



GLOBAL
EDITION



Horngren's Financial & Managerial Accounting

The Financial Chapters

SIXTH EDITION

Tracie Miller-Nobles • Brenda Mattison • Ella Mae Matsumura



Pearson

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Changes to This Edition

General

Revised end-of-chapter short exercises, exercises, problems, continuing problems, comprehensive problems, and critical thinking cases.

NEW! Using Excel. This end-of-chapter problem introduces students to Excel to solve common accounting problems as they would in the business environment.

NEW! Tying It All Together feature ties together key concepts from the chapter using the company highlighted in the chapter opener. The in-chapter box feature presents scenarios and questions that the company could face and focuses on the decision-making process. The end-of-chapter business case helps students synthesize the concepts of the chapter and reinforce critical thinking.

NEW! A Continuing Problem starts in Chapter 1 and runs through the financial chapters.

Chapter 1

NEW! Added discussion about why accounting is important to non-accounting majors.

Chapter 3

Updated discussion of the revenue recognition principle for the newly released standard.

Added a discussion on how to calculate interest for notes receivable and notes payable.

Changed interest calculations to use a 365-day year rather than a 360-day year to better reflect how actual lenders calculate interest.

Chapter 4

Increased the usage of the classified balance sheet as a requirement for end-of-chapter problems.

Changed the balance sheet presentation to reflect Property, Plant, and Equipment rather than Plant Assets.

Chapter 5

REVISED! Discussion on sales of merchandise revised to reflect the newly released revenue recognition standard, including reporting sales on account at the net amount and introduction of the Sales Discounts Forfeited account.

Changed income statement presentation to reflect Other Income and (Expenses) instead of Other Revenue and (Expenses) to better reflect how actual income statements are presented.

NEW! Added Appendix 5A that discusses multiple performance obligations.

Chapter 6

NEW! Added a comprehensive problem for Chapters 5 and 6 which includes the complete accounting cycle for a merchandising company with ratio analysis.

Chapter 7

NEW! Added coverage of credit card sales. In previous editions, this topic was covered in Chapter 8.

Chapter 8

Expanded coverage of estimating bad debts to help students understand why the Allowance for Bad Debts account may have either a debit or credit unadjusted balance due to previously overestimated or underestimated adjustments.

Chapter 9

NEW! Added comprehensive problem for Chapters 7–9 which includes transactions and analysis for cash, receivables, and long-term assets.

Chapter 10

REVISED! Discussion on debt and equity securities revised to reflect newly released financial instrument standard including the elimination of trading investments (equity) and available-for-sale investments (equity).

Chapter 11

Updated the payroll section for consistency with current payroll laws at the time of printing.
Added a section to illustrate how companies record the payment of payroll liabilities.

Chapter 12

NEW! Added discussion on future value, including determining the future value of a lump sum and of an annuity.

Chapter 13

NEW! Moved the corporate income statement, including calculating earnings per share, from the Chapter 15 Appendix to Chapter 13. The discussion on the Extraordinary Items section has been removed to align with current standards.

NEW! Added comprehensive problem for Chapters 11–13 which includes payroll, other current liabilities, long-term liabilities, and stockholders' equity transactions and analysis.

Chapter 14

Modified the wording in Changes to Current Assets and Current Liabilities section of preparing the statement of cash flows, indirect method, to emphasize adjustments are made to net income to convert from accrual basis to cash basis.

Chapter 15

Rearranged the liquidity ratios from most stringent to least stringent (cash ratio, acid-test ratio, current ratio).

NEW! Added problem (both A and B series) that has students complete a trend analysis and ratios to analyze a company for its investment potential.

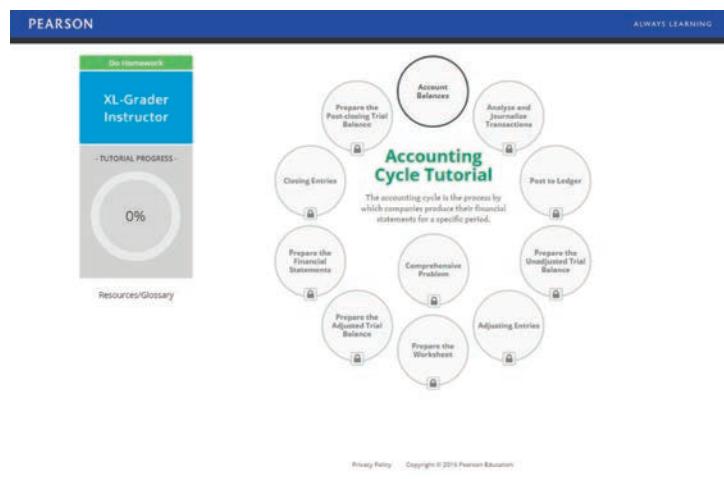
<http://www.pearsonglobaleditions.com/Sitemap/Horngren/>

Financial & Managerial Accounting . . .

