sequential order.
Final answers are labeled with the correct units and descriptor.
Final answers are written on the blanks provided.

**Important Lesson and Exam Information**

• Plan your course completion with care. Remember, you may turn in a maximum of two lessons assignments in any seven-day period.
• All required lesson assignments must be received in our office and posted to your record before you will be allowed to take the mid-course or final exam. In order for you to be eligible to take the mid-course exam, we must have accepted and posted lesson assignments 1–6; for you to be eligible to take the final exam, we must have accepted and posted all lesson assignments.
• We strongly recommend that you wait until we return lesson assignments 1–6 to you before you take the mid-course exam; however, if your completion deadline does not allow that, you may take an exam before we return your lesson assignments.
• If you will be delayed in taking your mid-course exam and have a completion deadline, you should continue to submit lesson assignments.
• Your completed final exam must be in our office no later than three weeks prior to the date you would like to have your final course grade.

**END OF INTRODUCTION**

If you change your school or address, be sure to send the Change of Address form to the Louisiana High School Correspondence Courses office so that your exam will arrive at the correct location.
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**HS 421B Financial Math, First Semester**

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<td>Chapter 12</td>
<td>Sections 1 – 6</td>
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</tbody>
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LESSON 1: Gross Income

Lesson Objectives

After you have completed this lesson, you should be able to:
1. Compute the straight-time pay, over-time pay, and total pay
2. Compute the total hours on a weekly time card
3. Compute the total pay on a piecework basis
4. Compute salary per pay period
5. Compute straight commission and graduated commission

Key Terms

gross income  
net income  
overtime pay  
piecework

Lesson Introduction

In this unit, you will study different methods of calculating gross income. Gross income is the total amount of money earned before any deductions are taken (insurance, taxes, etc.). There are several different methods to calculate gross income. Income may be calculated using number of hours worked or items produced or sold, or it may be set as a fixed annual salary. This lesson explains these methods of calculating gross income.

Section 1-1: Hourly Pay

Certainly you have heard the term minimum wage. This is the least amount that an employer can legally pay a full-time employee. There are some exceptions to this law. For example, restaurant servers getting tips may be earning less than minimum wage from the employer. In either case, these people are working for hourly pay. The amount of money these employees earn is related directly to the number of hours they have worked.

Reading Assignment, 1-1

Read the unit introduction on page 90 as well as the explanation of hourly pay on page 92. Review the given example.

Self Check, 1-1

Work problems 11, 13, and 17 on page 93. Check your answers in the back of the book. If your answers are correct, and you understand the section, proceed to the next section. If you had some difficulty with the section, review the reading assignment as well as the given examples.
Section 1-2: Overtime Pay

The normal work week consists of 40 working hours. After working 40 hours, an employee usually receives an overtime rate. The usual overtime rate is time and a half, or 1.5 times your hourly rate. If the overtime occurs on weekends or holidays, an employee can get double-time pay, or 2 times the hourly rate.

Note that if an employee works 45 hours in a week, he or she would receive the normal rate of pay for the first 40 hours and the overtime rate for the remaining 5 hours. Also, be careful not to round the overtime rate. Review the problem below.

An employee works 47 hours during the current week and has a regular hourly rate of $17.55. What is the employee’s gross income for the week?

$17.55 \times 1.5 = $26.325$ overtime rate (notice that the overtime rate has not been rounded)

\[
\begin{align*}
\text{regular pay} & \quad + \quad \text{overtime pay} \\
($17.55 \times 40) & \quad + \quad ($26.325 \times 7) \\
$702 & \quad + \quad $184.275 \\
$886.275 & \quad = \quad \text{gross} \\
\end{align*}
\]

(Note round the final $886.28 = \text{gross income}$)

Reading Assignment, 1-2

Read section 1-2 on page 94, including the example.

Self Check, 1-2

Work problems 1, 9, and 11 on page 95. When you finish, check your answers in the back of the book. If you got the answers correct and understand the section, proceed to the next section. If you had some difficulty with the section, review the reading assignment as well as the given examples.

Section 1-3: Weekly Time Card

Employers may use a time clock to verify the number of hours that an employee works. At the end of the pay period, the cards are collected and the gross income is calculated based on the number of hours worked each day.

When you read the explanation on page 96, be sure to note that the text stipulates that you are to round the hours worked each day to the nearest quarter hour.

Reading Assignment, 1-3

Read section 1-3 on page 96, including the example.
Self Check, 1-3

Work problems 1, 5, 7, and 9 on pages 97–98. Check your answers in the back of the book. If you got the answers correct and understand the section, proceed to the next section. If you had some difficulty with the section, review the reading assignment as well as the given examples.

Section 1-4: Piecework

Some manufacturers use the piecework method of paying employees. This method pays employees for performance. In other words, employees will make more money if they produce more products. For example, a cake decorator may not be paid by the hour but rather by the number of cakes decorated. This type of pay scale encourages employees to produce more.

Reading Assignment, 1-4

Read section 1-4 on page 99, including the example.

Self Check, 1-4

Work problems 3, 5, 7, and 9 on page 100. When you finish, check your answers in the back of the book. If you got the answers correct and understand the section, proceed to the next section. If you had some difficulty with the section, review the reading assignment as well as the given examples.

Section 1-5: Salary

A salary is a fixed amount of money that an employee earns for a specific period of time. The concept is the same as hourly rate; however, the period of time is usually a year. The salary can be paid monthly, every two weeks, or twice a month.

Reading Assignment, 1-5

Read section 1-5 on page 101. As you read, it is important to note the difference between semimonthly (twice a month) and biweekly (every two weeks). Sometimes these two methods of payment are misunderstood, but they are not the same. Biweekly payments are made every two weeks, with 26 payments made in the course of a year (52 weeks). Semimonthly payments are made twice a month (usually the first and the fifteenth days of the month), with 24 payments in the course of a year (12 months).
Example: $50,000 annual salary would be divided as follows:

<table>
<thead>
<tr>
<th>Method</th>
<th>Calculation</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monthly</td>
<td>$50,000/12 = $4,166.67</td>
<td>$4,166.67</td>
</tr>
<tr>
<td>Semi-monthly</td>
<td>$50,000/24 = $2,083.33</td>
<td>$2,083.33</td>
</tr>
<tr>
<td>Bi-weekly</td>
<td>$50,000/26 = $1,903.28</td>
<td>$1,903.28</td>
</tr>
<tr>
<td>Weekly</td>
<td>$50,000/52 = $961.54</td>
<td>$961.54</td>
</tr>
</tbody>
</table>

Self Check, 1-5

Review the given example and work problems 3, 7, 9, and 11 on page 102. If you had some difficulty with the section, review the reading assignment as well as the given examples.

Section 1-6: Commission

Many people working in sales work on commission. They are paid a set amount of money for each sale made or a set percentage of the total sale. Some sales employees work on a salary plus commission. They earn a set salary regardless of their sales and an additional amount of money based on their sales activity. Others work strictly on commission.

Reading Assignment, 1-6

Read section 1-6 on page 103, including the example.

Self Check, 1-6

Work problems 7, 11, 13, 17, and 19 on pages 104–105. When you finish, check your answers in the back of the book. If you got the answers correct and understand the section, proceed to the next section. If you had some difficulty with the section, review the reading assignment as well as the given examples.

Section 1-7: Graduated Commission

Another method of paying an employee a commission is based on a graduated scale. This employee’s rate of commission would increase as sales increased. For example, a computer sales representative may earn 3% on the first $6000 of monthly sales and 4% on any additional sales over $6000.

It is important to note that you may not receive the higher rate on the entire amount. For example, consider a computer sales clerk from the store described above. If the monthly sales totaled $8000, the clerk would receive 3% on the first $6000 and 4% on the additional $2000.
($6000 \times .03) + ($2000 \times .04) 
= $180 + $80 
= $260 \text{ total commission}

Reading Assignment, 1-7

Read section 1-7 on page 106, including the example.

Self Check, 1-7

Work problems 3, 5, 7, and 9 on page 107. When you finish, check your answers in the back of the book. If you got the answers correct and understand the section, proceed to the Lesson Assignment. If you had some difficulty with the section, review the reading assignment as well as the given examples.

END OF LESSON 1

Lesson Assignment 1:

Part I: Multiple Choice. Choose the correct answer from the options given, and write the correct letter on the blank provided. You will transfer these answers to your Lesson 1 Answer Sheet before you mail in your assignment. (4 points each)

_____ 1. Stuart Goldman works at King’s Golf Spot. He works 11 hours a week and earns $8.25 per hour. What is Goldman’s straight-time pay for each week?
A. $90.75
B. $80.75
C. $80.25
D. $90.25

_____ 2. Malik Montez works as a lifeguard earning $8.50 an hour for 20 hours a week. What is Montez’s straight-time pay for the week?
A. $170.00
B. $160.00
C. $1,600.00
D. $1,700.00

_____ 3. Samantha Hayes worked 38.75 hours at Tech Pro. She is paid $14.625 an hour. What is her straight-time pay?
A. $582.454
B. $566.719
C. $676.353
D. $565.255
4. Twana Thomas is paid $10.50 an hour for a regular 40-hour week. She earns time and a half if she works overtime. This week Thomas worked her regular 40 hours plus 8½ hours of overtime. What is her total pay?
   A. $553.88
   B. $420.00
   C. $522.50
   D. $456.00

5. Phyllis Doran worked at Symmes Medical Center for 7½ hours on Monday and from 8:00 A.M. until 1:00 P.M. on Tuesday. What is the total number of hours she worked?
   A. 13½ hours
   B. 11½ hours
   C. 10½ hours
   D. 12½ hours

6. Justin Joseph presses shirts at All Day Cleaners. He gets paid $0.37 per shirt. Last week he pressed 649 shirts. What was his total pay?
   A. $240.00
   B. $240.13
   C. $295.25
   D. $220.25

7. Robin Cline is a computer analyst. Her annual salary is $52,789. What is her monthly salary?
   A. $3,444.22
   B. $4,399.08
   C. $4,100.00
   D. $4,700.87

8. Sasha Story’s salary for a four-week period in July was $5,824. What was her weekly salary?
   A. $1,456
   B. $1,546
   C. $1,756
   D. $1,656

9. Briana Driscoll sells real estate. She earns a 6 percent straight commission on each sale. She recently sold a house for $355,000. What was her commission?
   A. $23,300
   B. $21,300
   C. $20,900
   D. $23,500
10. Quincy Jackson sells motorcycles. He earns a 10 percent commission on the first $5,000 and 15 percent on all sales over $5,000. How much commission will he earn on $19,000 in sales?

A. $1,900  
B. $2,600  
C. $2,400  
D. $2,850

- Print the Lesson Assignment 1 worksheets.
- Transfer your multiple choice answers to the answer sheets that you will submit for grading.
- Make sure that your letters are neatly written.
- Check your answers to make sure that you transferred them correctly.
- Complete the assignment following the directions for each section. Remember that on some of the sections, you may earn partial credit. However, to do so, you must neatly show all of your work.
- Check over your work.
- Make yourself a copy of your lesson before you mail it to us for grading.
- Mail your lesson assignment to LHSCC at P. O. Box 2751, Baton Rouge, LA 70821-2751
LESSON 2: Net Income

Lesson Objectives

After you have completed this lesson, you should be able to:
1. Use tables to find the amount withheld for federal income tax
2. Compute the state tax on a straight percent basis and on a graduated income basis
3. Compute the amount of income withheld for social security and Medicare taxes
4. Compute the deduction for group insurance
5. Compute the net pay per pay period

Key Terms

net income
deductions
dependents
earnings statement
personal exemptions

Lesson Introduction

In this unit, you will study methods of calculating net income. Net income is the amount of money that is actually taken home after deductions are made for taxes, insurance, and savings deductions.

Section 2-1: Federal Income Tax

Employees pay a specified amount of their earnings to the federal government. This income tax is based on the amount of money earned. The Internal Revenue Service, the governmental department charged with the responsibility of collecting income taxes, provides tax tables to employers so that they will know the correct amount of earnings to deduct.

Caution: This section is relatively easy. However, make sure that you are using the correct tax table as well as the correct number of deductions.

Reading Assignment, 2-1

Read section 2-1 on page 116. This section will explain the proper method of using a tax table to calculate the amount of federal income tax. Review the example box on page 116 as well.

Self Check, 2-1

Work problems 9, 13, 15, and 17 on pages 117–118. Check your answers in the back of the book.
Section 2-2: State Income Tax

The amount paid in state taxes varies from state to state. One method of calculating the amount of state income tax is using a straight percentage. Before the amount of the tax is calculated, however, you have to calculate the amount of taxable wages. Based on the different circumstances in family size, states provide for personal exemptions. This is an amount of money that basically you can earn tax free to support yourself and additional family members (wife, children, and other dependents).

Reading Assignment, 2-2

Read section 2-2 on pages 119–120, including the example. Look at the information in the yellow circle on page 119 listing the specific amounts for personal exemptions.

Self Check, 2-2

Work problems 7, 9, 11, and 13 on pages 120–121. Check your answers in the back of the book.

Section 2-3: Graduated State Income Tax

Another method that is used by states to calculate state income tax is by using a graduated scale. That is, the rate varies based on your level of income. As you earn more money, you are placed in a higher tax bracket. This means that you will pay a higher rate of taxes. This type of graduated system is calculated similar to the method used in lesson 1 to calculate graduated commission.

Reading Assignment, 2-3

Read section 2-3 on pages 122–123, including the example. Notice the important information in the yellow box. This box gives an example of the rate of tax for each level of income.

Self Check, 2-3

Work problems 1, 3, and 5 on page 123. Check your answers in the back of the book.

Section 2-4: Social Security and Medicare Taxes

Another mandatory deduction from an employee’s earnings is for Social Security and Medicare taxes. The Social Security Administration provides benefits for retirement, disability, survivors (dependents still living when a care provider dies), supplemental security income, and
Medicare health benefits. If you would like additional information on the services provided, you can go to their Web site at www.ssa.gov. The Social Security tax and Medicare tax are both calculated by using a straight percent method. However, two things you must note: (1) there is a cap (maximum amount) on the amount paid for Social Security, and (2) the rate for each tax is different.

Reading Assignment, 2-4

Read section 2-4 on page 124. The current rates for each of the taxes are given in the opening paragraph. Read the example on that page as well.

Self Check, 2-4

Work problems 7, 9, and 11 on page 125. Check your answers in the back of the book.

Section 2-5: Group Insurance

As a benefit to employees, an employer may provide health insurance at a lower cost than is otherwise available. This benefit varies from company to company. Some companies provide coverage for the employee at a low rate as well as the employee’s family members (spouse and children). It is provided at a lower rate because the company actually pays a portion of the premium. Also, large companies get discounted group rates and pass the savings to their employees. The employee’s portion of the premium is deducted from wages and salary earned.

The total bill (100%) must be paid. The percent is easy to calculate. If the company pays 70%, then the individual must pay the remaining 30%. Likewise, if the company pays 90%, the employee is responsible for 10%. Remember, the two portions must add up to 100%.

Reading Assignment, 2-5

Read section 2-5 on page 126, including the example.

Self Check, 2-5

Work problems 3, 5, and 7 on page 127. Check your answers in the back of the book.

Section 2-6: Statement of Earnings

When an employee receives a paycheck, an earnings statement is attached to explain the net pay. The earnings statement will give the gross pay, list all of the deductions, and indicate the net pay.
Reading Assignment, 2-6

Read section 2-6 on pages 128–129, including the example.

Self Check, 2-6

Work problems 3, 5, and 7 on pages 130–131. Check your answers in the back of the book.

END OF LESSON 2

Lesson Assignment 2

Part I: Multiple Choice. Choose the correct answer from the options given, and write the correct letter on the blank provided. You will transfer these answers to your Lesson 2 Answer Sheet before you mail in your assignment. (4 points each)

Figure 2.1. Use this table with the question(s) below, as needed.

<table>
<thead>
<tr>
<th>PERSONAL EXEMPTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single – $1,500</td>
</tr>
<tr>
<td>Married – $3,000</td>
</tr>
<tr>
<td>Each Dependent – $700</td>
</tr>
</tbody>
</table>

_____ 1. Mona Elliott’s gross pay is $33,500 a year. The state income tax rate is 3 percent of taxable wages. Elliott takes a single exemption for herself. Using Figure 2.1, how much is withheld a year for state income tax?
   A. $890
   B. $980
   C. $960
   D. $990

_____ 2. Lourdes Sanchez takes a single exemption for herself and one personal exemption for her son, Claudio. Using Figure 2.1, what is the total amount of exemptions?
   A. $2,300
   B. $2,400
   C. $2,200
   D. $2,000

_____ 3. Liana Lytle’s gross pay is $26,300. She takes a married exemption of $3,000. Her state income tax rate is 5.5 percent. How much will she pay in state tax?
   A. $1,281.50
   B. $1,982.00
   C. $1,344.80
   D. $1,821.25
4. Jack Salomon’s gross weekly pay is $498. His earnings to date for the year total $13,446. What amount is deducted from his pay this week for Medicare, which is taxed at 1.45 percent?
   A. $9.00
   B. $8.65
   C. $2.43
   D. $7.22

5. Dalton Alexander’s gross weekly pay is $576. His earnings to date for the year total $13,824. What amount is deducted from his pay per week for Medicare, which is taxed at 1.45 percent?
   A. $6.00
   B. $19.95
   C. $8.35
   D. $15.60

6. Lucinda Martinez is employed at Red Balloon Books. She has family medical coverage through the group medical plan that Red Balloon Books provides for its employees. The annual cost of Martinez’s family membership is $3,900. The company pays 50 percent of the cost. How much does she pay annually for medical insurance?
   A. $1,950
   B. $2,900
   C. $1,650
   D. $1,000

7. Arnel Green is employed at Market Systems Inc. She has family medical coverage through the group medical plan that Market Systems provides for its employees. The annual cost of Green’s family membership is $5,200. The company pays 49 percent of the cost. How much does she pay annually for medical insurance?
   A. $2,345
   B. $2,652
   C. $9,888
   D. $3,567

8. Charles Benton’s gross weekly salary is $421. His weekly federal withholding is $51.18. The Social Security tax is 6.2 percent of the first $84,900. The Medicare tax is 1.45 percent of gross pay. The state tax is 1.5 percent of gross pay. Each week he pays $12.40 for medical insurance. What are Benton’s total deductions?
   A. $108.90
   B. $102.10
   C. $110.90
   D. $138.09
**Figure 2.2. Use this table with the question(s) below, as needed.**

<table>
<thead>
<tr>
<th>Graduated Tax Table</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Taxable Wages</strong></td>
<td><strong>Tax Rate</strong></td>
</tr>
<tr>
<td>First $2,000</td>
<td>2.0%</td>
</tr>
<tr>
<td>Next $4,000</td>
<td>3.0%</td>
</tr>
<tr>
<td>Next $4,000</td>
<td>4.5%</td>
</tr>
<tr>
<td>Over $10,000</td>
<td>6.0%</td>
</tr>
</tbody>
</table>

_____ 9. Amanda Sabino’s taxable income is $20,900. Use Figure 2.2 to find out how much she’ll pay in state tax.
A. $880  
B. $560  
C. $1,000  
D. $994  

_____ 10. Doug Wright’s taxable income is $51,900. Using Figure 2.2, how much will he pay in state tax if the tax rate is 3 percent?
A. $3,400  
B. $1,557  
C. $1,234  
D. $3,488  

- Print the Lesson Assignment 2 worksheets.
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- Make sure that your letters are neatly written.
- Check your answers to make sure that you transferred them correctly.
- Complete the assignment following the directions for each section. Remember that on some of the sections, you may earn partial credit. However, to do so, you must neatly show all of your work.
- Check over your work.
- Make yourself a copy of your lesson before you mail it to us for grading.
- Mail your lesson assignment to LHSCC at P. O. Box 2751, Baton Rouge, LA 70821-2751
LESSON 3: Recordkeeping

Lesson Objectives

After completing this lesson, you should be able to:
1. Compute average monthly expenditures
2. Use records of past expenditures to prepare a monthly budget
3. Compare budgeted amount to actual spending

Key Terms

budget
expenditures
fixed expense
living expenses

Lesson Introduction

It is important to keep receipts and accurate records of expenditures in order to keep a budget. A budget is a financial plan. This plan helps you to see how much money you are making compared to how much money you are spending. Through the use of a good budget, it is easier to see where expenditures can be cut in order to save money or just allow you to have enough money to pay for essentials. In this lesson, you will compute average expenditures and use these figures to create a budget.

Section 3-1: Average Monthly Expenditure

In this section you will learn about computing average monthly expenditures. Some expenses will remain constant throughout the year while others will not. For example, the amount you spend on food can remain relatively constant throughout the year if you eat the same amount during that period of time. However, utility bills will not be constant. They tend to fluctuate month to month and season to season. Finding the average monthly expenses will help you in preparing a budget.

If you recall how to calculate the average, you will find a sum and then divide by the number of entries added together. For example, to find the average monthly expenses, you will add all 12 months together and then divide by 12. This will give the monthly average.

Reading Assignment

Read the unit introduction on pages 144–145 as well as the additional explanation on pages 146–147. Review the given example as well as the given solution.
Self Check

Work problems 9, 11, and 13, on page 148 for practice. Check your answers in the back of the book. If you got the answers correct and understand the section, proceed to the next section. If you had some difficulty with the section, review the reading assignment as well as the given examples.

Section 3-2: Preparing a Budget Sheet

A budget sheet is a complete listing of monthly expenditures or simply an outline of total expenses for a period of time. It shows your fixed expenses, monthly expenses, and annual expenses. The budget sheet is used as a guide to show your actual spending. This allows you to make more accurate projections of future months spending as well.

A family or business might do an annual budget. The budget sheet is simply putting the budget in a format that you can easily read and understand. Look at the examples on pages 150 and 151.

It is extremely important that you compare apples to apples. In other words, you cannot prepare a monthly budget sheet with annual figures. You must put them in terms of a month. For example, if your home insurance for a year is $1800, you do not use that figure in your monthly budget. You divide by 12 to get the monthly amount.

Reading Assignment

Read the additional explanation on pages 149–151 and review the given budget sheet example.

Self Check

Work problems 5, 7, 9, 11, 13, 15, and 17 on pages 151–152. Check your answers before proceeding to the next section. If you got the answers correct and understand the section, proceed to the next section. If you had some difficulty with the section, review the reading assignment as well as the given examples.

Section 3-3: Using a Budget

After you have completed your budget for a particular month and the month passes, you usually go back over your actual expenses to see in which areas you overspent. It is from this work that you will decide to either adjust your spending or adjust the budget. For example, if you budgeted $20 for entertainment for the month but actually spent $57, you will have to decide whether to cut your spending the next month for entertainment or cut spending from another category to make up for the overspent funds.
Reading Assignment

Read the additional explanation on pages 153–154 and review the example given.

Self Check

Work problems 5, 7, 9, and 13 on page 154. Check your answers before proceeding to the next section. If you got the answers correct and understand the section, proceed to the next section. If you had some difficulty with the section, review the reading assignment as well as the given examples.

END OF LESSON 3

Lesson Assignment 3

Part I: Multiple Choice. Choose the correct answer from the options given, and write the correct letter on the blank provided. You will transfer these answers to your Lesson 3 Answer Sheet before you mail in your assignment. (4 points each)

_____ 1. Sita Rahim keeps records of her expenditures. She wants to know how much she spends each month, on the average. Her records for three months are shown below. What is her average monthly expenditure?

<table>
<thead>
<tr>
<th>Month</th>
<th>Expenditure</th>
</tr>
</thead>
<tbody>
<tr>
<td>August</td>
<td>$3,156.00</td>
</tr>
<tr>
<td>September</td>
<td>$2,896.50</td>
</tr>
<tr>
<td>October</td>
<td>$2,666.00</td>
</tr>
</tbody>
</table>

A. $2,344.50  
B. $3,001.01  
C. $2,906.17  
D. $3,004.20

_____ 2. The Cohens’ monthly budget allowed them to spend $245.00 for groceries each month. During November they spent $356.82. How much more or less did they spend than budgeted?

A. $223.64 more  
B. $223.64 less  
C. $111.82 more  
D. $111.82 less
3. The Bose family’s monthly budget allowed them to spend $155 for personal expenses. To prepare for vacation, their personal spending in June totaled $355. By how much did they overspend?
   A. $300
   B. $200
   C. $100
   D. $510

4. The Hongs’ monthly budget allowed them to spend $455 for household expenses. During June they spent $235 for household expenses. How much less did they spend than budgeted?
   A. $400 less
   B. $220 less
   C. $235 less
   D. $455 less

5. Norma Richard’s monthly budget allows her to spend $125 for entertainment. In June she spent $185. How much more or less did she spend than budgeted?
   A. $45 less
   B. $76 more
   C. $60 more
   D. $60 less

6. Joseph Pearson is a programmer for Main Tech. He tracks his transportation expenses to and from Main Tech. His expense sheet looks like this:

<table>
<thead>
<tr>
<th>Expense</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gas/Oil</td>
<td>$50.00</td>
</tr>
<tr>
<td>Parking</td>
<td>5.00</td>
</tr>
<tr>
<td>Tolls</td>
<td>0.00</td>
</tr>
<tr>
<td>Commuting</td>
<td>45.00</td>
</tr>
</tbody>
</table>

Pearson budgets $100 per month for transportation. How much more or less are Pearson’s expenses than the $100 budgeted?
   A. $5 more
   B. $5 less
   C. $10 more
   D. none of the above

7. Betty Glacier is a manufacturer’s representative for a plastics company. She travels all over the country selling her company’s products. Her total monthly expenses for August, September, and October were $2,756.11, $7,111.20, and $5,080.70. What was her average monthly expenditure?
   A. $4,567.76
   B. $3,898.01
   C. $4,982.67
   D. $3,983.45
8. Barney Taylor is a representative for an oil refinery. He travels throughout the Western United States. His total monthly expenses for August and September were $1,759.11 and $5,444.70. What was his average monthly expenditure?
A. $5,444.70  
B. $3,556.11  
C. $1,759.11  
D. $3,601.91

9. Aneas Arnold sells lighting supplies. She travels all over New England. Her total monthly expenses for August, September, and October were $2,700, $1,100, and $2,200. What was her average monthly expenditure?
A. $2,200  
B. $2,000  
C. $3,000  
D. $6,000

10. How much more or less is the amount spent than the amount budgeted?

<table>
<thead>
<tr>
<th>Budgeted: $3,984.00</th>
<th>Spent: $3,878.90</th>
</tr>
</thead>
</table>
A. $105.10 more  
B. $110.10 more  
C. $105.10 less  
D. none of the above

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- Make sure that your letters are neatly written.
- Check your answers to make sure that you transferred them correctly.
- Complete the assignment following the directions for each section. Remember that on some of the sections, you may earn partial credit. However, to do so, you must neatly show all of your work.
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LESSON 4: Checking Accounts

Lesson Objectives

After you have completed this lesson, you should be able to:
1. Compute the total checking-account deposit
2. Write a check using the proper format
3. Compute the balance in a check register
4. Compute the present balance on a checking-account bank statement
5. Reconcile a check register and a bank statement

Key Terms

deposit
check register
bank statement
balance

Lesson Introduction

In this unit, you will learn the workings of a checking account. Because checking accounts are extremely important in everyday business transactions, we will discuss these accounts from the deposit of funds in the account to writing checks to make purchases and, finally, to balancing the account using a reconciliation statement.

Section 4-1: Deposits

To open a checking account at a bank, you must first deposit money in the account. In turn, when a check is written as payment for goods or services, the bank will pay cash to the bearer of the check in the amount indicated. There are several important parts of a deposit slip. On the deposit slip, currency (money in the form of bills), coins, and additional checks are listed separately.

Reading Assignment, 4-1

Read section 4-1 on pages 166–167. Read the example, noting the different sections on the deposit slip.

Self Check, 4-1

Work problems 11, 13, and 15 on page 168. Remember, you may use a calculator to check your addition. Check your answers at the end of the book.
Section 4-2: Writing Checks

After depositing funds in an account, you can begin to write checks. One important thing to note is that a check can only be written for an amount equal to or less than the amount that you have deposited in the account. This is important because when a check is written for an amount that is greater than the amount of available funds in the account, the bank charges an overdraft fee. Sometimes the check is returned unpaid to the merchant to whom the check was written. The merchant, in most cases, charges a fee for the returned check as well.

Reading Assignment, 4-2

Read section 4-2, pages 169–170 noting the example of the sample check given.

Self Check, 4-2

Work problems 17, 19, 21, and 23 on page 171. Check answers in the back of the book.

Section 4-3: Check Registers

A check register is used to keep your account organized and prevent you from making an overdraft (writing a check for an amount that exceeds the amount available in the account). The check register keeps a running total of funds by adding amounts that are deposited and subtracting amounts withdrawn.

Reading Assignment, 4-3

Read section 4-3 on pages 172–173, including the example.

Self Check, 4-3


Section 4-4: Bank Statements

At the end of the month, the banking institution will send you a bank statement for your account. This statement will list all transactions on the account, listed by date. Some banks will return the canceled checks for you to preview. Other banks keep them on file for a period of time, in the event of a dispute.

Reading Assignment, 4-4

Read section 4-4 on pages 175–176, including the example of a bank statement.
Self Check, 4-4

Work problems 5, 7, and 9 on pages 177. Check your answers in the back of the book.

Section 4-5: Reconciling the Bank Statement

When you receive your bank statement from the bank, the balance that is on the statement is not necessarily the amount of money that you have available in the account. The balance on the statement is not necessarily going to match the balance in your check register. Because the bank may add interest to your account or deduct a monthly service charge, and because you may have written checks that have yet to be paid by the bank, you must go through a process of reconciling your bank statement to make sure that your check register is accurate.

*Note:* When reconciling your bank statement, the two bottom line figures must be equal. If they are not equal, there is an error in the process. Although getting the same amount in both columns does not guarantee that you are correct, if the two amounts are not the same, it is definitely incorrect.

Reading Assignment, 4-5

Read section 4-5 on pages 178–179, including the example of a bank reconciliation statement.

Self Check, 4-5


END OF LESSON 4
Lesson Assignment 4

Part I: Multiple Choice. Choose the correct answer from the options given, and write the correct letter on the blank provided. You will transfer these answers to your Lesson 4 Answer Sheet before you mail in your assignment. (4 points each)

_____ 1. Luisa Perez had a balance of $541.82 in her checking account on January 7. On January 10 she wrote a check to Marty’s Hair Salon for $27.19. What is her new balance?
   A. $494.63
   B. $569.01
   C. $514.63
   D. $27.19

_____ 2. Jamahl Jones earned $20.50 cutting grass, $16.50 babysitting, and $4.95 selling two baseball cards. He puts all but $10.00 in his checking account. What is his total deposit?
   A. $41.95
   B. $31.50
   C. $31.95
   D. $30.00

_____ 3. Lincoln Jefferson sold his motor scooter and received a check for two hundred eighty-one and 01/100 dollars. What is the amount of the check written as a numeral?
   A. $281.00
   B. $821.10
   C. $281.01
   D. $218.10

_____ 4. The manager of Tony’s Pizzeria deposited money in the restaurant’s checking account at the end of the day. The deposit included 4 fifty-dollar bills, 9 twenty-dollar bills, 16 ten-dollar bills, 22 five-dollar bills, 16 one-dollar bills, 29 quarters, 14 dimes, 9 nickels, and 17 pennies. What was the total deposit?
   A. $675.27
   B. $675.10
   C. $678.27
   D. $698.27

_____ 5. Colleen McHugh wishes to deposit checks for $13.75, $92.08, and $8.21 into her account. She would like to receive $15.00 in cash. What is her total deposit?
   A. $114.04
   B. $99.04
   C. $115.94
   D. $99.54
6. Isaac Epstein received a bank statement showing the following amounts. What is his present balance?

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Previous Balance</td>
<td>$131.02</td>
</tr>
<tr>
<td>Deposits</td>
<td>415.75</td>
</tr>
<tr>
<td>Checks</td>
<td>198.31</td>
</tr>
<tr>
<td>Service Charge</td>
<td>3.87</td>
</tr>
<tr>
<td>Interest</td>
<td>1.79</td>
</tr>
<tr>
<td>Present Balance</td>
<td></td>
</tr>
</tbody>
</table>

A. $344.99  
B. $357.70  
C. $354.12  
D. $346.38

7. Which of the following is the correct word form to write on a check for the amount $756.50?

A. seven hundred and fifty six and \$50.00  
B. seven hundred fifty-six and \$50.00  
C. seven hundred fifty-six and 0.50 dollars  
D. seven fifty-six and 0.50 dollars

8. The manager of Pia’s Taco Casa makes a deposit into the restaurant’s checking account at the end of the day. She has 2 fifty-dollar bills, 16 twenty-dollar bills, 4 ten-dollar bills, 1 five-dollar bill, 24 quarters, 12 dimes, and 3 nickels. She wants to receive 20 one-dollar bills to use as change the next day. How much is the total deposit?

A. $472.35  
B. $452.35  
C. $492.35  
D. $432.35
9. Latoya Johnson uses United Bank online banking. One month she paid the basic charge, 8 bills, and requested a printed statement. United’s online banking charges are shown below. What are Johnson’s total fees for the month?

<table>
<thead>
<tr>
<th>Service</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Monthly Charge</td>
<td>$5.50</td>
</tr>
<tr>
<td>Bill Payment - first 4 N/C (no charge)</td>
<td>$0.50</td>
</tr>
<tr>
<td>Printed Statement</td>
<td>$3.50</td>
</tr>
</tbody>
</table>

A. $13.00  
B. $11.00  
C. $9.50  
D. $9.00

10. Terrell DeShay’s statement balance is $432.10. He has one outstanding check for $37.00. What is DeShay’s adjusted balance?