Expanding on Proven Success

Accounting Cycle Tutorial

Pearson MyLab Accounting's interactive tutorial helps students master the Accounting Cycle for early and continued success in the Introduction to Accounting course. The tutorial, accessed by computer, smartphone, or tablet, provides students with brief explanations of each concept of the Accounting Cycle through engaging, interactive activities. Students are immediately assessed on their understanding and their performance is recorded in the Pearson MyLab Accounting Gradebook. Whether the Accounting Cycle Tutorial is used as a remediation self-study tool or course assignment, students have yet another resource within Pearson MyLab Accounting to help them be successful with the accounting cycle.



ACT Comprehensive Problem

NEW! The Accounting Cycle Tutorial now includes a comprehensive problem that allows students to work with the same set of transactions throughout the accounting cycle. The comprehensive problem, which can be assigned at the beginning or the end of the full cycle, reinforces the lessons learned in the accounting cycle tutorial activities by emphasizing the connections between the accounting cycle concepts.

Study Plan

The Study Plan acts as a tutor, providing personalized recommendations for each of your students based on his or her ability to master the learning objectives in your course. This allows students to focus their study time by pinpointing the precise areas they need to review, and allowing them to use customized practice and learning aids—such as videos, eText, tutorials, and more—to get them back on track. Using the report available in the Gradebook, you can then tailor course lectures to prioritize the content where students need the most support—offering you better insight into classroom and individual performance.

Dynamic Study Modules

help students study effectively on their own by continuously assessing their activity and performance in real time. Here's how it works: students complete a set of questions with a unique answer format that also asks them to indicate their confidence level. Questions repeat until the student can answer them all correctly and confidently. Once completed, Dynamic Study Modules explain the concept using materials from the text. These are available as graded assignments prior to class, and accessible on smartphones, tablets, and computers. NEW! Instructors can now remove questions from Dynamic Study Modules to better fit their course. Available for select titles.

A screenshot of a Dynamic Study Module question titled "The Adjusting Process". The top right shows "return" and "Mary Kate Murray" with a progress bar. The question is "What is the amount for Office Supplies in the Adjusted Trial Balance?". Below it, the answer choices are: "\$11,000", "\$9,000", "\$7,000" (which is checked), "\$2,000", and "I DON'T KNOW YET". At the bottom, there are "support" and "© Knowledge Factor, Inc. 2016. All rights reserved." buttons, and "next question" and "CORRECT" buttons.

Learning Catalytics

Learning Catalytics helps you generate class discussion, customize your lecture, and promote peer-to-peer learning with real-time analytics. As a student response tool, Learning Catalytics uses students' smartphones, tablets, or laptops to engage them in more interactive tasks and thinking.

- NEW! Upload a full PowerPoint® deck for easy creation of slide questions.
- Help your students develop critical thinking skills.
- Monitor responses to find out where your students are struggling.
- Rely on real-time data to adjust your teaching strategy.
- Automatically group students for discussion, teamwork, and peer-to-peer learning.

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Lauren Martin | Logout

Session 26148360

multiple choice question

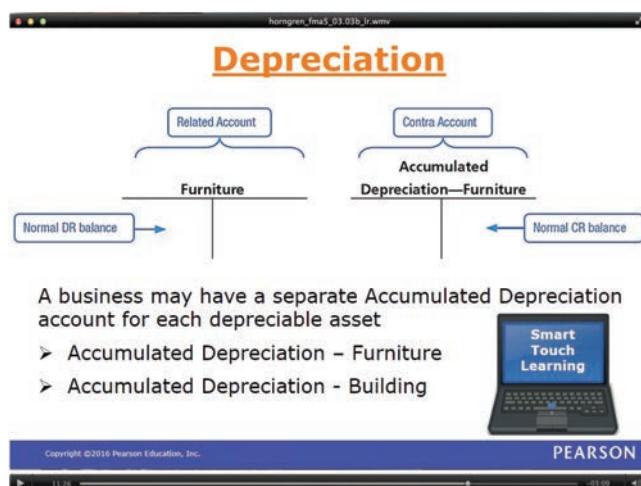
Fernandez Company allocates overhead based on machine hours. Selected data for the most recent year follow:

- Estimated manufacturing overhead cost \$240,000
- Actual manufacturing overhead cost \$215,000
- Estimated machine hours 40,000
- Actual machine hours 41,000

The estimates were made as of the beginning of the year, while the actual results were for the entire year. The amount of manufacturing overhead allocated for the year based on machine hours would have been:

- A. \$215,000
- B. \$227,500
- C. \$240,000
- D. \$246,000

Hide response Change response
 Refresh Send a message to the instructor Join another session



Depreciation

Related Account

Contra Account

Furniture

Accumulated Depreciation—Furniture

Normal DR balance

Normal CR balance

A business may have a separate Accumulated Depreciation account for each depreciable asset

- Accumulated Depreciation – Furniture
- Accumulated Depreciation - Building

Smart Touch Learning

PEARSON

Animated Lectures

These pre-class learning aids are available for every learning objective and are professor-narrated PowerPoint summaries that will help students prepare for class. These can be used in an online or flipped classroom experience or simply to get students ready for lecture.

Chapter Openers

Chapter openers set up the concepts to be covered in the chapter using stories students can relate to. The implications of those concepts on a company's reporting and decision making processes are then discussed.