A. $395.10  
B. $469.10  
C. $406.10  
D. $359.00

11. Tammy Martin’s checking account had a balance of $235.42. She writes one check for $36.75 to purchase a sweater and another for $6.75 to purchase a book. What is the new balance in Martin’s account?

A. $278.92  
B. $198.67  
C. $91.92  
D. $191.92

12. Eric Schneider’s bank statement shows a previous balance of $974.95. He made deposits of $246.00 and $98.48. He wrote checks for $721.00 and $35.35. He has a $3.00 service charge and earned $0.75 in interest. What is his present balance?

A. $506.83  
B. $486.08  
C. $560.08  
D. $560.83

13. Patrice Rodrick receives her bank statement for the month. Her balance is $430.52. In comparing her checkbook register, canceled checks, and bank statement, she finds that checks #224 and #250 are outstanding. The amounts are $32.50 and $62.80. What is Rodrick’s adjusted balance?

A. $525.82  
B. $335.22  
C. $463.02  
D. $493.32
14. Belinda Diaz received her bank statement and canceled checks for August. Use the amounts in the table below to find her present balance. What is her present balance?

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Previous Balance</td>
<td>$879.98</td>
</tr>
<tr>
<td>Deposits</td>
<td>456.00</td>
</tr>
<tr>
<td>Checks</td>
<td>323.01</td>
</tr>
<tr>
<td>Service Charge</td>
<td>4.56</td>
</tr>
<tr>
<td>Interest</td>
<td>3.45</td>
</tr>
<tr>
<td>Present Balance</td>
<td></td>
</tr>
</tbody>
</table>

A. $1,012.97  
B. $1,011.86  
C. $1,086.11  
D. $998.76

15. Ramon Ramos receives his bank statement for the month. His balance is $470.99. In comparing his checkbook register, canceled checks, and bank statement, he finds that checks #786 and #789 are outstanding. The amounts are $52.50 and $65.00. What is Ramos’s adjusted balance?

A. $343.69  
B. $358.49  
C. $418.49  
D. $353.49

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LESSON 5: Savings Accounts

Lesson Objectives

After you have completed this lesson, you should be able to:
1. Compute the total savings account deposit and withdrawal
2. Compute savings account balance
3. Compute simple interest
4. Compute compound interest
5. Compute compound interest using given tables

Key Terms

interest
simple interest
compound interest

Lesson Introduction

In this unit, you will learn the workings of a savings account. More than likely, you are familiar with the basics of a savings account. Also in this lesson, you will learn the difference between simple interest and compound interest as well as different methods for calculating interest for a given situation. As you begin the lesson, you will notice that the first four sections of this lesson are similar to the corresponding sections from the previous lesson on checking accounts.

Section 5-1: Deposits

To open a savings account at a bank, you must first deposit money in the account. The procedure for making a deposit to a savings account is identical to the procedure learned in the previous section for a checking account. There are several important parts of a deposit slip. On the deposit slip, currency, coins, and checks are listed separately. This money is placed in the bank for you to use in the future. In the meantime, the bank will use your money to make other investments as well as for loans to other customers.

Reading Assignment, 5-1

Read section 5-1 on pages 196–197. Review the given example, noting the similarities on the deposit slip. You should see that the only difference is going to be the account number. The savings-account deposit slips are usually a different color from the checking-account deposit slips.
Self Check, 5-1

Work problems 13, 15, and 17 on page 198. Remember, you may use a calculator to check your addition. Check your answers in the back of the book.

Section 5-2: Withdrawals

After depositing funds in an account, you can make withdrawals from the account as needed. You can make the withdrawals personally at the bank or using an ATM machine. As with the checking account, it is important to note that a withdrawal can be made only for an amount equal to or less than the amount that you have deposited in the account. Some banks require that you keep a minimum amount in the account to keep the account active. If you withdraw all funds from the account, the bank may consider the account closed.

Reading Assignment, 5-2

Read section 5-2 on pages 199–200, including the example of the sample withdrawal slip given. It is similar to a check in appearance and in the way that it is filled out. The difference is that you are giving this slip to a bank and not a merchant.

Self Check

Work problems 13, 15, 17, and 19 on page 201. Check your answers in the back of the book.

Section 5-3: Account Statements

The banking institution will send you a bank statement for your account at regular intervals. This could be monthly or quarterly, depending on the bank’s policy. This statement will list all transactions on the account, listed by date.

Reading Assignment, 5-3

Read section 5-3 on pages 202–203, including the example of a bank statement.

Self Check, 5-3

Work problems 7, 9, and 11 on pages 203–204. Check the answers in the back of the book.
Section 5-4: Simple Interest

The bank is constantly using the money that you have deposited in the bank. They are making investments and lending it out to other clients. In return for the use of your money, they will pay you interest. Interest is the cost of money. For example, when a person uses a credit card to make a purchase, the credit-card company is actually paying for merchandise with their money. In return, the credit-card holder will pay interest based on the amount of time they use the company’s money. This is similar to a savings account. The bank will pay a specified rate of interest for as long as they are using your money.

The formula for finding interest is \( i = p \times r \times t \), where \( i \) is interest, \( p \) is principal, \( r \) is rate of annual interest, and \( t \) is time. That is, interest is equal to the principal times the rate of interest times the length of time that the money is used.

*Principal* is the amount of money on which interest is paid. (The amount of a loan, the amount deposited in a bank, the amount of a purchase on a credit card are all examples of principal.)

*Rate* is the percent of the principal amount that will be paid in interest annually. Rate is always expressed in terms of a percent.

Percent Note: \( 5\% = .05; \ 6\frac{1}{2}\% = .065; \ 175\% = 1.75 \)

If you have trouble with percents, you can review Workshop 13 and Workshop 14 on pages 28–31 of your textbook. These pages contain brief explanations and problems with percents.

Time is simply the length of time that interest will be paid. Time for the interest formula is always expressed in terms of a year.

Time Note: \( 1 \text{ month} = 1/12; \ 7 \text{ months} = 7/12; \ 64 \text{ days} = 64/365 \)

Quarterly means four times per year, or every three months.

Semi-annually means twice per year, or every six months.

It may be necessary at this time to review the rules for rounding numbers. Since we are dealing with money, your final answer will be rounded to the nearest cent (two places behind the decimal). That does not mean that you will round all numbers to the hundredths. For example, if you receive interest for 1 month, the fraction 1/12 is 0.08333333. . . . Your answer will not be accurate if you round to 0.83. You must be careful when rounding. Rules for rounding and several examples are given in Workshop 2 on pages 6–7.

**Reading Assignment, 5-4**

Read section 5-4 on pages 205–206, including the examples of interest calculations.
Self Check, 5-4

Work problems 7, 11, and 13 on page 207. Check your answers at the end of the book.

Section 5-5: Compound Interest

The concept of compound interest sometimes presents a bit of a problem. Compound interest is sometimes explained as interest on interest. For example, if you deposit $100 in a bank paying a rate of 6% interest annually, how much will be in the account at the end of one year?

\[ i = p \times r \times t \]

\[ i = 100 \times 0.06 \times 1 \]

\[ i = $6 \]

There will be $106 at the end of the year. You will have the $100 that you deposited plus an additional $6 for interest.

What if you leave the $106 in the bank for another year, how much will you have at the end of the second year?

\[ i = p \times r \times t \]

\[ i = 106 \times 0.06 \times 1 \]

\[ i = $6.36 \]

There will be $112.36 at the end of the second year. You notice that you receive more interest the second year. That is because you had more money in the bank for the second year. You not only received the $6 interest on the $100 deposit but you also received an additional $0.36 on the $6 interest from the previous year.

Reading Assignment, 5-5

Read section 5-5 on pages 208–209, including the example of compound interest and the example below.


May 1 balance $9544, annual interest rate of 5.25%, compounded monthly. Find the amount in the account at the end of August.

At the end of May

\[ i = 9544 \times 0.0525 \times \frac{1}{12} \] substitute the values for each variable

\[ i = 501.06 \times \frac{1}{12} \] multiply the first two terms

\[ i = 41.755 \]

\[ i = $41.76 \] round the answer to nearest cent

$9544 + $41.76 = $9585.76 Balance in account at end of May
At the end of June  
\[ i = 9585.76 \times 0.0525 \times \frac{1}{12} \]  
substitute the values for each variable  
\[ i = 503.2524 \times \frac{1}{12} \]  
multiply the first two terms  
\[ i = 41.9377 \]  
round the answer to nearest cent  
\[ 9585.76 + 41.94 = 9627.70 \]  
Balance in the account at the end of June

At the end of July  
\[ i = 9627.70 \times 0.0525 \times \frac{1}{12} \]  
substitute the values for each variable  
\[ i = 505.45425 \times \frac{1}{12} \]  
multiply the first two terms  
\[ i = 42.1211875 \]  
round the answer to nearest cent  
\[ 9627.70 + 42.12 = 9669.82 \]  
Balance in the account at the end of July

At the end of August  
\[ i = 9669.82 \times 0.0525 \times \frac{1}{12} \]  
substitute the values for each variable  
\[ i = 507.6655 \times \frac{1}{12} \]  
multiply the first two terms  
\[ i = 42.3054625 \]  
round the answer to nearest cent  
\[ 9669.82 + 42.31 = 9712.13 \]  
Balance in the account at the end of August

Final Answer: $9712.13 will be in the account at the end of August.

Self Check, 5-5

Work problems 9, 11, and 13 on page 210. Check your answers in the back of the book.

Section 5-6: Compound Interest Tables

To make the calculation of compound interest easier, you can use a compound interest table. The table gives you the value of $1 at specified interest rates for a given period of time. Then, by multiplying the value from the chart by the principal amount, you can calculate the amount of interest.

Note: Be sure that you are using the correct table when doing your calculations.

Reading Assignment, 5-6

Read section 5-6 on pages 211–212, including the example. There are several steps involved in using the chart. Review the example carefully.
Self Check, 5-6

Work problems 9, 11, and 13 on page 213. Check your answers in the back of the book.

Section 5-7: Daily Compounding

Banks and credit institutions use different periods for compounding. Some accounts accrue interest annually, whereas others accrue interest daily. On credit-card billing statements there is a section, usually towards the end of the statement, that explains the interest rate for the account. Often it is given in terms of the daily interest rate. In this section, another chart is used to find the amount of interest for a specified number of days.

Reading Assignment, 5-7

Read section 5-7 on pages 214–215, including the example. You will see that the procedure is similar to the previous section.

Self Check, 5-7

Work problems 9, 11, and 13 on page 216. Check your answers in the back of the book.

END OF LESSON 5

Lesson Assignment 5

Part I: Multiple Choice. Choose the correct answer from the options given, and write the correct letter on the blank provided. You will transfer these answers to your Lesson 5 Answer Sheet before you mail in your assignment. (4 points each)

_____ 1. Lincoln Cook has a check for $295.50 and a check for $6.25. He also has a $10.00 bill. He would like to receive $5.00 in cash and deposit the rest of the money in his savings account. What is the total deposit?
   A. $304.75
   B. $306.75
   C. $206.75
   D. $311.75

_____ 2. Pamela Ericson wants to deposit a check for $955 and $45 in cash into her savings account. What is her total deposit?
   A. $100
   B. $1,000
   C. $10,000
   D. $10
3. Fifty-seven and \( \frac{50}{100} \) dollars as a numeral is:
   A. $56.70
   B. $53.40
   C. $34.50
   D. $57.50

4. Maxwell Collins withdraws $268.75 from his savings account. How will it appear in word form on his withdrawal slip?
   A. two hundred sixty-nine and \( \frac{75}{100} \) dollars
   B. two hundred eighty-six and \( \frac{50}{100} \) dollars
   C. two hundred sixty-eight and \( \frac{75}{100} \) dollars
   D. two-hundred sixty-eight and \( \frac{75}{100} \) dollars

5. Pedro Romar’s savings account statement shows a previous balance of $895.00 and $3.50 in interest. He made a deposit of $210.00. He had a withdrawal of $20.50. What is his new balance?
   A. $1,088.00
   B. $1,088.50
   C. $1,098.50
   D. $1,098.00

6. The previous balance on Hector Todd’s savings account is $618.21. He has $4.31 in interest, $466.26 in deposits, and $10.10 in withdrawals. What is his new balance?
   A. $1,078.90
   B. $1,178.68
   C. $1,078.68
   D. $1,068.78

7. Jaycee Alvarez deposits $300 in a savings account at City Bank. The account pays an annual interest rate of 5 percent. She makes no other deposits or withdrawals. After three months, the interest is calculated. How much simple interest does her money earn?
   A. $4.00
   B. $3.95
   C. $3.75
   D. $4.25

8. The principal on Wallace Wilkins’ savings account is $300. The annual interest rate is 5 percent. What is the interest after six months?
   A. $7.80
   B. $7.50
   C. $7.60
   D. $7.25
9. Natasha Evans deposited $1,100 in a savings account that earns 5 percent interest compounded quarterly. The amount in her account at the end of the second quarter was $1,127.67. How much compound interest had she earned?
   A. $27.67
   B. $13.68
   C. $13.67
   D. $127.67

10. Malik Montez’s savings account has a principal of $1,640. It earns 6 percent interest compounded quarterly. What is the amount at the end of the second quarter?
   A. $1,634.23
   B. $1,657.89
   C. $1,689.57
   D. $1,897.67

11. Trina Wilsons’ bank calculates interest on a daily basis. Complete the following interest calculation:
   \[
   \text{Principal} \times \text{Rate} \times \text{Time} = \text{Interest}
   \]
   \[
   \begin{align*}
   \text{Principal} & = $3,500 \\
   \text{Rate} & = 0.05 \\
   \text{Time} & = \frac{91}{365}
   \end{align*}
   \]
   A. $41.35
   B. $46.55
   C. $45.73
   D. $43.63

12. Erica Glaser wants to deposit a check for $20,005 and cash amounting to $1,234. What is her total deposit?
   A. $23,239
   B. $21,239
   C. $23,219
   D. $21,999

---

Figure 5.1. Use this table with the questions 13 – 14, as needed.

<table>
<thead>
<tr>
<th>Compound Interest—Amount of $1.00</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Interest Periods</strong></td>
</tr>
<tr>
<td>1.250%</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
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</tr>
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<tr>
<td>6</td>
</tr>
<tr>
<td>7</td>
</tr>
<tr>
<td>8</td>
</tr>
</tbody>
</table>
13. Use Figure 5.1. Home City Bank pays 5 percent interest compounded quarterly on regular savings accounts. Miguel Cardosa deposited $1,000 for 1 year. He made no other deposits or withdrawals. How much interest did he earn during the first year?
   A. $50.94
   B. $45.75
   C. $40.67
   D. $35.70

14. Use Figure 5.1. Benita Lopez opened an account and deposited $3,600. The account pays 6 percent annual interest and compounds quarterly. She made no other deposits or withdrawals. How much interest did she earn during 1 year?
   A. $225.85
   B. $220.90
   C. $275.65
   D. $175.95

15. Use Figure 5.1. Joaquin Sanchez opened an account at Midwest Savings by depositing $827. The bank pays 5.5 percent interest compounded quarterly. He makes no other deposits or withdrawals. How much will the account be worth after 2 years?
   A. $895.47
   B. $95.47
   C. $922.47
   D. None of the above.

- Print the Lesson Assignment 5 worksheets.
- Transfer your multiple choice answers to the answer sheets that you will submit for grading.
- Make sure that your letters are neatly written.
- Check your answers to make sure that you transferred them correctly.
- Complete the assignment following the directions for each section. Remember that on some of the sections, you may earn partial credit. However, to do so, you must neatly show all of your work.
- Check over your work.
- Make yourself a copy of your lesson before you mail it to us for grading.
- Mail your lesson assignment to LHSCC at P. O. Box 2751, Baton Rouge, LA 70821-2751
**LESSON 6: Cash Purchases**

**Lesson Objectives**

After you have completed this lesson, you should be able to:

1. Compute the sales tax and the total sales
2. Compute the unit price of a product
3. Use the unit price to make the best purchasing decision
4. Compute the final cost of an item after coupons and rebates
5. Compute the sales price and markdown amount of an item

**Key Terms**

- sales tax
- coupons
- unit price
- rebates
- markdown
- making change
- discount rate

**Lesson Introduction**

In this unit, you will study the details of cash purchases. Using the information in this lesson, you will be better prepared to make purchasing decisions. Because all but five states have a sales tax, it is important to understand how this tax is calculated and that it is added to the cost of a purchase.

**Section 6-1: Sales Tax**

When a consumer purchases merchandise or services, an additional amount is added for sales tax. The rate varies from state to state. The sales tax is a set percentage of the cost of the items purchased that is added to the final cost that you would pay. These funds are paid by the retail stores to the state either monthly or quarterly. It is also important to note that there are items that are exempt from sales tax. Usually medical services are tax exempt. Also, in Louisiana, for example, groceries are taxed at a different rate than clothing and other goods.

**Reading Assignment, 6-1**

Read section 6-1 on page 232, including the example. Note the two steps involved. First you find the amount of the tax, and then add it to the cost of the merchandise to get the total cost.

**Self Check, 6-1**

Work problems 7, 9, and 11 on page 233. Check your answers in the back of the book.
Section 6-2: Total Purchase Price and Making Change

To calculate the total purchase price, you simply add the amount of the sales tax to the cost of the item. If several items were purchased, you would first calculate the sum of the items purchased and then calculate the tax on the items as a group. In other words, you would not calculate the tax on each item individually. Simply calculate the tax on the total.

After calculating the total purchase price, you may pay with different denominations of bills and coins. It will be important to count your change or if you are working in retail or a cashier position, you may have to make change for purchases.

One way of making change or counting change is Bottom to Top. To make change, count up to the next nickel, dime, quarter and dollar until the amount tendered is reached. For example, a customer’s total purchase price including tax for items purchased comes to a grand total of $11.57. The customer gives you a $20.  How much change is given back to the customer?

Solution: Begin counting with the final price - $11.68
Change Received:
   2 pennies = $11.70
   1 nickel  = $11.75
   1 quarter = $12.00
   3 $1 bills = $15.00
   1 $5 bill = $20.00

The total change is 2 pennies, 1 nickel, 1 quarter, 3-$1 bills and 1-$5 bill for a total of $8.32.

You can easily check by adding the purchase price to the change to get the amount tendered (what the customer gave you).

Total purchase price + amount of change = Amount tendered
$11.68 + $8.32 = $20.00

Look at another example below then fill in the blanks on the chart for practice. Check your answer to make sure that you understand the process.

<table>
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<tr>
<th>Example: Purchase price: $3.27</th>
<th>Amount tendered: $10.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change received:</td>
<td></td>
</tr>
<tr>
<td>3 pennies</td>
<td>&gt;&gt;&gt;&gt;&gt; = $3.30</td>
</tr>
<tr>
<td>2 dimes</td>
<td>&gt;&gt;&gt;&gt;&gt; = $3.50</td>
</tr>
<tr>
<td>2 quarters</td>
<td>&gt;&gt;&gt;&gt;&gt; = $4.00</td>
</tr>
<tr>
<td>1 dollar</td>
<td>&gt;&gt;&gt;&gt;&gt; = $5.00</td>
</tr>
<tr>
<td>1 $5 dollar</td>
<td>&gt;&gt;&gt;&gt;&gt; = $10.00</td>
</tr>
</tbody>
</table>
Directions: Show, for each piece of currency, the quantity received as change. Use the least amount of coins and bills possible. The first one is done for you.

<table>
<thead>
<tr>
<th>Purchase</th>
<th>1¢</th>
<th>5¢</th>
<th>10¢</th>
<th>25¢</th>
<th>$1</th>
<th>$5</th>
<th>$10</th>
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<th>Tendered</th>
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<tbody>
<tr>
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</tr>
</tbody>
</table>

The solutions are at the end of Lesson 6 in the Study Guide.

Sometimes the customer wants to pay with some additional loose change and not give a whole dollar amount. For example, if the total purchase price is $1.79 and the customer pays with $2.04. The extra 4 pennies given by the customer prevents getting 1 penny in change at the same time gets rid of some loose change. To count change with loose coins:

The purchase price is $1.79  The amount tendered is $2.04

Subtract the additional 4 pennies from $1.79  =  $1.75

Then make change from the $1.75  =  $. 25 is the change

Practice filling in the chart below. The answers are at the end of Lesson 6 in the Study Guide. The first one is done for you.

<table>
<thead>
<tr>
<th>Purchase</th>
<th>1¢</th>
<th>5¢</th>
<th>10¢</th>
<th>25¢</th>
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<td>$40.03</td>
</tr>
</tbody>
</table>

Reading Assignment, 6-2

Read section 6-2 on pages 234–235, including the example.
Self Check, 6-2

Work problems 7, 9, 11, and 13 on page 236. Check your answers in the back of the book.

Section 6-3: Unit Pricing

The unit price is the cost per one unit of measure or count. For example, if a pack of 150 paper plates sells for $3, then the unit cost is $.02 per plate. Notice that the unit price consists of a cost for a single plate. Grocery stores usually have the unit price printed on the pricing labels on the shelves. Some examples of unit prices are cost per ounce, cost per pound, cost per dozen, and cost per can.

Reading Assignment, 6-3

Read section 6-3 on page 237, including the example.

Self Check, 6-3

Work problems 7, 9, 11, and 13 on page 238. Check your answers in the back of the book.

Section 6-4: Comparison Shopping

The unit price is used to decide whether a larger size of a product is actually giving you a better deal. By calculating the unit price of two items that are different in size, you can easily make a comparison to see which one gives you a better deal.

Reading Assignment, 6-4

Read section 6-4 on page 239, including the example.

Self Check, 6-4

Work problems 5, 7, 9, and 11 on page 240.

Section 6-5: Coupons and Rebates

Many times consumers can use coupons and cash rebates to save money when making a purchase. These tactics are used as incentives to get people to buy the products. Sometimes car dealerships will offer rebates as well, in an effort to get consumers to purchase a new vehicle.
When working these problems, *calculate the total cost of the items before the coupons*. Then, add up the value of the coupons. The third step is to subtract the value of the coupons or the rebate from the cost.

**Reading Assignment, 6-5**

Read section 6-5 on page 241, including the example.

**Self Check, 6-5**

Work problems 11, 13, and 15 on page 242. Check your answers in the back of the book.

**Section 6-6: Markdown**

As an extra incentive to purchase a product, items are often put on sale or discounted. You have seen signs indicating that an item is discounted 10% or 50%. That rate is the rate of discount or markdown. When you multiply the rate by the regular price of the item, you get the amount of the discount. Be careful not to confuse the rate of discount and the amount of the discount. The rate of discount will always be written as a percentage.

**Reading Assignment, 6-6**

Read section 6-6 on pages 243–244 carefully, including the examples.

**Self Check**

Work problems 11, 15, 17, and 21 on pages 244–245. Check your answers in the back of the book.

**Section 6-7: Sale Price**

To find the sale price of an item, you simply subtract the amount of the markdown from the original price.

**Reading Assignment, 6-7**

Read section 6-7 on page 246, including the example.

**Self Check, 6-7**

Work problems 9, 11, and 13 on page 247. Check your answers in the back of the book.
Answers to Making Change from Bottom to Top

<table>
<thead>
<tr>
<th>Purchase</th>
<th>1¢</th>
<th>5¢</th>
<th>10¢</th>
<th>25¢</th>
<th>$1</th>
<th>$5</th>
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Answers to Making Change with Loose Coins

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<td>1</td>
<td></td>
<td></td>
<td></td>
<td>$20.03</td>
</tr>
<tr>
<td>$22.41</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>$50.01</td>
</tr>
<tr>
<td>$87.74</td>
<td>1</td>
<td></td>
<td>1</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>$100.04</td>
</tr>
<tr>
<td>$30.03</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$40.03</td>
</tr>
</tbody>
</table>

END OF LESSON 6

After completing Lesson Assignment 6, you will need to prepare for and take the mid-course exam. If you change your school or address, be sure to send the Change of Address form to Louisiana High School Correspondence Courses office. The form is available on the web-site.

Lesson Assignment 6

Part I: Multiple Choice. Choose the correct answer from the options given, and write the correct letter on the blank provided. You will transfer these answers to your Lesson 1 Answer Sheet before you mail in your assignment. (4 points each)

_____ 1. Nicole Nichols purchased a new carpet for $287 and a vacuum cleaner for $121. What is the sales tax if she lives in Ohio where the sales tax rate is 5 percent?
   A. $31.99
   B. $19.98
   C. $20.40
   D. $24.48
2. Cordell Johnson purchased a snow blower for $237.00 and two bags of rock salt for $3.15 each. What is the sales tax on his purchases if he lives in Maine where the sales tax rate is 5 percent?
   A. $12.17
   B. $12.01
   C. $12.21
   D. $13.02

3. Mike Meier purchased a lawnmower for $328.61, a lawn sprinkler for $13.27, and a hose reel for $27.96. He must pay the state tax of 5.5 percent, the county tax of 1.5 percent, and the city tax of 2 percent. What is the total purchase price?
   A. $33.29
   B. $369.84
   C. $403.13
   D. $37.24

4. Chin Quong purchased 11 binders for $1.37 each, a dozen pens for $0.87 each, and a box of copier paper for $27.19. He must pay state tax of 7.5 percent, the county tax of 0.5 percent, and city tax of 2 percent. How much will he pay in taxes for his purchases?
   A. $6.27
   B. $5.27
   C. $5.23
   D. $6.23

5. Roberto’s Salon advertised a shampoo for $4.25, a hair cut for $24.50, and a manicure for $27.25. The state tax is 5.5 percent, the county tax is 2.5 percent, and the city tax is 1.5 percent. What is the total purchase price of the three services?
   A. $62.34
   B. $67.87
   C. $87.00
   D. $61.32

6. Manuel Cortez purchased a dozen donuts for $3.99. What is the unit price per donut to the nearest tenth of a cent?
   A. $0.433 per donut
   B. $0.232 per donut
   C. $0.333 per donut
   D. $0.332 per donut

7. Tina Zappa purchased a three-pack of facial tissues for $2.98. What is the unit price per pack rounded to the nearest tenth of a cent?
   A. $0.972 per pack
   B. $0.993 per pack
   C. $0.913 per pack
   D. $0.944 per pack
8. Nathan Alexander wants to purchase ears of corn for a family reunion picnic. A farmers’ market near his home offers six ears of corn for $1.25, 12 ears of corn for $2.40, or 36 ears of corn for $7.20. Which is the best buy?
   A. 12 ears for $2.40
   B. 6 ears for $1.25
   C. 36 ears for $7.20
   D. Both A and C

9. Megan Evans has a coupon that saves her $1 when she buys two jars of peanut butter. The peanut butter is $2.39 per jar. What is the final price?
   A. $3.21
   B. $3.98
   C. $3.78
   D. $3.47

10. Tien-Yu Moy had a coupon for $1.50 off a can of coffee that was valid if he also purchased coffee cream. The regular price of the can of coffee was $6.99 and the coffee cream was $2.15. What is the final price?
    A. $7.64
    B. $7.49
    C. $7.98
    D. $7.89

11. Builder’s Warehouse has a clearance on overstocked merchandise. A picnic table that usually sells for $167 is on sale for $149. What is the markdown?
    A. $22
    B. $18
    C. $31
    D. $15

12. Crystal Porter wants to purchase a new minivan. It regularly sells for $24,987. The manufacturer is offering a sale price of $18,994. What is the markdown?
    A. $4,998
    B. $5,665
    C. $5,993
    D. $6,007

13. Lee’s Leather Store marked down leather jackets 10 percent. What is the sale price of a leather jacket regularly priced at $130?
    A. $123
    B. $103
    C. $113
    D. $117
14. The regular selling price of a mountain bike is $369.27. The markdown rate is 27 percent. Use the percent paid to determine the sale price.
   A. $269.57
   B. $260.98
   C. $278.98
   D. $265.77

15. At Pablo’s Pizza the regular price for 2 large, one-topping pizzas is $12.98 each. Pablo’s offers a markdown rate of 32 percent on Tuesdays. What is the sale price for 2 large, one-topping pizzas?
   A. $17.45
   B. $18.99
   C. $17.65
   D. $13.89

- Print the Lesson Assignment 6 worksheets.
- Transfer your multiple choice answers to the answer sheets that you will submit for grading.
- Make sure that your letters are neatly written.
- Check your answers to make sure that you transferred them correctly.
- Complete the assignment following the directions for each section. Remember that on some of the sections, you may earn partial credit. However, to do so, you must neatly show all of your work.
- Check over your work.
- Make yourself a copy of your lesson before you mail it to us for grading.
- Mail your lesson assignment to LHSCC at P. O. Box 2751, Baton Rouge, LA 70821-2751
It is now time to request your midcourse exam. Please email LHSCC at academicss@highschoolcredit.org and request that your exam be mailed to your proctor. You must allow 1 week for processing and mailing.

About the Mid-Course Exam

The mid-term exam will cover the material from lessons 1–6. To review for the exam, you should go over your returned lessons, noting especially the questions that were marked wrong. There is a cumulative review test for units 1–6 on pages 254–255 of your textbook. You can check the answers to the odd-numbered problems on page 807 of your textbook. You may use a calculator on the mid-course exam. Any calculator is acceptable except those with a complete alphabet keyboard.

Your score on the mid-course exam counts as 20 percent of your course grade. You will have a maximum of two hours to complete the exam.

Important Mid-Course Exam Information

• Because you will be most familiar with the material in lessons 1–6 just after completing them, we recommend that you pause to prepare for the mid-course exam. You should then take the exam as soon as you feel ready, so that not too much time passes between your completing the lessons and taking the exam.
• We advise that you resume submitting lessons only after taking the exam and receiving a grade.
• However, if you have an approaching course-completion deadline and are unable to take your exam at this time, you may continue to submit lessons, even though you have not yet completed the exam.
• If you change your school or home address, please send in the Change of Address form to our office.
• Your exam results will be mailed to you. Please expect roughly the same rate of return as you have with all your previous lessons.
LESSON 7: Charge Accounts and Credit Cards

Lesson Objectives

After you have completed this lesson, you should be able to:
1. Compute the new balance of a charge account
2. Use different methods to compute the finance charge for a charge account

Key Terms

finance charges  unpaid balance method
charge account  average daily balance method
credit card

Lesson Introduction

In this unit, you will study the details of purchases made using credit cards and charge accounts. In both of these situations, you receive goods or services before you actually pay for them. It is a buy-now, pay-later situation. With this arrangement, there is a cost involved. That cost is the specified rate of interest on the account. There are different methods used to calculate interest on accounts, and this lesson will guide you through these procedures.

Section 7-1: Account Statements

At regular intervals, you will receive a statement listing all of the transactions made on this account. On most credit cards, if you have paid the previous month’s balance, no finance charge is added. If you have an unpaid balance, however, a finance charge or interest is assessed to the account.

Reading Assignment, 7-1

Read section 7-1 on page 258, including the example. Look at the parts of the statement written in blue at the top of page 259. These are some key areas of the monthly statement that you will need to understand.

Self Check, 7-1

Work problems 7, 9, 11, and 13 on page 260. Check your answers in the back of the book.

Section 7-2: Finance Charge—Unpaid-Balance Method

Using this method to calculate the monthly finance charge, the company calculates the interest based only on the amount of the account that is unpaid. So if you had a previous month’s balance of $500, and you paid $300 before the due date, interest would be assessed only on the $200 that remained unpaid on the account.
Reading Assignment, 7-2

Read section 7-2 on pages 261–262, including the example.

Self Check, 7-2

Work problems 11, 13, 15, and 17 on page 263. Check your answers in the back of the book.

Section 7-3: Finance Charge—Average-Daily-Balance Method (No new purchases included)

This third method of calculating account finance charges is based on the average daily balance on the account. To get the average daily balance, you will have to calculate the account balance at the end of each day and add them together. Then, divide the total by the number of days in the billing period. This will be around 30 days. It will fluctuate some because of holidays, weekends, and that some months have 31 days. As you can see from the title of the section, you are not charged interest for charges made during the current month.

Reading Assignment, 7-3

Read section 7-3 on pages 264–266, including the examples. These examples show step-by-step instructions for finding the average daily balance.

Self Check, 7-3

Work problems 9, 15, 19, and 21 on pages 266–267. Check your answers in the back of the book.

Section 7-4: Finance Charge—Average-Daily-Balance Method (New purchases included)

This method is identical to the one from the previous section, except that when calculating the average daily balance, you will include any purchase made during the current billing period. This means that as soon as a purchase is posted to your account, you will be charged a finance charge. This method does not give you an opportunity to pay off the balance of your account before assessing interest to the account.