Tying It All Together

This feature ties together key concepts from the chapter using the company highlighted in the chapter opener. The in-chapter box feature presents scenarios and questions that the company could face and focuses on the decision-making process. The end of chapter business case helps students synthesize the concepts of the chapter and reinforce critical thinking.

TYING IT ALL TOGETHER

Hyatt Hotels Corporation was founded in 1957 when Jay Pritzker purchased the first Hyatt hotel next to the Los Angeles International Airport. Today, Hyatt Hotels owns and operates hotels in 52 countries around the world. For the year ended December 31, 2015, the company reported revenues totaling \$4.3 billion with net income of \$124 million. (You can find Hyatt Hotels Corporation's annual report at <https://www.sec.gov/Archives/edgar/data/1468174/000146817416000152/h10-k123115.htm>.)

Would Hyatt Hotels Corporation record closing entries and why?

Hyatt Hotels would record closing entries in order to get the accounts ready for next year. All companies record closing entries in order to zero out all revenue and expense accounts. In addition, the closing process updates the Retained Earnings account balance for net income or loss during the period and any dividends paid to stockholders.

Why are temporary accounts important in the closing process? What type of temporary accounts would Hyatt Hotels Corporation have?

Temporary accounts are important in the closing process because these accounts relate to a particular accounting period and are

closed at the end of the period. Revenues, expenses, and dividends are all temporary accounts. Some examples of temporary accounts that Hyatt Hotels might have include Owned and Leased Hotels Revenue; Selling, General, and Administrative Expense; Interest Expense; and Dividends.

When would Hyatt Hotels Corporation prepare its post-closing trial balance? What type of accounts would be reported on this trial balance?

A post-closing trial balance is a list of all permanent accounts and their balances at the end of the accounting period and is prepared after the closing process. Hyatt Hotels would report only permanent accounts on its post-closing trial balance. Some examples of permanent accounts that Hyatt Hotels might have include assets, such as Cash and Property, liabilities, such as Accounts Payable; and equity, such as Common Stock and Retained Earnings.

> Tying It All Together 4-1

Before you begin this assignment, review the Tying It All Together feature in the chapter. It will also be helpful if you review Hyatt Hotels Corporation's 2015 annual report (<https://www.sec.gov/Archives/edgar/data/1468174/000146817416000152/h10-k123115.htm>).

Hyatt Hotels Corporation is headquartered in Chicago and is a leading global hospitality company. The company develops, owns, and operates hotels, resorts, and vacation ownership properties in 52 different countries. For the year ended December 31, 2015, Hyatt Hotels reported the following select account information (in millions):

Revenue	\$ 4,328
Selling, general, and administrative expense	4,005
Other Expenses	61
Interest Expense	68
Income Tax Expense	70
Dividends	0
Retained Earnings, December 31, 2014	2,165

Requirements

1. Journalize Hyatt Hotels Corporation's closing entries at December 31, 2015.
2. Determine Hyatt Hotels Corporation's ending Retained Earnings balance at December 31, 2015.
3. Review the Hyatt Hotels Corporation's balance sheet included in the 2015 annual report and find ending Retained Earnings, December 31, 2015. Does your ending Retained Earnings calculated in Requirement 2 match?

Effect on the Accounting Equation

Next to every journal entry in the financial chapters, these illustrations help reinforce the connections between recording transactions and the effect those transactions have on the accounting equation.

On November 10, Smart Touch Learning performed services for clients, for which the clients will pay the company later. The business earned \$3,000 of service revenue on account.

This transaction increased Accounts Receivable, so we debit this asset. Service Revenue is increased with a credit.

Date	Accounts and Explanation	Debit	Credit
Nov. 10	Accounts Receivable	3,000	
	Service Revenue		3,000

$$\begin{array}{c} A \uparrow \\ \text{Accounts} \\ \text{Receivable} \uparrow \end{array} = \left\{ \begin{array}{l} L \downarrow + E \downarrow \\ \text{Service} \\ \text{Revenue} \uparrow \end{array} \right\}$$

Instructor Tips & Tricks

Found throughout the text, these handwritten notes mimic the experience of having an experienced teacher walk a student through concepts on the “board.” Many include mnemonic devices or examples to help students remember the rules of accounting.

$$\begin{array}{c} A \downarrow \\ \text{Accumulated} \\ \text{Depreciation} \\ \text{Building} \uparrow \end{array} = \left\{ \begin{array}{l} L \downarrow + E \downarrow \\ \text{Depreciation} \\ \text{Expense} \\ \text{Building} \uparrow \end{array} \right\}$$

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Depreciation Expense—Building	250	
	Accumulated Depreciation—Building		250

Remember, an increase in a contra asset, such as Accumulated Depreciation, decreases total assets. This is because a contra asset has a credit balance and credits decrease assets.

Common Questions, Answered

Our authors have spent years in the classroom answering students' questions and have found patterns in the concepts or rules that consistently confuse students. These commonly asked questions are located in the margin of the text next to where the answer or clarification can be found highlighted in purple text.