Look at the following example. Notice in the transaction column, the purchases (indicated by a + sign to signify that the amount was added to the balance) and the payments (indicated by a – sign to signify that the amount was deducted from the balance).
\[
\text{Sum of daily balances} \div \text{number of days} = \text{average daily balance}
\]

<table>
<thead>
<tr>
<th>Dates</th>
<th>Transaction</th>
<th>Balance</th>
<th>Number of Days</th>
<th>Sum of Days</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/14-3/19</td>
<td>None</td>
<td>$169.38</td>
<td>6</td>
<td>$1,016.28</td>
</tr>
<tr>
<td>3/20-3/27</td>
<td>+14.83</td>
<td>$184.21</td>
<td>8</td>
<td>$1,473.68</td>
</tr>
<tr>
<td>3/28-4/10</td>
<td>+52.91</td>
<td>$237.12</td>
<td>14</td>
<td>$3,319.68</td>
</tr>
<tr>
<td>4/11-4/14</td>
<td>-50.00</td>
<td>$187.12</td>
<td>4</td>
<td>$748.48</td>
</tr>
<tr>
<td><strong>Totals:</strong></td>
<td></td>
<td></td>
<td><strong>32</strong></td>
<td><strong>$6,558.12</strong></td>
</tr>
</tbody>
</table>

\[
$6,558.12 \div 32 = $204.94 \quad \text{Average daily balance}
\]

\[
\text{Average daily balance} \times \text{Periodic rate} = \text{Finance charge}
\]

\[
$204.94 \times .02 = $4.10 \quad \text{finance charge}
\]

**Reading Assignment, 7-4**

Read section 7-4 on pages 268–270, including the example. You should see the similarities in this method to the method from section 7-3. Be mindful of the difference as well, mainly that you will include the amount of purchases made when calculating the average daily balance.

**Self Check, 7-4**

Work problems 11, 13, 15, and 17 on page 271.

**Lesson Assignment 7**

**Part I: Multiple Choice. Choose the correct answer from the options given, and write the correct letter on the blank provided. You will transfer these answers to your Lesson 1 Answer Sheet before you mail in your assignment. (4 points each)**

1. Dante Michaels’ charge account statement showed a previous balance of $277.45, a finance charge of $3.22, new purchases of $299.33, and a payment of $316.00. What is his new balance?
   - A. $287
   - B. $267
   - C. $264
   - D. $234

2. Lucinda Thompson’s charge account statement shows an unpaid balance of $222.08. The monthly finance charge is 1.5 percent of the unpaid balance. What is the finance charge?
   - A. $3.11
   - B. $3.98
   - C. $5.43
   - D. $3.33
3. Destiny Paxton has a previous balance at Coffee Emporium of $59.27. She had payments and credits of $29.21. The finance charge is 1.75 percent of the unpaid balance and she had $16.16 in new purchases. What is the new balance?
   A. $43.21
   B. $47.11
   C. $46.75
   D. $49.01

4. What is the average daily balance (no new purchases included)?

<table>
<thead>
<tr>
<th>Dates</th>
<th>Payment</th>
<th>End-of-Day Balance</th>
<th>×  Number of Days</th>
<th>Sum of Balances</th>
</tr>
</thead>
<tbody>
<tr>
<td>6/1–6/15</td>
<td>$18.79</td>
<td>15</td>
<td>$281.85</td>
<td></td>
</tr>
<tr>
<td>6/16</td>
<td>$15.15</td>
<td>3.64</td>
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<tr>
<td>6/17–6/30</td>
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<td>14</td>
<td>50.96</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>30</td>
<td></td>
</tr>
</tbody>
</table>

   A. $7.01
   B. $10.13
   C. $11.22
   D. $9.88

5. Lena Craig’s charge account statement showed a previous balance of $1,100, a finance charge of $6, new purchases of $700, and a payment of $180. What is her new balance?
   A. $1,766
   B. $1,866
   C. $1,626
   D. $1,888

6. Pauline Davis’s charge account statement shows an unpaid balance of $255. The monthly finance charge is 1.25 percent of the unpaid balance. What is the new account balance?
   A. $245.19
   B. $258.19
   C. $265.00
   D. $265.50

7. Arturo Alvarez’s charge account statement shows an unpaid balance of $6,255. The monthly finance charge is 1.5 percent of the unpaid balance. What is the total finance charge?
   A. $6,849.23
   B. $93.83
   C. $6,348.83
   D. $62.55
8. What is the average daily balance (no new purchases included)?

<table>
<thead>
<tr>
<th>Dates</th>
<th>Payment</th>
<th>End-of-Day Balance</th>
<th>×</th>
<th>Number of Days</th>
<th>Sum of Balances</th>
</tr>
</thead>
<tbody>
<tr>
<td>6/4–6/18</td>
<td></td>
<td>$797.01</td>
<td>×</td>
<td>15</td>
<td>$11,955.15</td>
</tr>
<tr>
<td>6/19</td>
<td>$88.75</td>
<td>708.26</td>
<td>×</td>
<td>1</td>
<td>708.26</td>
</tr>
<tr>
<td>6/20–7/3</td>
<td></td>
<td>708.26</td>
<td>×</td>
<td>14</td>
<td>9,915.64</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td><strong>30</strong></td>
<td><strong>9,915.64</strong></td>
</tr>
</tbody>
</table>

A. $725.46  
B. $752.64  
C. $769.01  
D. $750.99

9. Find the average daily balance (no new purchases included).

<table>
<thead>
<tr>
<th>Dates</th>
<th>Payment</th>
<th>End-of-Day Balance</th>
<th>×</th>
<th>Number of Days</th>
<th>Sum of Balances</th>
</tr>
</thead>
<tbody>
<tr>
<td>9/4–9/18</td>
<td></td>
<td>$10,827.01</td>
<td>×</td>
<td>15</td>
<td>$162,405.15</td>
</tr>
<tr>
<td>9/19</td>
<td>$10,088.75</td>
<td>738.26</td>
<td>×</td>
<td>1</td>
<td>738.26</td>
</tr>
<tr>
<td>9/20–10/3</td>
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<td>738.26</td>
<td>×</td>
<td>14</td>
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<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td><strong>30</strong></td>
<td><strong>10,335.64</strong></td>
</tr>
</tbody>
</table>

A. $5,781.99  
B. $5,864.98  
C. $5,782.64  
D. $5,011.11
10. Find the average daily balance (new purchases included).

<table>
<thead>
<tr>
<th>Dates</th>
<th>Payment</th>
<th>Purchase</th>
<th>End-of-Day Balance</th>
<th>Number of Days</th>
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<tbody>
<tr>
<td>12/1–12/5</td>
<td>$675.00</td>
<td>$675.00</td>
<td>$675.00 × 5 $</td>
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<td></td>
</tr>
<tr>
<td>12/6</td>
<td>$410.00</td>
<td>1,085.00</td>
<td>1,085.00 × 1 $</td>
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<td>$1,085.00</td>
</tr>
<tr>
<td>12/7–12/15</td>
<td></td>
<td>1,085.00</td>
<td>1,085.00 × 9 $</td>
<td></td>
<td>$9,765.00</td>
</tr>
<tr>
<td>12/16</td>
<td>$925.00</td>
<td>160.00</td>
<td>160.00 × 1 $</td>
<td></td>
<td>$160.00</td>
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<td>160.00</td>
<td>160.00 × 15 $</td>
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<td>$2,400.00</td>
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<tr>
<td>Total</td>
<td></td>
<td></td>
<td>31</td>
<td></td>
<td>$31,025.00</td>
</tr>
</tbody>
</table>

A. $910.35  
B. $450.01  
C. $0.00     
D. $541.45  

- Print the Lesson Assignment 7 worksheets.
- Transfer your multiple choice answers to the answer sheets that you will submit for grading.
- Make sure that your letters are neatly written.
- Check your answers to make sure that you transferred them correctly.
- Complete the assignment following the directions for each section. Remember that on some of the sections, you may earn partial credit. However, to do so, you must neatly show all of your work.
- Check over your work.
- Make yourself a copy of your lesson before you mail it to us for grading.
- Mail your lesson assignment to LHSCC at P. O. Box 2751, Baton Rouge, LA 70821-2751
LESSON 8: Loans

Lesson Objectives

After you have completed this lesson, you should be able to:
1. Compute the maturity value and interest rate of a single-payment loan
2. Compute the amount financed on an installment loan
3. Compute the monthly payment, amount repaid, and finance charge on an installment loan
4. Compute the payment to interest and to principal and the new balance of a simple-interest installment loan
5. Compute the final payment of a simple-interest installment loan
6. Use a table to find the annual rate of a loan
7. Compute the finance charge refunded for early repayment of a loan

Key Terms

loan
single-payment loan
ordinary interest
exact interest
promissory note
installment loan
annual percentage rate
monthly payment

Lesson Introduction

In this unit, you will study the details of taking out a loan and the different methods of payment that could be used to repay the loan. There are different types of loans that are used for different financial situations. Each comes with different payment plans and methods of calculating the interest.

Section 8-1: Single-Payment Loans

As indicated by the title of the section, this type of loan requires a single payment at a specific future date. On this date, the maturity date, both the principal and the interest are paid by the borrower. The method used to calculate interest is similar to the method used to calculate interest on a savings account (lesson 5). You will have to be mindful of whether you are calculating ordinary interest (360 days as a year) or exact interest (365 days as a year).

Reading Assignment, 8-1

Read the unit introduction on pages 282–283 and section 8-1 on pages 284–285, including the example. The example shows both ordinary and exact interest calculations.
Self Check, 8.1

Work problems 11, 13, and 15 on page 286. Check your answers in the back of the book.

Section 8-2: Installment Loans

When making a major purchase, like home appliances or furniture, you may purchase it on an installment plan. Under this plan, you will make an initial down payment and pay the remaining balance in several equal payments. In this lesson, you will be calculating the amount of the down payment and the remaining amount that will be financed.

Reading Assignment, 8-2

Read section 8-2 on pages 287–288, including the example. The example outlines the two steps involved in the problems from this section. You first find the amount that you are required to pay as a down payment and then calculate the amount that you will have to finance.

Self Check, 8.2

Work problems 13, 15, and 17 on page 289. Check your answers in the back of the book.

Section 8-3: Simple-Interest Installment Loans

When a purchase is made using an installment plan, you have to realize that you may have to pay a finance charge based on the amount that you are financing and the length of time that you are taking to make the final payment. In this section, you will be using a table to calculate the required monthly payment on an installment loan.

Reading Assignment, 8-3

Read section 8-3 on pages 290–291, including the example.

Self Check, 8-3

Work problems 9, 11, 15, and 17 on pages 292–293. Check your answers in the back of the book.

Section 8-4: Installment Loans—Allocation of Monthly Payment

When a loan payment is made, part of the payment is used to pay the interest and the remaining amount is used to pay off the actual loan. By using previously learned skills of calculating loan interest, you will construct a loan repayment schedule. This schedule will show how much of the loan payment is being used for paying interest and the amount used to pay off the principal. It will also keep a running balance of the remaining principal.
Reading Assignment, 8-4

Read section 8-4 on pages 294–295, including the examples.

Self Check, 8-4

Work problems 5, 7, 9, and 11 on page 296.

Section 8-5: Paying Off Simple Interest Installment Loans

When you go to a financial institution to obtain a loan, the loan documents will indicate all pertinent information, such as the principal, rate of interest, term of the loan, and total amount of interest that will be paid on the loan. Financial institutions are also required to specify the terms for early payment of a loan. This section shows how to calculate the final payment for an installment loan. Because of rounding of values, the last payment may be a little bit more than the previous installment amounts.

Reading Assignment, 8-5

Read section 8-5 on pages 297–298, including the example.

Self Check, 8-5

Work problems 5, 7, 9, and 11 on page 299.

Section 8-6: Determining the APR

APR is an initialism for annual percentage rate. Because loan rates can be quoted for different periods of time, you can compare the cost of different loans by converting the quoted rate to an annual rate. You will use the table given on page 300 to calculate the annual percentage rate of the loans.

Reading Assignment, 8-6

Read section 8-6 on pages 300–301, including the example.

Self Check, 8-6


END OF LESSON 8

NOTE: If you have not yet taken your mid-course exam, please prepare for and take it as soon as possible.
Lesson Assignment 8

1. Barbara D’Angelo’s bank granted her a single-payment loan of $1,000 for 100 days at 12 percent ordinary interest. What is the amount of ordinary interest owed?
   A. $36.77  
   B. $32.15  
   C. $33.33  
   D. $34.55

2. Marina Guzmon’s bank granted her a single-payment loan of $3,250 to pay a repair bill. She agreed to repay the loan in 31 days at an ordinary interest rate of 11.75 percent. What is the maturity value of the loan?
   A. $3,221.09  
   B. $3,012.21  
   C. $3,282.88  
   D. $3,454.99

3. Tasheka Quinn is buying a new couch for $989. She made a down payment of $200 and financed the remainder. What amount did she finance?
   A. $799  
   B. $789  
   C. $877  
   D. $766
**Figure 8.1. Use this table with the question(s) below, as needed.**

<table>
<thead>
<tr>
<th>Term in Months</th>
<th>Annual Percentage Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>8.00%</td>
</tr>
<tr>
<td>6</td>
<td>17.06</td>
</tr>
<tr>
<td>12</td>
<td>8.70</td>
</tr>
<tr>
<td>18</td>
<td>5.91</td>
</tr>
<tr>
<td>24</td>
<td>4.52</td>
</tr>
<tr>
<td>30</td>
<td>3.69</td>
</tr>
<tr>
<td>36</td>
<td>3.13</td>
</tr>
<tr>
<td>42</td>
<td>2.74</td>
</tr>
<tr>
<td>48</td>
<td>2.44</td>
</tr>
</tbody>
</table>

4. Use Figure 8.1. Corey Griffin obtained an installment loan of $1,000. The annual percentage rate is 8 percent. He must repay the loan in 18 months. What is the finance charge?
   A. $63.80
   B. $75.10
   C. $70.00
   D. $78.20

5. Use Figure 8.1. Henry Reed obtained an installment loan of $2,000. The annual percentage rate is 12 percent. He must repay the loan in 48 months. What is the finance charge?
   A. $524.80
   B. $525.00
   C. $500.25
   D. $495.10

6. Use Figure 8.1. Tulio Fernandez purchased a treadmill with an installment loan that has an APR of 12 percent. The treadmill sells for $1,672. The store financing requires a 10 percent down payment and 12 monthly payments. What is the finance charge?
   A. $92.50
   B. $98.88
   C. $89.00
   D. $99.50

7. Ernesto White took out a simple interest loan at 10 percent interest for 12 months. His previous balance is $1,000. What is the interest for the next payment?
   A. $10.01
   B. $5.76
   C. $9.43
   D. $8.33
8. Cloe Closson took out a simple interest loan at 10 percent interest for 12 months. Her previous balance is $500. What is the interest for the next payment?
   A. $4.17
   B. $5.09
   C. $4.08
   D. $4.91

9. Chico Alvarez obtained a loan of $2,400 to get a new roof on his home. The interest rate is 12 percent and the monthly payment is $113.04. What is the interest on the first monthly payment?
   A. $25.04
   B. $29.90
   C. $32.01
   D. $24.00

10. Drew Collins purchased a new treadmill for $1,662. He made a 15 percent down payment and financed the remainder. What amount did he finance?
    A. $1,510.11
    B. $1,590.00
    C. $1,412.70
    D. $1,223.90

- Print the Lesson Assignment 8 worksheets.
- Transfer your multiple choice answers to the answer sheets that you will submit for grading.
- Make sure that your letters are neatly written.
- Check your answers to make sure that you transferred them correctly.
- Complete the assignment following the directions for each section. Remember that on some of the sections, you may earn partial credit. However, to do so, you must neatly show all of your work.
- Check over your work.
- Make yourself a copy of your lesson before you mail it to us for grading.
- Mail your lesson assignment to LHSCC at P. O. Box 2751, Baton Rouge, LA 70821-2751
LESSON 9: Vehicle Transportation

Lesson Objectives

After you have completed this lesson, you will be able to:

1. Compute the sticker price of a new vehicle
2. Compute the dealer’s cost of a new vehicle
3. Compute the average retail price of a used vehicle
4. Use tables to compute the annual premium for vehicle insurance
5. Compute the cost per mile of operating and maintaining a vehicle
6. Compute the total cost of leasing a vehicle
7. Compute the cost per mile of renting a vehicle

Key Terms

sticker price
base price
dealer’s cost
insurance
used-car guides
options
destination charge

Lesson Introduction

In this unit, you will learn about different options possible for acquiring a vehicle. You will be able to use the information in this lesson to compare the cost of different options. Thus, you will be able to make informed decisions on your next vehicle acquisition.

Section 9-1: Purchasing a New Vehicle

If you have ever attempted to purchase a new vehicle, you probably walked over to the car window and looked at the purchase price listed on the sticker. This purchase price includes all of the charges for the car. This price is derived by adding the base price to the price of any additional options and a destination charge. Often times, car dealerships will offer incentives to purchase a car. Discounted finance rates and rebates are often used to entice consumers to make a purchase.

Reading Assignment, 9-1

Read the unit introduction on pages 312–313 and section 9-1 on pages 314–315, including the example.
Self Check, 9-1

Work problems 7, 9, 11, and 13 on page 316. Check your answers in the back of the book.

Section 9-2: Dealer’s Cost

There are several Internet sites that help consumers to get the best deal possible on a vehicle purchase. These sources report the dealer’s base price of the vehicle. It could be listed as an actual amount, or it may be listed as a percentage of the sticker price. In either case, you can negotiate the price that you will actually pay for the car by knowing this information.

Reading Assignment, 9-2

Read section 9-2 on pages 317–318, including the example.

Self Check, 9-2

Work problems 7, 9, and 11 on page 319. Check your answers in the back of the book.

Section 9-3: Purchasing a Used Vehicle

As when purchasing a new car, you can often negotiate the price that you pay for a used car as well. Again, there are reliable resources on the Internet that publish the average price for cars purchased from dealers during a previous period. This information gives you an idea of what you can expect to pay for a specific make, model, and year of a used car.

Reading Assignment, 9-3

Read section 9-3 on pages 320–321, including the example.

Self Check, 9-3

Work problems 5, 7, and 9 on page 322.

Section 9-4: Vehicle Insurance

This is a very important section for you to understand. There are many different facets of an insurance policy of which you need to be aware. Each of them has an effect on the cost or premium that you will pay. You also need to understand each of these facets so that when you purchase insurance for your vehicle, you will be able to decide on the appropriate limits and coverage that are needed.
Reading Assignment, 9-4

Read section 9-4 on pages 323–325, including the example.

Self Check, 9-4

Work problems 3, 5, 7, and 9 on page 326. You will be using the given tables on page 324 to calculate the insurance premiums. Check your answers in the back of the book.

Section 9-5: Operating and Maintaining a Vehicle

There are many costs involved in the operation and maintenance of a vehicle. Some are fixed costs, and others are variable costs. Fixed costs remain constant regardless of how far you drive the car. For example, insurance is a fixed cost. You will pay the specified premium whether you drive 100 miles or 10,000 miles. Variable costs will fluctuate with use of the car. Gas is a prime example of variable cost.

Reading Assignment, 9-5

Read section 9-5 on pages 327–328, including the example.

Self Check, 9-5

Work problems 7, 9, 11, and 13 on page 329.

Section 9-6: Leasing a Vehicle

In recent years, it has become feasible or desirable in many instances to lease a car as opposed to purchasing one. During the term of the lease, you make monthly payments for using the vehicle. At the end of the lease term, you return the car to the dealer, or if your lease agreement has provisions for purchase, you may purchase the car. It is fairly common for businesses to lease vehicles instead of purchasing them. Leasing the cars is beneficial to companies in many ways. For example, a company will lease a car for a sales representative. The sales representative will use the car for a specified period of time and then return the car. By doing this, the company keeps its representatives in newer cars. The company also does not have to worry about selling the used cars and can cut down on maintenance costs that tend to increase as cars get older.

Note: When calculating the cost of completing a lease-purchase transaction, remember that you must add the residual cost to the total. In other words, after you complete the lease part of the deal and you want to purchase the car, you must pay the residual cost of the car in order to obtain the vehicle.
Reading Assignment, 9-6

Read section 9-6 on pages 330–331, including the example.

Self Check, 9-6

Work problems 9, 11, and 13 on page 332.

Section 9-7: Renting a Vehicle

When a vehicle is needed for a brief period of time, renting is a viable option. More often than not, this option is used when traveling to another city by plane and needing a car when you get there. If your own car is in need of repairs, you may need to rent a car while you wait for your car to be repaired. Generally, you will pay a specified amount per day and another amount per mile.

Reading Assignment, 9-7

Read section 9-7 on pages 333–334, including the example.

Self Check, 9-7

Work problems 7, 9, 11, 13, and 15 on page 335. Check your answers in the back of the book.

END OF LESSON 9
Lesson Assignment 9

Part I: Multiple Choice. Choose the correct answer from the options given, and write the correct letter on the blank provided. You will transfer these answers to your Lesson 1 Answer Sheet before you mail in your assignment. (4 points each)

_____ 1. Brad Alexander sees a van advertised in the Sunday newspaper. The base price is $24,000.82. The total for factory-installed options is $3,027.00. The destination charge is $200.00. What is the sticker price?
   A. $27,227.82
   B. $20,973.82
   C. $3,227.82
   D. $24,000.82

_____ 2. Jeanne Barrons has decided to buy a new car. It has a base price of $21,276.00, options totaling $1,219.80, and a destination charge of $590.00. While surfing the Internet, she learned that the dealer’s cost is approximately 83 percent of the base price and 80 percent of the price of the options. What should Barrons estimate as the dealer’s cost?
   A. $19,224.92
   B. $17,659.09
   C. $18,634.92
   D. $19,430.84

_____ 3. Car dealer Jill Spade pays 89 percent for a car that has a base price of $23,998. She pays 87 percent of its $3,425 options price and a $460 destination charge. What is the dealer’s cost?
   A. $21,818.22
   B. $21,358.22
   C. $24,337.97
   D. $24,797.97

_____ 4. Eddie O’Neil found a car advertised at a local used-car dealership for $34,000. The car is clean and in good condition. Its average retail value is $33,400. It has air-conditioning valued at $840 and leather seats valued at $200, but it does not include a CD player, which is valued at $100. The used-vehicle guide indicates that $1,450 should be deducted for excessive mileage on the car. O’Neil plans to visit the dealership this evening. What is the average retail price for this vehicle?
   A. $33,971
   B. $32,650
   C. $32,890
   D. $22,450
5. Jillian Rolland is planning to sell her van so she can buy a new, small car. One of
the vehicle guides she checked shows that the average retail value for the van is
$12,150. She adds $50 for the compact disc player, $100 for rear air-conditioning,
$225 for cruise control, and $225 for having less than expected mileage. She
deducts a total of $300 because the van does not have power door locks or power
windows. What is the average retail price for Rolland’s van?
A. $12,345
B. $22,035
C. $12,450
D. $13,225

6. Kevin Mahan’s insurance policy has a $237.20 premium for bodily injury and
property damage. The collision premium is $146. Mahan’s driver-rating factor is
2.7. What is his annual premium?
A. $1,034.64
B. $237.20
C. $383.20
D. $640.44

7. David Seal’s annual base premium is $812. His driver-rating factor is 1.4. How
much is his annual premium?
A. $1,136.80
B. $813.40
C. $1,202
D. $580

8. For the past two years Lynda Santana has recorded the costs of operation of her
car. They total $1,600 of fixed costs and $2,134 of variable costs. She’s driven a
total of 14,000 miles. What was the cost per mile?
A. $0.31
B. $0.25
C. $0.27
D. $0.26

9. Jennifer Sosa leased a new car. She pays $300 per month for 48 months. She
paid a $78 title fee and a $110 license fee, and her deposit was $5,000. What is
the total lease cost?
A. $15,092
B. $19,510
C. $19,588
D. $15,987
10. Geraldo Castro rented a car for 4 days at $45 per day, and drove the car 600 miles at $0.22 per mile. He spent $30.00 for gasoline and purchased a collision waiver for $12.00 per day. What is the total cost for renting the car?
   A. $452.00
   B. $390.00
   C. $45.00
   D. $30.00

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- Transfer your multiple choice answers to the answer sheets that you will submit for grading.
- Make sure that your letters are neatly written.
- Check your answers to make sure that you transferred them correctly.
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LESSON 10: Housing Costs

Lesson Objectives

After you have completed this lesson, you will be able to:
1. Compute a mortgage loan amount
2. Compute the monthly payment, amount paid, and interest charged on a loan
3. Compute the total closing cost of a loan
4. Compute the allocation of monthly payment toward principal, interest, and the new principal
5. Compute the assessed value and taxes of real estate
6. Compute the amount of coverage
7. Compute the annual homeowners’ premium
8. Compute the total housing cost

Key Terms

mortgage loan
closing costs
assessed value
mills
personal liability
medical coverage
replacement value
homeowners’ insurance
real estate taxes
rate of assessment

Section 10-1: Mortgage Loans

When you decide to purchase a home, more than likely you will not be able to pay cash for the entire cost of the home. You will probably pay a required down payment and take out a mortgage loan for the remaining balance. The amount of the down payment will vary depending on the type of loan and on the house itself. For example, there are government-sponsored programs that allow you to purchase a home with a 5% down payment or lower, as opposed to the customary 10%. When purchasing a condominium, the down payment may be a bit higher as well. Mortgage loans can be paid over long periods of time. They can be paid in 10 years, 15 years, or even 30 years. In this first section, you will find the required amount of the down payment of a mortgage loan as well as the amount that will need to be financed.

Reading Assignment, 10-1

Read the unit introduction on pages 342–343 and section 10-1 on page 343, including the example.
Self Check, 10-1

Work problems 5, 7, 9, and 11 on page 345. Check your answers in the back of the book.

Section 10-2: Monthly Payment and Total Interest

As with any loan, you are going to pay the bank interest because you are actually using their money to purchase the home. Interest rates vary from bank to bank and have become very competitive. In this lesson, you will use a table to calculate the monthly payment amount based on the length of the loan.

Reading Assignment, 10-2

Read section 10-2 on pages 346–347, including the example.

Self Check, 10-2

Work problems 7, 9, 11, and 13 on page 348. Check your answers in the back of the book.

Section 10-3: Closing Costs

There are numerous costs involved with the purchase of a home. Sometimes these fees are assessed by a specific rate. In other words, they are set at a specific percentage of the loan amount. In other cases, the financial institution may charge a flat fee regardless of the loan amount. In either case, you are responsible for these fees. However, when writing a purchase agreement on a house, the buyer may include a clause that requires the seller to pay a portion of the closing costs. Sellers may also pay a portion of the closing costs as an added incentive to the buyer to make the purchase.

Reading Assignment, 10-3

Read section 10-3 on pages 349–350, including the example.

Self Check, 10-3

Work problems 3, 5, and 7 on page 350.

Section 10-4: The Monthly Payment

Just like the loans made for an automobile purchase, mortgage loans are paid in equal monthly installments. Below is a portion of a loan payback schedule. Notice the amount of interest that is paid in comparison to the amount of the principal. During the first years of a mortgage loan, you will be paying more interest than principal. The reverse is true toward the ending period of
the loan. At that time, you will be paying more principal than interest.

Amortization Schedule: 360 months to repay $100,000 at 9%.

<table>
<thead>
<tr>
<th>Payment Number</th>
<th>Payment Amount</th>
<th>Interest Amount</th>
<th>Principal Reduction</th>
<th>Balance Due</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>$804.63</td>
<td>$750.00</td>
<td>$54.63</td>
<td>$99,945.37</td>
</tr>
<tr>
<td>2</td>
<td>$804.63</td>
<td>$749.59</td>
<td>$55.04</td>
<td>$99,890.33</td>
</tr>
<tr>
<td>3</td>
<td>$804.63</td>
<td>$749.18</td>
<td>$55.45</td>
<td>$99,834.88</td>
</tr>
<tr>
<td>4</td>
<td>$804.63</td>
<td>$748.76</td>
<td>$55.87</td>
<td>$99,779.01</td>
</tr>
<tr>
<td>5</td>
<td>$804.63</td>
<td>$748.34</td>
<td>$56.29</td>
<td>$99,722.72</td>
</tr>
<tr>
<td>6</td>
<td>$804.63</td>
<td>$747.92</td>
<td>$56.71</td>
<td>$99,666.01</td>
</tr>
<tr>
<td>7</td>
<td>$804.63</td>
<td>$747.49</td>
<td>$57.13</td>
<td>$99,608.88</td>
</tr>
<tr>
<td>8</td>
<td>$804.63</td>
<td>$747.07</td>
<td>$57.56</td>
<td>$99,551.31</td>
</tr>
<tr>
<td>9</td>
<td>$804.63</td>
<td>$746.63</td>
<td>$57.99</td>
<td>$99,493.32</td>
</tr>
<tr>
<td>10</td>
<td>$804.63</td>
<td>$746.20</td>
<td>$58.43</td>
<td>$99,434.89</td>
</tr>
<tr>
<td>11</td>
<td>$804.63</td>
<td>$745.76</td>
<td>$58.87</td>
<td>$99,376.02</td>
</tr>
<tr>
<td>12</td>
<td>$804.63</td>
<td>$745.32</td>
<td>$59.31</td>
<td>$99,316.71</td>
</tr>
</tbody>
</table>

Payment Amount for 1 year = $804.63 * 12 = $9,655.56

Of that amount, $683.28 is applied to the principal amount, while $8,972.28 will be paid to the bank for interest.

**Reading Assignment, 10-4**

Read section 10-4 on pages 351–353, including the example.

**Self Check, 10-4**


**Section 10-5: Real-Estate Taxes**

You will have to pay taxes on your home. These taxes are based on the assessed value of your home. The assessed value is not the market or actual value of your home. In Louisiana, for example, your home is not taxed on the first $75,000 of its value. For a home that is less than $75,000, you would be exempt from the real-estate taxes. Anything over $75,000 would be taxed at the specified rate. Other states may tax property on a given percent of the actual value. For example, a $100,000 home may be taxed at 40% of the market value.
The real-estate tax rate is often expressed in mills per dollar. Mills are units per thousand. For example, 40% is 40 out of 100, whereas 40 mills is 40 out of 1000. Below are some examples of mills.

\[ 7 \text{ mills} = \frac{7}{1000} = .007 \]

Sample problem: The tax rate is set at 47.9 mills. The market value of the house is $95,000, and the rate of assessment is 40%.

The tax rate as a decimal: \[ 47.9 \text{ mills} = .0479 \]

The assessed value: \[ $95,000 \times .40 = $38,000 \]

The real estate tax: \[ $38,000 \times .0479 = $1,820.20 \]

**Reading Assignment, 10-5**

Read section 10-5 on pages 355–356, including the example.

**Self Check, 10-5**

Work problems 5, 7, and 9 on page 356. Check your answers in the back of the book.

**Section 10-6: Homeowners’ Insurance**

When you purchase a home and finance the purchase, banks will require that you have homeowners’ insurance to protect themselves against loss due to a fire, storm, etc. Even after the loan is completely paid, you will still want to carry the insurance to protect yourself against such loss.

Homeowners’ insurance can be a bit tricky. If you own a home and wish to have it covered on a policy, you will have to pay a premium based on the replacement value of the home. Insurance companies require that you insure your home for at least 80% of the replacement value in order to receive full coverage. If you insure your home for less than 80% of the replacement cost, the insurance company will pay for losses at a rate that is equal to the percentage of the replacement value for which you have insured it.

**Reading Assignment, 10-6**

Read section 10-6 on pages 357–358, including the example.
Self Check, 10-6

Work problems 1, 3, 5, 7, and 9 on page 358. Check your answers in the back of the book.

Section 10-7: Homeowners’ Insurance Premium

Insurance companies use a table to calculate a homeowners’ insurance premium. Factors that affect the premium amount include the type of construction of the home, the distance the home is from the nearest fire hydrant, the distance the home is from the nearest fire station, and the location of the property. Fire stations are also given a rating based on the average response time in their district. This rating also affects your premium.

Reading Assignment, 10-7

Read section 10-7 on pages 359–360, including the example.

Self Check, 10-7

Work problems 3, 5, and 7 on page 360. Check your answers in the back of the book.

Section 10-8: Other Housing Costs

Other housing costs include the cost of utilities (natural gas, electricity, phone, and water) and maintenance on the house. When you go to apply for a loan, the bank will use a formula to calculate the amount that they will lend based on your total income and total expenses. According to the Federal Housing Administration (FHA), your total monthly housing cost should be less than 35% of your monthly net pay.

For example, if your total monthly net pay is $2350, the FHA recommends that your total monthly housing cost be no more than $822.50. ($2350 * .35 = $822.50)

Reading Assignment, 10-8

Read section 10-8 on pages 361–362, including the example.

Self Check, 10-8

Work problems 7, 9, and 11 on pages 362–363. Check your work in the back of the book.