Notice that Smart Touch Learning credited the amortization directly to the intangible asset, Patent, instead of using an Accumulated Amortization account. A company may credit an intangible asset directly when recording amortization expense, or it may use the account Accumulated Amortization. **Companies frequently choose to credit the asset account directly because the residual value is generally zero and there is no physical asset to dispose of at the end of its useful life, so the asset essentially removes itself from the books through the process of amortization.**

At the end of the first year, Smart Touch Learning will report this patent at \$160,000 (\$200,000 cost minus first-year amortization of \$40,000), the next year at \$120,000, and so forth. Each year for five years the value of the patent will be reduced until the end of its five-year life, at which point its book value will be \$0.

.....

Why was the account Patent credited instead of Accumulated Amortization—Patent?



Try It! Boxes

Found after each learning objective, Try Its! give students opportunities to apply the concept they've just learned by completing an accounting problem. Links to these exercises appear throughout the eText, allowing students to practice in Pearson MyLab Accounting without interruption.

Try It!

Total Pool Services earned \$130,000 of service revenue during 2018. Of the \$130,000 earned, the business received \$105,000 in cash. The remaining amount, \$25,000, was still owed by customers as of December 31. In addition, Total Pool Services incurred \$85,000 of expenses during the year. As of December 31, \$10,000 of the expenses still needed to be paid. In addition, Total Pool Services prepaid \$5,000 cash in December 2018 for expenses incurred during the next year.

1. Determine the amount of service revenue and expenses for 2018 using a cash basis accounting system.
2. Determine the amount of service revenue and expenses for 2018 using an accrual basis accounting system.

Check your answers online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercises S3-1 and S3-2. [Pearson MyLab Accounting](#)

Try It! Solution Videos

Author-recorded and accompanying Try It! Exercises, these videos walk students through the problem and the solution.

Startech Surveillance Services had the following adjustments as of the end of the year:

- a. Equipment depreciation was \$1,500. **D**
 - b. \$700 of advertising expense was incurred but not paid. (Use Advertising Payable.) **A**
 - c. Office Supplies on hand at the end of the year totaled \$250. The beginning balance of Office Supplies was \$600. **D**
 - d. \$1,200 of rent revenue was earned but not recorded or received. **A**
 - e. Unearned revenue of \$3,000 had been earned. **D**
6. For each situation, indicate which category of adjustment (deferral or accrual) is described.
7. Journalize the adjusting entry needed.

Deferral: Cash occurs before revenue or expense

Accrual: Cash occurs after revenue or expense

a. Dep. Exp.	1500	b. Adv. Exp.	700
Acc. Dep.	1500	Adv. Pay.	700

IFRS

Information on IFRS provides guidance on how IFRS differs from U.S. GAAP throughout the financial chapters.



Decision Boxes

This feature provides common questions and potential solutions business owners face. Students are asked to determine the course of action they would take based on concepts covered in the chapter and are then given potential solutions.

DECISIONS

Can we cut these costs?

The management team of Puzzle Me is looking at the production cost reports for July, and discussing opportunities for improvement. The production manager thinks the production process is very efficient, and there is little room for cost savings in conversion costs. The purchasing manager tells the team that he was recently approached by a supplier with an excellent reputation for quality. This supplier submitted a bid for cardboard that was a little thinner but would allow the company to decrease direct materials costs by 5%. What should the team do?

Solution

The production cost reports for the Assembly and Cutting Departments show direct materials costs of \$2.80 and \$0.50 per puzzle, respectively, for total direct materials cost of \$3.30 per puzzle. A decrease of 5% in direct materials costs would result in a savings

of \$0.165 per puzzle ($\$3.30 \times 5\%$) and decrease total costs from \$5.30 to \$5.135 per puzzle. Based on the completed production of 38,000 puzzles in July, the total cost savings would be \$6,270 per month (\$0.165 per puzzle \times 38,000 puzzles). The purchasing manager recommends using the new supplier.

Alternate Solution

The marketing manager has a different perspective. He points out that most of the puzzles produced are for toddlers. Based on market research, the adults who purchase these puzzles like the sturdy construction. If Puzzle Me changes materials and the puzzles do not stand up well to the treatment they receive by young children, the company could rapidly lose market share. The marketing manager does not recommend using a thinner cardboard.

> Things You Should Know

1. Why is accounting important?

- Accounting is the language of business.
- Accounting is used by decision makers including individuals, businesses, investors, creditors, and taxing authorities.
- Accounting can be divided into two major fields: financial accounting and managerial accounting.
- Financial accounting is used by external decision makers, and managerial accounting is used by internal decision makers.
- All businesses need accountants. Accountants work in private, public, and governmental jobs.
- Accountants can be licensed as either a certified public accountant (CPA) or certified management accountant (CMA).

Things You Should Know

Provides students with a brief review of each learning objective presented in a question and answer format.

Using Excel Problems

This end of chapter problem introduces students to Excel to solve common accounting problems as they would in the business environment. Students will work from a template that will aid them in solving the problem related to accounting concepts taught in the chapter. Each chapter focuses on different Excel skills.