END OF LESSON 10
Lesson Assignment 10

Part I: Multiple Choice. Choose the correct answer from the options given, and write the correct letter on the blank provided. You will transfer these answers to your Lesson 1 Answer Sheet before you mail in your assignment. (4 points each)

_____ 1. Patti Green and her husband are purchasing a condominium for $123,000. They have $15,000 for a down payment. What is the amount of their mortgage loan?
   A. $108,000
   B. $110,850
   C. $120,000
   D. $116,700

_____ 2. Betty Rifkin’s mortgage loan amount is $87,750. She financed her house for 30 years with monthly payments of $725. At the end of 30 years, what will be the total amount of interest charged?
   A. $116,115
   B. $173,250
   C. $152,725
   D. $163,500

_____ 3. Sarah Wood and her husband have agreed to purchase a house for $87,500. Washington Savings and Loan is willing to finance the purchase but require a $5,000 down payment and closing costs of 3 percent of the amount of the mortgage loan. What are the total closing costs?
   A. $5,000
   B. $2,475
   C. $2,650
   D. $3,000

_____ 4. April Segal and her sister obtained a 25-year, $120,000 loan for their new home. The interest rate is 7.5 percent and their monthly payment is $886. How much of the first payment is for principal?
   A. $136
   B. $120
   C. $175
   D. $186

_____ 5. Sue Gable obtained a mortgage loan for $189,600 at 7 percent for 25 years. Her monthly payment is $1,340.47. How much of the first monthly payment is for principal?
   A. $184.34
   B. $175.32
   C. $188.50
   D. $234.47
6. Tom Smith and his wife live in Providence, Rhode Island, where the tax rate is 29.52 mills. The rate of assessment is 100 percent. A tax assessor has determined that the market value of the Smith’s home is $292,500. What is their real estate tax for a year?
   A. $9,349.56
   B. $8,874.34
   C. $8,634.60
   D. $9,176.43

7. Jerry Flanigan’s new home has an estimated replacement value of $215,000. He has insured his home for 80 percent of its replacement value. What is the amount of coverage on the home?
   A. $172,000
   B. $127,902
   C. $145,900
   D. $189,083

8. Santo de Soto and his family purchased a new home that has a replacement value of $275,000. They want to insure their home for 85 percent of its replacement value. What is the amount of the coverage on their home?
   A. $254,896
   B. $233,895
   C. $217,786
   D. $233,750

9. Cesar Santiago recorded his housing expenses for the month of September: $575.16 for mortgage payment, $23.70 for insurance premium, $87.40 for real estate taxes, $76.36 for electricity, $21.18 for telephone service, and $19.30 for water. What is his total monthly housing cost?
   A. $803.10
   B. $783.10
   C. $563.00
   D. $912.07
10. Henry Alvarez recorded his housing expenses for the month of January: $775.36 for mortgage payment, $32.50 for insurance premium, $115.75 for real estate taxes, $98.64 for electricity, $34.40 for telephone service, and $31.80 for water. What is his total monthly housing cost?
   A. $1,008.87
   B. $1,088.45
   C. $1,098.78
   D. $1,088.64

- Print the Lesson Assignment 10 worksheets.
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- Check your answers to make sure that you transferred them correctly.
- Complete the assignment following the directions for each section. Remember that on some of the sections, you may earn partial credit. However, to do so, you must neatly show all of your work.
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- Mail your lesson assignment to LHSCC at P. O. Box 2751, Baton Rouge, LA 70821-2751
LESSON 11: Insurance

Lesson Objectives

After you have completed this lesson, you will be able to:
1. Compute health insurance premiums
2. Compute the amount paid by the patient for health care
3. Use tables to compute the annual premium for three types of life insurance

Key Terms

health insurance
term life insurance
whole life insurance

Lesson Introduction

In this unit you will learn about health insurance and the different benefits provided, the different types of life insurances.

Section 11-1: Health Insurance Premiums

In lesson 2 when you were calculating the net income, a deduction was made for health insurance. In this section, you will actually calculate the cost of the health insurance premiums. You will also calculate the portion that you will have to pay as well as the portion that your employer will pay. There are different components of health insurance. If you elect to have coverage for each option, you will be charged a premium for that coverage. Often, employers will contribute to the cost of health insurance as a benefit of employment in the company.

Look at the following example:

The annual premium for Employee X is $1789 for hospitalization, $487 for surgical-medical, and $210 for major medical. The company will pay 70% of the insurance cost. Calculate the employee’s percentage, the employer’s dollar contribution, the employee’s dollar contribution, and the employee’s monthly premium. This amount will be deducted from the employee’s gross income.

\[
\begin{align*}
100\% - 70\% &= 30\% & \text{The employee will pay 30\% of the premium} \\
$1789 + $487 + $210 &= $2486 & \text{total insurance premium} \\
$2486 \times .70 &= $1740.20 & \text{employer’s contribution} \\
$2486 \times .30 &= $745.80 & \text{employee’s contribution} \\
$745.80 \div 12 &= $62.15 & \text{employee’s monthly premium}
\end{align*}
\]
Reading Assignment, 11-1

Read the unit introduction on pages 370–371 and section 11-1 on pages 372–373, including the example.

Self Check, 11-1

Work problems 5, 7, 9, and 11 on pages 373–374. Check your answers in the back of the book.

Section 11-2: Health Insurance Benefits

Health insurance policies pay different amounts for a wide variety of services. Traditional insurance policies include a deductible. This is an amount of money that you must pay each year before the insurance company will begin paying for medical services. There is also a coinsurance amount. This is the part of the bill that you and the insurance company will share. Most coinsurance rates are set at 80/20. The insurance company will pay 80% of the charges, and you are responsible for 20%. Of course this coinsurance plan is paid on the amount of the bill after the annual deductible has been paid.

Example: Sally had a total medical bill of $29,000. Her insurance covered $26,756 of the bill. Her medical policy has a $250 deductible and a 20% coinsurance clause. Find the amount subject to coinsurance and find the amount that Sally had to pay.

\[
\begin{align*}
$29,000 - $26,756 &= $2244 \\
$2244 - $250 &= $1994 & \text{This is the amount of the bill that is subject to the coinsurance. The $250 was subtracted because of the $250 deductible provision in the policy.}
\end{align*}
\]

\[
\begin{align*}
$1994 \times .20 &= $398.80 & \text{Sally has to pay 20% of the coinsurance portion, so she will have to pay $398.80 for the coinsurance portion.}
\end{align*}
\]

\[
\begin{align*}
$250 + $398.80 &= $648.80 & \text{The total amount for which Sally is responsible is $648.80.}
\end{align*}
\]

Reading Assignment, 11-2

Read section 11-2 on pages 375–376, including the example.

Self Check, 11-2

Work problems 3, 5, and 7 on page 377. Check your answers in the back of the book.
Section 11-3: Term Life Insurance

The main purpose of life insurance is to provide financial protection for your family in the event of your death. Because you have different financial needs at different stages in your life, there are different types of life insurance. For example, when you start a family, your insurance needs may be greater because you have a house note, children’s education, and may not be making a high salary as you begin your career. During this period, you may purchase a term life insurance policy. As you get closer to retirement age, you may not have a house note, and your children may not depend on you for financial support. At this time, your life insurance needs may not be as great. The rates for term life insurance are derived from a table based on age, gender, and length of time you wish to have the insurance. Another factor that plays heavily into the premium amount but is not listed in your book, is whether you are a smoker. Smokers’ premiums are significantly higher than nonsmokers’.

Reading Assignment, 11-3

Read section 11-3 on pages 378–379, including the example.

Self Check, 11-3

Work problems 5, 7, 9, and 11 on page 380. Check your work in the back of the book.

Section 11-4: Other Types of Life Insurance

There are several other types of life insurance that you can purchase. This section explains the basics of each type of policy. Again, the premium is based on age, gender, amount of insurance, and whether you are a smoker. The procedure for calculating the premium is the same as for term life; however, you will use a different table of values.

Reading Assignment, 11-4

Read section 11-4 pages 381–382, including the example.

Self Check, 11-4

Work problems 5, 7, 9, and 11 on page 383. Check your answers in the back of the book.

END OF LESSON 11
Lesson Assignment 11

Part I: Multiple Choice. Choose the correct answer from the options given, and write the correct letter on the blank provided. You will transfer these answers to your Lesson 1 Answer Sheet before you mail in your assignment. (4 points each)

_____ 1. Ernesto Baca is employed by Bigg Company. He has a family membership in his company’s health insurance program. The annual premium is $5,432. Baca’s employer pays 80 percent of the total cost. Baca’s contribution is deducted from his paycheck. What is his annual contribution?
   A. $1,086.40
   B. $1,567.20
   C. $1,125.65
   D. $1,527.98

_____ 2. Stanley McBride is employed by the True Blue company. The PPO annual premium is $7,058. His employer pays 70 percent of the total cost. His contribution is deducted from his paycheck. What is McBride’s monthly deduction?
   A. $200.14
   B. $176.45
   C. $176.45
   D. $152.87

_____ 3. Kathy Parker pays a monthly premium of $225 for health insurance. She can purchase dental care and vision care insurance for her family at an additional cost. The dental premium is $556 and the vision premium is $324 per year. What is her total monthly premium for all her insurance?
   A. $295.42
   B. $298.33
   C. $297.23
   D. $296.80

_____ 4. Carl Pitt is 35 years old. He wants to purchase a $50,000, 5-year term life insurance policy. The premium per $1,000 is $2.50. What is his annual premium?
   A. $125.00
   B. $235.45
   C. $156.22
   D. $326.88
5. Thomas Trotte is 50 years old. He wants to purchase a $50,000, 5-year term life insurance policy. The premium per $1,000 is $5.80. What is his annual premium?
   A. $560  
   B. $296  
   C. $290  
   D. $580

6. Dierdre Sullivan took out a $100,000, 10-year term policy at age 40. The premium per $1,000 was $3.30. She will be 50 years old next year when the premium per $1,000 will be $5.90. What is the amount of the increase?
   A. $260  
   B. $250  
   C. $240  
   D. $280

7. Jeff Conrad is 30 years old. He wants to purchase a whole life policy valued at $50,000.
   Use the figure below to calculate his annual premium.

   **Annual Premiums per $1,000 of Life Insurance**
   **Whole Life**
<table>
<thead>
<tr>
<th>Age</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>$8.00</td>
<td>$6.35</td>
</tr>
<tr>
<td>25</td>
<td>$9.50</td>
<td>$7.40</td>
</tr>
<tr>
<td>30</td>
<td>$11.75</td>
<td>$9.15</td>
</tr>
<tr>
<td>35</td>
<td>$15.00</td>
<td>$11.60</td>
</tr>
<tr>
<td>40</td>
<td>$19.50</td>
<td>$14.40</td>
</tr>
<tr>
<td>45</td>
<td>$25.50</td>
<td>$18.65</td>
</tr>
<tr>
<td>50</td>
<td>$34.00</td>
<td>$24.35</td>
</tr>
<tr>
<td>55</td>
<td>$46.50</td>
<td>$32.35</td>
</tr>
</tbody>
</table>
   
   A. $587.50  
   B. $563.80  
   C. $465.90  
   D. $432.87

8. Sean Roberts was admitted to the hospital for surgery. His insurance covers 80 percent of the hospital charges which totaled $7,987. What amount did he pay for hospital charges?
   A. $7,000.00  
   B. $1,597.40  
   C. $2,000.00  
   D. $4,255.00
9. Marybeth Adamson’s recent health care costs include co-payments of $125 and a hospital bill of $750. Her insurance has a $200 deductible and it covers 100 percent of all hospital charges. What amount did she pay?
   A. $231
   B. $325
   C. $450
   D. $125

10. Izabel Romero took out a $100,000, 10-year term policy at age 55. The premium per $1,000 was $8.85. She will be 65 years old this year. The premium per $1,000 will be $14.00. What is the annual increase?
   A. $530.00
   B. $515.00
   C. $562.00
   D. $553.00

- Print the Lesson Assignment 11 worksheets.
- Transfer your multiple choice answers to the answer sheets that you will submit for grading.
- Make sure that your letters are neatly written.
- Check your answers to make sure that you transferred them correctly.
- Complete the assignment following the directions for each section. Remember that on some of the sections, you may earn partial credit. However, to do so, you must neatly show all of your work.
- Check over your work.
- Make yourself a copy of your lesson before you mail it to us for grading.
- Mail your lesson assignment to LHSCC at P. O. Box 2751, Baton Rouge, LA 70821-2751
LESSON 12: Investments

Lesson Objectives

After completing this lesson, you should be able to:
1. Use tables to compute the interest on certificates of deposit
2. Compute the effective annual yield
3. Compute the total cost of a stock investment
4. Compute the annual yield and dividend of a stock investment
5. Compute the profit or loss from a stock sale
6. Compute the annual interest and yield of a bond investment

Key Terms

- certificate of deposit
- dividends
- stocks
- capital gains
- bonds
- growth fund
- dividends
- no-load
- face value
- mutual funds

Lesson Introduction

In this unit you will learn about some basic investment options, including mutual funds, certificates of deposit (CDs), stocks, and bonds.

The following is an excerpt from U.S. Securities and Exchange Commission online publication “Invest Wisely: An Introduction to Mutual Funds,” located on the Internet at http://www.sec.gov/investor/pubs/inwsmf.htm

Mutual Funds: What They Are

A mutual fund is a company that pools money from many investors and invests the money in stocks, bonds, short-term money-market instruments, other securities or assets, or some combination of these investments. The combined holdings the mutual fund owns are known as its portfolio. Each share represents an investor's proportionate ownership of the fund's holdings and the income those holdings generate.

Some of the traditional, distinguishing characteristics of mutual funds include the following:

- Investors purchase mutual fund shares from the fund itself (or through a broker for the fund).
- The price that investors pay for mutual fund shares is the fund's per share net asset value (NAV) plus any shareholder fees that the fund imposes at the time of purchase (such as sales loads).
- Mutual fund shares are "redeemable," meaning investors can sell their shares back to the fund (or to a broker acting for the fund).
• Mutual funds generally create and sell new shares to accommodate new investors. In other words, they sell their shares on a continuous basis, although some funds stop selling when, for example, they become too large.

Advantages and Disadvantages

Every investment has advantages and disadvantages. For some investors, mutual funds provide an attractive investment choice because they generally offer the following features:

• Professional Management — Professional money managers research, select, and monitor the performance of the securities, stocks/bonds/etc., the fund purchases.

• Diversification — Diversification is an investing strategy that can be neatly summed up as "Don't put all your eggs in one basket." Spreading your investments across a wide range of companies and industry sectors can help lower your risk if a company or sector fails. Some investors find it easier to achieve diversification through ownership of mutual funds rather than through ownership of individual stocks or bonds.

• Affordability — Some mutual funds accommodate investors who don't have a lot of money to invest by setting relatively low dollar amounts for initial purchases, subsequent monthly purchases, or both.

• Liquidity — Mutual fund investors can readily redeem their shares at the current NAV — plus any fees and charges assessed on redemption — at any time.

But mutual funds also have features that some investors might view as disadvantages, such as:

• Costs Despite Negative Returns — Investors must pay sales charges, annual fees, and other expenses, regardless of how the fund performs. And, depending on the timing of their investment, investors may also have to pay taxes on any capital gains distribution they receive — even if the fund went on to perform poorly after they bought shares.

• Lack of Control — Investors typically cannot ascertain the exact make-up of a fund's portfolio at any given time, nor can they directly influence which securities the fund manager buys and sells or the timing of those trades.

• Price Uncertainty — With an individual stock, you can obtain real-time (or close to real-time) pricing information with relative ease by checking financial websites or by calling your broker. You can also monitor how a stock's price changes from hour to hour — or even second to second. By contrast, with a mutual fund, the price at which you purchase or redeem shares will typically depend on the fund's NAV, which the fund might not calculate until many hours after you've placed your order. In general, mutual funds must calculate their NAV at least once every business day, typically after the major U.S. exchanges close.

Different Types of Funds

When it comes to investing in mutual funds, investors have literally thousands of choices. Before you invest in any given fund, decide whether the investment strategy and risks of the fund are a good fit for you. The first step to successful investing is figuring out your financial goals and risk tolerance — either on your own or with the help of a financial professional. Once you know for what you're saving, when you'll need the money, and how much risk you can tolerate, you can more easily narrow your choices.
Most mutual funds fall into one of three main categories — money market funds, bond funds (also called "fixed income" funds), and stock funds (also called "equity" funds). Each type has different features and different risks and rewards. Generally, the higher the potential return, the higher the risk of loss.

**Money Market Funds**

Money market funds have relatively low risks compared to other mutual funds (and most other investments). By law, they can invest in only certain high-quality, short-term investments issued by the U.S. government, U.S. corporations, and state and local governments. Investor losses have been rare, but they are possible.

Money market funds pay dividends that generally reflect short-term interest rates, and historically the returns for money market funds have been lower than for either bond or stock funds. That's why "inflation risk" — the risk that inflation will outpace and erode investment returns over time — can be a potential concern for investors in money market funds.

**Bond Funds**

Bond funds generally have higher risks than money market funds, largely because they typically pursue strategies aimed at producing higher yields. Unlike money market funds, the SEC's rules do not restrict bond funds to high-quality or short-term investments. Because there are many different types of bonds, bond funds can vary dramatically in their risks and rewards. Some of the risks associated with bond funds include:

Credit Risk — the possibility that companies or other issuers whose bonds are owned by the fund may fail to pay their debts (including the debt owed to holders of their bonds).

Interest Rate Risk — the risk that the market value of the bonds will go down when interest rates go up. Because of this, you can lose money in any bond fund.

Prepayment Risk — the chance that a bond will be paid off early. For example, a bond issuer may decide to pay off (or "retire") its debt. When this happens, the fund may not be able to reinvest the proceeds in an investment with as high a return or yield.

**Stock Funds**

Although a stock fund's value can rise and fall quickly (and dramatically) over the short term, historically stocks have performed better over the long term than other types of investments — including corporate bonds, government bonds, and treasury securities.

Overall "market risk" poses the greatest potential danger for investors in stocks funds. Stock prices can fluctuate for a broad range of reasons — such as the overall strength of the economy or demand for particular products or services.
Not all stock funds are the same. For example:

- **Growth** funds focus on stocks that may not pay a regular dividend but have the potential for large capital gains.