CHAPTER 4

> Using Excel

P4-41 Using Excel to prepare financial statements, closing entries, and the post-closing trial balance

Download an Excel template for this problem online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

Cedar River Corporation started operations on July 1, 2018. On July 31, a trial balance was prepared, adjusting entries were journalized and posted, and an adjusted trial balance was completed. A worksheet is to be used to help prepare the financial statements and the post-closing trial balance.

Requirements

1. Use Excel to complete the Income Statement and Balance Sheet columns of the worksheet. Carry numbers from the adjusted trial balance columns of the worksheet to the income statement and balance sheet columns using Excel formulas.
 - a. Use formulas to total the columns.
 - b. Use a formula to determine the amount of the net income or net loss.
 - c. Format the cells requiring dollar signs.
 - d. Boldface the totals.
2. Prepare the income statement, the statement of retained earnings, and a classified balance sheet.
 - a. Use the Increase Indent button on the Home tab to indent items.
 - b. Use formulas to sum items.

End-of-Chapter Continuing and Comprehensive Problems

> Continuing Problem

P1-55 is the first problem in a continuing problem that will be used throughout the chapters to reinforce the concepts learned.

P1-55 Using the accounting equation for transaction analysis, preparing financial statements, and calculating return on assets (ROA)

Let's Bike Company is a company that rents bicycles for use on cycling trails along the coastline. Leona Cho and Bowie Lee both worked for one of the "Big Four" accounting firms after graduation and became CPAs. As they love cycling, they had a dream of promoting cycling as a healthy activity, which at the same time helps reduce the carbon footprint. They decided to begin a new business that combined their love of cycling with their business knowledge. Leona and Bowie decided that they will create a new corporation, Let's Bike Company, or LBC for short. The business began operations on November 1, 2018.

- Nov. 1 Received \$23,000 cash to begin the company and issued common stock to Leona and Bowie.
- 2 Purchased bikes for \$5,400 on account.
- 3 Purchased office supplies on account, \$980.
- 8 Earned \$2,300 cash for rental of bikes to individual customers.
- 12 Paid \$3,400 and \$950 related to the purchases on November 2 and 3, 2018, respectively.



Continuing Problem—Starts in Chapter 1 and runs through the financial chapters.

Comprehensive Problem 1 for Chapters 1–4—Covers the entire accounting cycle for a service company.

Comprehensive Problem 2 for Chapters 1–4—A continuation of Comprehensive Problem 1. It requires the student to record transactions for the month after the closing process.

NEW! Comprehensive Problem for Chapters 5 and 6—Covers the entire accounting cycle for a merchandise company, including analysis.

NEW! Comprehensive Problem for Chapters 7–9—Covers cash, receivables, and long-term assets transactions and analysis.

NEW! Comprehensive Problem for Chapters 11–13—Covers payroll, other current liabilities, long-term liabilities, and stockholders' equity transactions and analysis.

Comprehensive Problem for Appendix B—Uses special journals and subsidiary ledgers and covers the entire accounting cycle for a merchandise company. Students can complete this comprehensive problem using the Pearson MyLab Accounting General Ledger or Quickbooks™ software.

> **Comprehensive Problem 1 for Chapters 1–4**

Murphy Delivery Service completed the following transactions during December 2018:

- | | |
|--------|---|
| Dec. 1 | Murphy Delivery Service began operations by receiving \$13,000 cash and a truck with a fair value of \$9,000 from Russ Murphy. The business issued Murphy shares of common stock in exchange for this contribution. |
| 1 | Paid \$600 cash for a six-month insurance policy. The policy begins December 1. |
| 4 | Paid \$750 cash for office supplies. |
| 12 | Performed delivery services for a customer and received \$2,200 cash. |
| 15 | Completed a large delivery job, billed the customer, \$3,300, and received a promise to collect the \$3,300 within one week. |
| 18 | Paid employee salary, \$800. |
| 20 | Received \$7,000 cash for performing delivery services. |
| 22 | Collected \$2,200 in advance for delivery service to be performed later. |
| 25 | Collected \$3,300 cash from customer on account. |
| 27 | Purchased fuel for the truck, paying \$150 on account. (Credit Accounts Payable) |
| 28 | Performed delivery services on account, \$1,400. |
| 29 | Paid office rent, \$1,400, for the month of December. |
| 30 | Paid \$150 on account. |
| 31 | Cash dividends of \$2,500 were paid to stockholders. |

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Dear Colleague,

Thank you for taking the time to review *Horngren's Financial and Managerial Accounting*. We are excited to share our innovations with you as we expand on the proven success of our revision to the Horngren franchise. Using what we learned from focus groups, market feedback, and our colleagues, we've designed this edition to focus on several goals.

First, we again made certain that the textbook, student resources, and instructor supplements are clear, consistent, and accurate. As authors, we reviewed each and every component to ensure a student experience free of hurdles. Next, through our ongoing conversations with our colleagues and our time engaged at professional conferences, we confirmed that our pedagogy and content represents the leading methods used in teaching our students these critical foundational topics. Lastly, we concentrated on student success and providing resources for professors to create an active and engaging classroom.

We are excited to share with you some new features and changes in this latest edition. First, we have added a new Tying It All Together feature that highlights an actual company and addresses how the concepts of the chapter apply to the business environment. A Using Excel problem has also been added to every chapter to introduce students to using Excel to solve common accounting problems as they would in the business environment. Chapter 5 (Merchandising Operations) has been updated for the newly released revenue recognition standard.

We trust you will find evidence of these goals throughout our text and in the MyLab Accounting component. We welcome your feedback and comments. Please do not hesitate to contact us at HorngrensAccounting@pearson.com or through our editor, Lacey Vitetta, LaceyVitetta@pearson.com.

Tracie L. Miller-Nobles, CPA

Brenda Mattison, CMA

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Instructor and Student Resources

Each supplement, including the resources in Pearson MyLab Accounting, has been reviewed by the author team to ensure accuracy and consistency with the text. Given their personal involvement, you can be assured of the high quality and accuracy of all supplements.

For Instructors

Pearson MyLab Accounting

Online Homework and Assessment Manager: <http://www.myaccountinglab.com>

Instructor Resource Center: <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>

For the instructor's convenience, the instructor resources can be downloaded from the textbook's catalog page (<http://www.pearsonglobaleditions.com/Sitemap/Horngren/>) and Pearson MyLab Accounting. Available resources include the following:

Online Instructor's Resource Manual:

Course Content:

- Tips for Taking Your Course from Traditional to Hybrid, Blended, or Online
- Standard Syllabi for Financial Accounting (10-week & 16-week)
- Sample Syllabi for 10- and 16-week courses
- “First Day of Class” student handouts include:
 - Student Walk-Through to Set-up Pearson MyLab Accounting
 - Tips on How to Get an A in This Class

Chapter Content:

- Chapter Overview
 - Contains a brief synopsis and overview of each chapter.
- Learning Objectives
- Teaching Outline with Lecture Notes
 - Combines the Teaching Outline and the Lecture Outline Topics, so instructors only have one document to review.
 - Walks instructors through what material to cover and what examples to use when addressing certain items within the chapter.
- Handout for Student Notes
 - An outline to assist students in taking notes on the chapter.
- Student Chapter Summary
 - Aids students in their comprehension of the chapter.
- Assignment Grid
 - Indicates the corresponding Learning Objective for each exercise and problem.
 - Answer Key to Chapter Quiz
- Ten-Minute Quiz
 - To quickly assess students' understanding of the chapter material.
- Extra Critical Thinking Problems and Solutions
 - Critical Thinking Problems previously found in the text were moved to the IRM so instructors can continue to use their favorite problems.
- Guide to Classroom Engagement Questions
 - Author-created element will offer tips and tricks to instructors in order to help them use the Learning Catalytic questions in class.

Online Instructor's Solutions Manual:

- Contains solutions to all end-of-chapter questions, short exercises, exercises, and problems.
- The Try It! Solutions, previously found at the end of each chapter, are now available for download with the ISM.
- Using Excel templates, solutions, and teaching tips.
- All solutions were thoroughly reviewed by the author team and other professors.

Online Test Bank:

- Includes more than 3,900 questions, including NEW multi-level questions.
- Both conceptual and computational problems are available in true/false, multiple choice, and open-ended formats.
- Algorithmic test bank is available in Pearson MyLab Accounting.

PowerPoint Presentations:*Instructor PowerPoint Presentations:*

- Complete with lecture notes.
- Mirrors the organization of the text and includes key exhibits.

Student PowerPoint Presentations:

- Abridged versions of the Instructor PowerPoint Presentations.
- Can be used as a study tool or note-taking tool for students.

Demonstration Problem PowerPoint Presentations:

- Offers instructors the opportunity to review in class the exercises and problems from the chapter using different companies and numbers.

Clicker Response System (CRS) PowerPoint Presentations:

- 10 multiple-choice questions to use with a Clicker Response System.

Image Library:

- All image files from the text to assist instructors in modifying our supplied PowerPoint presentations or in creating their own PowerPoint presentations.

For Students

Pearson MyLab Accounting

Online Homework and Assessment Manager: <http://www.myaccountinglab.com>

- Pearson eText
- Using Excel templates
- Animated Lectures
- Interactive Figures
- Student PowerPoint® Presentations
- Flash Cards

Student Resource Web site: <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>

The book's Web site contains the following:

- Data Files: Select end-of-chapter problems have been set up in QuickBooks software and the related files are available for download.
- Working Papers
- Try It! Solutions: The solutions to all in-chapter Try Its! are available for download.
- Links to Target Corporation's Annual Report and Kohl's Corporation's Annual Report

<http://www.pearsonglobaleditions.com/Sitemap/Horngren/>

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Brenda Mattison appreciates the loving support of her family, especially from her husband, Grant, and sons, Christopher and Dillon. Her family's faith in her, along with her faith in God, provided her the inspiration to follow her dreams. This book is dedicated to her students, who work hard to achieve their dreams, are a constant reminder of what's really important in our lives, and inspire her to continuously seek ways to improve her craft of teaching.