- **Income** funds invest in stocks that pay regular dividends.

- **Index** funds aim to achieve the same return as a particular market index, such as the S&P 500 Composite Stock Price Index, by investing in all — or perhaps a representative sample — of the companies included in an index.

- **Sector** funds may specialize in a particular industry segment, such as technology or consumer products stocks.

### How to Buy and Sell Shares

You can purchase shares in some mutual funds by contacting the fund directly. Other mutual fund shares are sold mainly through brokers, banks, financial planners, or insurance agents. All mutual funds will redeem (buy back) your shares on any business day and must send you the payment within seven days.

The easiest way to determine the value of your shares is to call the fund's toll-free number or visit its website. The financial pages of major newspapers sometimes print the NAVs for various mutual funds. When you buy shares, you pay the current NAV per share plus any fee the fund assesses at the time of purchase, such as a purchase sales load or other type of purchase fee. When you sell your shares, the fund will pay you the NAV minus any fee the fund assesses at the time of redemption, such as a deferred (or back-end) sales load or redemption fee. A fund's NAV goes up or down daily as its holdings change in value.

### How Funds Can Earn Money for You

You can earn money from your investment in three ways:

1. **Dividend Payments** — A fund may earn income in the form of dividends and interest on the securities in its portfolio. The fund then pays its shareholders nearly all of the income (minus disclosed expenses) it has earned in the form of dividends.

2. **Capital Gains Distributions** — The price of the securities a fund owns may increase. When a fund sells a security that has increased in price, the fund has a capital gain. At the end of the year, most funds distribute these capital gains (minus any capital losses) to investors.

3. **Increased NAV** — If the market value of a fund's portfolio increases after deduction of expenses and liabilities, then the value (NAV) of the fund and its shares increases. The higher NAV reflects the higher value of your investment.

With respect to dividend payments and capital gains distributions, funds usually will give you a choice: the fund can send you a check or other form of payment, or you can have your dividends or distributions reinvested in the fund to buy more shares (often without paying an additional sales load).
**Degrees of Risk**

All funds carry some level of risk. You may lose some or all of the money you invest — your principal — because the securities held by a fund go up and down in value. Dividend or interest payments may also fluctuate as market conditions change.

Before you invest, be sure to read a fund's prospectus and shareholder reports to learn about its investment strategy and the potential risks. Funds with higher rates of return may take risks that are beyond your comfort level and are inconsistent with your financial goals.

**Fees and Expenses**

As with any business, running a mutual fund involves costs — including shareholder transaction costs, investment advisory fees, and marketing and distribution expenses. Funds pass along these costs to investors by imposing fees and expenses. It is important that you understand these charges because they lower your returns. SEC rules require funds to disclose both shareholder fees and operating expenses in a "fee table" near the front of a fund's prospectus. The list below will help you decode the fee table and understand the various fees a fund may impose:

- **Sales Charge (Load) on Purchases** — the amount you pay when you buy shares in a mutual fund. Also known as a "front-end load," this fee typically goes to the brokers that sell the fund's shares. Front-end loads reduce the amount of your investment.

- **Purchase Fee** — another type of fee that some funds charge their shareholders when they buy shares. Unlike a front-end sales load, a purchase fee is paid to the fund (not to a broker) and is typically imposed to defray some of the fund's costs associated with the purchase.

- **Deferred Sales Charge (Load)** — a fee you pay when you sell your shares. Also known as a "back-end load," this fee typically goes to the brokers that sell the fund's shares. The most common type of back-end sales load is the "contingent deferred sales load" (also known as a "CDSC" or "CDSL"). The amount of this type of load will depend on how long the investor holds his or her shares and typically decreases to zero if the investor holds his or her shares long enough.

- **Redemption Fee** — another type of fee that some funds charge their shareholders when they sell or redeem shares. Unlike a deferred sales load, a redemption fee is paid to the fund (not to a broker) and is typically used to defray fund costs associated with a shareholder's redemption.

- **Management Fees** — fees that are paid out of fund assets to the fund's investment adviser for investment portfolio management, any other management fees payable to the fund's investment adviser or its affiliates, and administrative fees payable to the investment adviser that are not included in the "Other Expenses" category.

- **Distribution Fees ("12b-1" Fees)** — fees paid by the fund out of fund assets to cover the costs of marketing and selling fund shares and sometimes to cover the costs of providing shareholder services. "Distribution fees" include fees to compensate brokers and others who sell fund shares and to pay for advertising, the printing and mailing of prospectuses to new investors, and the printing and mailing of sales literature. "Shareholder Service Fees" are fees paid to persons to respond to investor inquiries and provide investors with information about their investments.
• Other Expenses — expenses not included under "Management Fees" or "Distribution or Service (12b-1) Fees," such as any shareholder service expenses that are not already included in the 12b-1 fees, custodial expenses, legal and accounting expenses, transfer agent expenses, and other administrative expenses.

Be sure to review carefully the fee tables of any funds you're considering, including no-load funds. Even small differences in fees can translate into large differences in returns over time. For example, if you invested $10,000 in a fund that produced a 10% annual return before expenses and had annual operating expenses of 1.5%, then after 20 years you would have roughly $49,725. But if the fund had expenses of only 0.5%, then you would end up with $60,858, an 18% difference.

A Word About "No-Load" Funds

Some funds call themselves "no-load." As the name implies, this means that the fund does not charge any type of sales load. But, as discussed above, not every type of shareholder fee is a "sales load." A no-load fund may charge fees that are not sales loads, such as purchase fees, redemption fees, exchange fees, and account fees. No-load funds will also have operating expenses.


Section 12-1: Certificates of Deposit

A certificate of deposit (CD) is an interest-bearing account in which you must leave the money in the account for a specified period of time. CDs are given for 3-month periods, 6-month periods, on up to 30 years. Because you guarantee the bank that you will not withdraw the money from the account, you will earn a slightly higher rate of interest. In return, should you withdraw the money early, you are penalized.

The method for calculating interest for a CD is exactly the same as was used for savings accounts with compound interest. You will use a given compound-interest table to calculate the interest.

Reading Assignment, 12-1

Read section 12-1 on pages 394–395, including the example.

Self Check, 12-1

Work problems 3, 5, 7, 9, and 11 on pages 395–396. Check your work at the back of the book.
Section 12-2: Effective Annual Yield

The effective annual yield is the actual percentage of interest that you receive for an account. For example, if you deposit $1000 in an account that pays 7% interest compounded quarterly, the effective interest rate will be higher than 7%.

1st quarter \( i = p \times r \times t \)
\( i = 1000 \times .07 \times \frac{1}{4} \)
\( i = 17.50 \)
Account balance = $1000 + $17.50 = $1017.50

2nd quarter \( i = p \times r \times t \)
\( i = 1017.50 \times .07 \times \frac{1}{4} \)
\( i = 17.80625 \)
\( i = $17.81 \)
Account balance = $1017.50 + $17.81 = $1035.31

3rd quarter \( i = p \times r \times t \)
\( i = 1035.31 \times .07 \times \frac{1}{4} \)
\( i = 18.117925 \)
\( i = $18.12 \)
Account balance = $1035.31 + $18.12 = $1053.43

4th quarter \( i = p \times r \times t \)
\( i = 1053.43 \times .07 \times \frac{1}{4} \)
\( i = 18.435025 \)
\( i = $18.44 \)
Account balance = $1053.43 + $18.44 = $1071.87

If you put $1000 in a simple interests account for one year, you will gain $70 in interest. If the interest is compounded quarterly you will gain $71.87 in interest.

The effective interest rate = interest for one year ÷ principal
= $71.81 ÷ $1000
= .07181
The effective interest rate = 7.181%

(There is no need to round this number; you can give the exact interest rate.)

Reading Assignment, 12-2

Read section 12-2 on pages 397–398, including the example.

Self Check, 12-2

Work problems 5, 7, 9, and 11 on page 399. Check your answers in the back of the book.

Section 12-3: Stocks

You can invest in a company by buying stock. You can buy shares of stock in hopes that the share price will rise and you will be able to sell your shares for a profit. Stock prices are customarily quoted in eighths. The New York Stock Exchange is now in the process of
converting stock prices to dollars and cents; however, many stock prices are still quoted in eighths.

Listed below are examples of cost of stocks in eighths

\[
\begin{align*}
1/8 &= .125 (12\frac{1}{2} \text{ cents}) \\
2/8 &= \frac{1}{4} = .25 (25 \text{ cents}) \\
3/8 &= .375 (37\frac{1}{2} \text{ cents}) \\
4/8 &= .50 (50 \text{ cents}) \\
7\frac{5}{8} &= 7.625 (7 \text{ dollars and } 62\frac{1}{2} \text{ cents})
\end{align*}
\]

*Do not round the price of the share of stock.* When you make a purchase of stock, you will be rounding your final answer only.

For example, if you purchase 23 shares of a stock that trades for 3 7/8 and paid a $20 commission on the sale, the calculation would look like this:

\[
(23 \times 3.875) + 20 = 89.125 + 20 = 109.13 \text{ (notice that the final answer only is rounded)}
\]

**Reading Assignment, 12-3**

Read section 12-2 on pages 400–401, including the example.

**Self Check, 12-3**

Work problems 5, 7, 9, and 11 on pages 401–402. Check your answers in the back of the book.

**Section 12-4: Stock Dividends**

After you have made a stock purchase, you are a part owner of the company. Because of that, you will share in the profits that are declared by the company. These profits paid are called dividends. They are paid usually quarterly, semi-annually, or annually. These dividends are paid per share.

For example, from the problem above, when we purchased 23 shares of stock, the company has declared a $0.21 annual dividend per share. Find the amount of the dividend and then find the annual yield (percent).

\[
\begin{align*}
\text{Number of shares} \times \text{dividend per share} \\
23 \times 0.21 \\
\$4.83
\end{align*}
\]

You will receive a $4.83 dividend. 

\[
\frac{\text{Annual dividend per share}}{\text{cost per share}} = \text{yield (percent)}
\]

\[
\frac{0.21}{3.875} = 0.0541935
\]

\[
\text{You will receive a } 5.42\% \text{ yield (percent)}
\]
The annual yield on the stock purchase is 5.42%. Notice that it is rounded to the nearest hundredth of a percent.

**Reading Assignment, 12-4**

Read section 12-3 on pages 403–404, including the example.

**Self Check, 12-4**

Work problems 7, 9, and 11 on pages 405. Check your answers in the back of the book.

**Section 12-5: Selling Stocks**

When selling the stock, the calculation process is identical to the method used to calculate the buying price. Whether you make a profit depends on whether the price has increased or decreased since your purchase.

**Reading Assignment, 12-5**

Read section 12-4 on pages 406–407, including the example.

**Self Check, 12-5**

Work problems 5, 7, 9, and 11 on pages 407–408. Check your answers in the back of the book.

**Section 12-6: Bonds**

When a large corporation or the government is in need of large sums of money, it can raise money by issuing bonds. Bonds are different from stocks in that you are not becoming a part owner in the company. You are just lending them money for a specified period of time. Just as when the bank lends you money, interest will be paid. The price of a bond is quoted as a percent of the face value.

For example, a $10,000 face-value bond may be quoted at 95. That means that the cost of the bond will be 95% of the $10,000 face value.

Look at the example below.

Six $1000 bonds were purchased at 87½. They will pay 5% interest annually. What was the cost of the bonds? What is the annual interest? And what is the annual yield?
Total Cost of six bonds
6($1000 \times .875) \quad \text{the number of bonds} \times (\text{face value of one bond} \times \text{cost of one bond})
6($875)
$5250 \quad \text{total cost of the six bonds}

Annual Interest:
6($1000 \times .05) \quad \text{number of bonds} \times (\text{face value of one bond} \times \text{annual interest rate})
6($50)
$300 \quad \text{annual interest on the six bonds}

Annual Yield:
$300 \div $5250 \quad \text{annual amount of interest} \div \text{the total cost of the six bonds}
.057142 \ldots
5.71\% \quad \text{annual yield on the six bonds.}

**Reading Assignment, 12-6**

Read section 12-5 on pages 409–410, including the example.

**Self Check, 12-6**

Work problems 7, 9, and 11 on pages 410–411.

**END OF LESSON 12**
Lesson Assignment 12

Part I: Multiple Choice. Choose the correct answer from the options given, and write the correct letter on the blank provided. You will transfer these answers to your Lesson 1 Answer Sheet before you mail in your assignment. (4 points each)

_____ 1. Florence Tyler invests $6,500 in a 4-year certificate of deposit that earns interest at an annual rate of 5 percent compounded daily. The amount per $1.00 is 1.221386. What is the interest earned?
   A. $23,906.00
   B. $1,439.01
   C. $165.28
   D. $1,896.50

_____ 2. Scott Harris can invest $7,000 in a 1-year CD that earns interest at an annual rate of 4 percent compounded monthly. The amount per $1.00 is 1.040742. He can also invest $7,000 in a 1-year CD at an annual rate of 4 percent compounded quarterly. The amount per $1.00 is 1.040604. What is the difference in the amount of interest earned for each investment?
   A. $0.96
   B. $0.81
   C. $0.87
   D. $0.88

_____ 3. Christina Stratton invested $8,000 in a certificate of deposit for 4 years. The certificate earns interest at an annual rate of 8.25 percent compounded quarterly. The amount per $1.00 is 1.085088. What is the effective annual yield?
   A. 3.630%
   B. 7.032%
   C. 8.509%
   D. 2.143%

_____ 4. Jody Azbil invested $25,000 in a certificate of deposit for 4 years. The certificate earns interest at an annual rate of 9.75 percent compounded quarterly. The amount per $1.00 is 1.470089. What is the effective annual yield?
   A. 18.457%
   B. 16.824%
   C. 47.009%
   D. 10.112%

_____ 5. Abigail Eddy purchased 200 shares of stock at $11.58 per share. Her online stockbroker charged her a $12.50 commission. What is the total amount that she paid for the stock?
   A. $1,547.20
   B. $2,328.50
   C. $2,154.54
   D. $2,316.00
6. Holly Wright purchased 2,000 shares of a motor company stock at $19.97 per share. Her online broker’s charge for commission was $13.80. What is the total cost for the stock?
   A. $39,940.00
   B. $40,028.65
   C. $94,658.25
   D. $39,953.80

7. Callie Zimmerman purchased 100 shares of a toy company stock at $12.58 per share. Her online stock broker charged $0.04 per share for commission. What is the total cost of the stock?
   A. $1,397
   B. $1,262
   C. $1,554
   D. $2,982

8. Michelle Smith bought 30 shares of James Company stock at $34 per share. The company paid annual dividends of $0.42 per share. What is the total annual dividend?
   A. $9.78
   B. $12.60
   C. $1.69
   D. $11.97

9. Otessa Posey bought 2,000 shares of Print Company stock for $12,780. She sold the stock for $7 per share and paid a sales commission of $26. What is the profit or loss from the sale?
   A. $1,328 loss
   B. $206 profit
   C. $1,194 profit
   D. $1,278 loss
10. Jefferson Wilkens purchased a $4,250 bond at the quoted price of 83. The bond paid interest at a rate of 7 percent. What is the cost of the bond?
   A. $3,548.75
   B. $2,183.50
   C. $4,800.50
   D. $5,697.22

- Print the Lesson Assignment 12 worksheets.
- Transfer your multiple choice answers to the answer sheets that you will submit for grading.
- Make sure that your letters are neatly written.
- Check your answers to make sure that you transferred them correctly.
- Complete the assignment following the directions for each section. Remember that on some of the sections, you may earn partial credit. However, to do so, you must neatly show all of your work.
- Check over your work.
- Make yourself a copy of your lesson before you mail it to us for grading.
- Mail your lesson assignment to LHSCC at P. O. Box 2751, Baton Rouge, LA 70821-2751
It is now time to request your final exam. Please email LHSCC at academics@highschoolcredit.org and request that your exam be mailed to your proctor. You must allow 1 week for processing and mailing.

About the Final Exam

The final exam will cover the material from lessons 1–12, with a heavier concentration on lessons 7–12. To review for the exam, you should go over your returned lessons, noting especially the questions that were marked wrong. You may use a calculator on the final exam. Any calculator is acceptable except those with a complete alphabet keyboard.

Remember, you must pass the final exam in order to pass the course. If you do not pass the final exam, a grade of “F” is assigned as the final grade in the course.

If you have submitted all of your lessons and pass the final exam, your score will be worth 40 percent of your course grade. You will have a maximum of two hours to complete the exam.

Study well for the final exam; you must pass it in order to pass the course.

Important Final Exam and Course-Completion Information

• You will be eligible to take the final exam only when our office has received lessons 1–12. If you still have lessons you have not mailed to us or that were returned to you incomplete, please submit those completed lessons so you may take the exam.
• A course grade report will be mailed to you and your school. Allow three weeks to receive your grade.

Congratulations on finishing the lesson assignments for your course. We hope you will continue your education by taking another course with us.