Ella Mae Matsumura thanks her family for their longstanding love and support in her endeavors: husband, Kam-Wah Tsui; son, David Tsui; sister and late parents, Linda, Lester, and Eda Matsumura. She would also like to express her appreciation to: the numerous colleagues and friends who have encouraged her and helped her grow as a scholar and a person; the many students who have provided constructive feedback that has shaped her teaching; and her faith community for its enduring love and affirmation.

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Accounting and the Business Environment

1



Coffee, Anyone?

Aiden Jackson stared at the list the banker had given him during their meeting. *Business plan, cash flow projections, financial statements, tax returns.* Aiden had visited with the banker because he had a dream of opening a coffee shop near campus. He knew there was a need; students were always looking for a place to study and visit with their friends. He also had the experience. He had worked for the past three years as a manager of a coffee shop in a neighboring town. Aiden needed one thing, though—money. He had saved a small amount of money from his job and received several contributions from family and friends, but he still didn't have enough to open the business. He had decided the best option

was to get a loan from his bank. After the meeting, Aiden felt overwhelmed and unsure of the future of his business.

You might think that Aiden was facing an impossible situation, but you'd be wrong. Almost every new business faces a similar situation. The owner starts with an inspiration, and then he or she needs to provide enough continuous cash flow to build the business. In addition, the owner has to make decisions such as: *Should we expand to another location? Do we have enough money to purchase a new coffee roaster? How do I know if the business made a profit?*

So how does Aiden get started? Keep reading. That's what accounting teaches you.



Why Study Accounting?

The situation that Aiden faced is similar to the situations faced in the founding of most businesses. **Starbucks Corporation**, for example, first opened its doors in Seattle, Washington, in 1971. Three partners, Jerry Baldwin, Zev Siegl, and Gordon Bowker, were inspired by a dream of selling high-quality coffee. We know their dream was successful because Starbucks currently has more than 22,000 stores in 67 countries. How did Starbucks grow from a small one-store shop to what it is today? The partners understood accounting—the language of business. They understood how to measure the activities of the business, process that information into reports (financial statements), and then use those reports to make business decisions. Your knowledge of accounting will help you better understand businesses. It will make you a better business owner, employee, or investor.





Chapter 1 Learning Objectives



- | | |
|--|---|
| <p>1 Explain why accounting is important and list the users of accounting information</p> <p>2 Describe the organizations and rules that govern accounting</p> <p>3 Describe the accounting equation and define assets, liabilities, and equity</p> | <p>4 Use the accounting equation to analyze transactions</p> <p>5 Prepare financial statements</p> <p>6 Use financial statements and return on assets (ROA) to evaluate business performance</p> |
|--|---|

WHY IS ACCOUNTING IMPORTANT?

Learning Objective 1

Explain why accounting is important and list the users of accounting information

Accounting

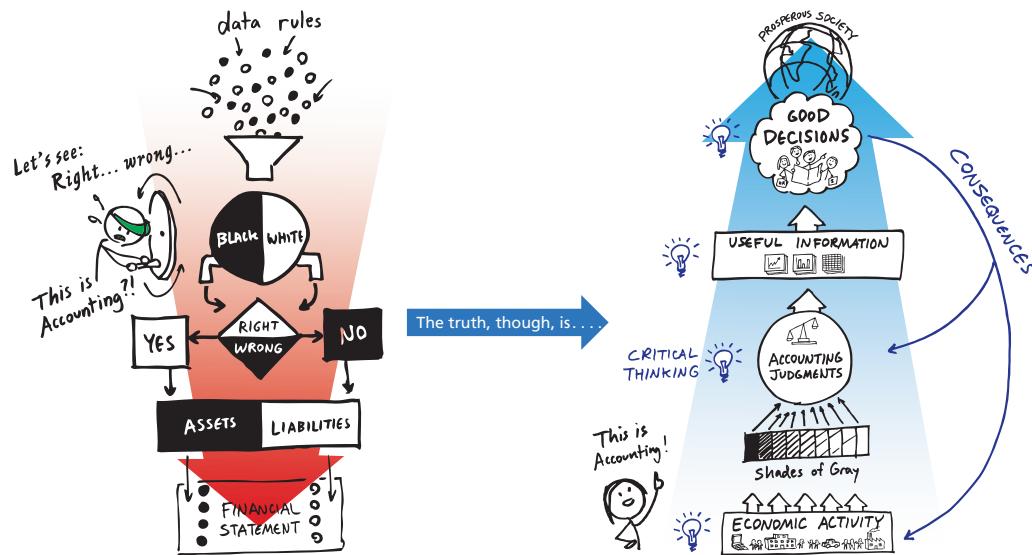
The information system that measures business activities, processes the information into reports, and communicates the results to decision makers.

You've heard the term *accounting*, but what exactly is it? **Accounting** is the information system that measures business activities, processes the information into reports, and communicates the results to decision makers. Accounting is the language of business. The better you understand the language of business, the better you can manage your own business, be a valuable employee, or make wise investments.

We tend to think of accountants as boring and dry. However, accounting is much more than simple recordkeeping or bookkeeping. Today's accountants participate in a broad range of activities such as the investigation of financial evidence, the development of computer programs to process accounting information, and the communication of financial results to interested parties. The knowledge of accounting is used every day to help make business decisions.

Recently, leaders from across the accounting community, called the Pathways Commission, came together to create a vision model (see Exhibit 1-1) to help students and

Exhibit 1-1 | Pathways Vision Model





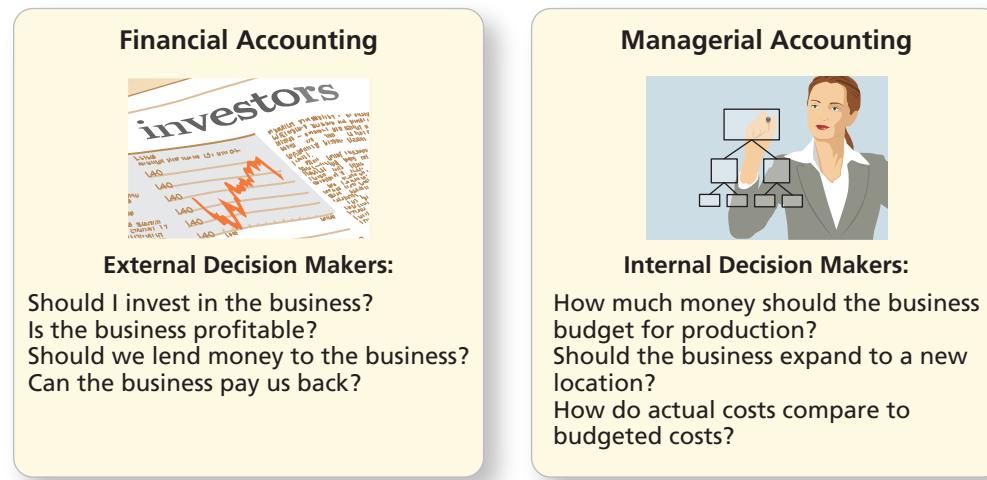
the public understand what accounting is. The model is intended to explain in a visual way what accountants really do. Accounting starts with economic activities that accountants review and evaluate using critical thinking and judgment to create useful information that helps individuals make good decisions. The model emphasizes that good decisions have an impact on accounting judgments and economic activity, thus creating a circular flow of cause and effect. Accountants are more than boring, tedious number crunchers. Instead, accountants play a critical role in supporting a prosperous society.

Decision Makers: The Users of Accounting Information

We can divide accounting into two major fields: financial accounting and managerial accounting. **Financial accounting** provides information for external decision makers, such as outside investors, lenders, customers, and the federal government. **Managerial accounting** focuses on information for internal decision makers, such as the company's managers and employees.

Exhibit 1-2 illustrates the difference between financial accounting and managerial accounting. Regardless of whether they are external or internal to the company, all decision makers need information to make the best choices. The bigger the decision, the more information decision makers need. Let's look at some ways in which various people use accounting information to make important decisions.

Exhibit 1-2 | Decision Making: Financial Versus Managerial Accounting



Individuals

How much cash do you have? How much do you need to save each month to retire at a certain age or pay for your children's college education? Accounting can help you answer questions like these. By using accounting information, you can manage your money, evaluate a new job, and better decide whether you can afford to buy a new computer. Businesses need accounting information to make similar decisions.

Businesses

Business owners use accounting information to set goals, measure progress toward those goals, and make adjustments when needed. The financial statements give owners the information they need to help make those decisions. Financial statements are helpful when, for example, a business owner wants to know whether his or her business has enough cash to purchase another computer.

Financial Accounting

The field of accounting that focuses on providing information for external decision makers.

Managerial Accounting

The field of accounting that focuses on providing information for internal decision makers.



Accounting is alive! As businesses evolve and the type of business transactions change, so must the language of business. The most significant changes in the business world in the last decade have been the huge increases in international commerce. Because more business is conducted internationally, decision makers are looking for an international accounting language.

Look for more information about International Financial Reporting Standards (IFRS) anywhere that you see this image.



Investors

Outside investors who have some ownership interest often provide the money to get a business going. Suppose you're considering investing in a business. How would you decide whether it is a good investment? In making this decision, you might try to predict the amount of income you would earn on the investment. Also, after making an investment, investors can use a company's financial statements to analyze how their investment is performing.

You might have the opportunity to invest in the stock market through your company's retirement plan. Which investments should you pick? Understanding a company's financial statements will help you decide. You can view the financial statements of large companies that report to the Securities and Exchange Commission (SEC) by logging on to <http://www.finance.yahoo.com>, <http://www.google.com/finance>, or the SEC's EDGAR database (<http://www.sec.gov/edgar.shtml>).

Creditors

Creditor

Any person or business to whom a business owes money.

Any person or business to whom a business owes money is a **creditor**. Before extending credit to a business, a creditor evaluates the company's ability to make the payments by reviewing its financial statements. Creditors follow the same process when you need to borrow money for a new car or a house. The creditor reviews accounting data to determine your ability to make the loan payments. What does your financial position tell the creditor about your ability to repay the loan? Are you a good risk for the bank?

Taxing Authorities

Local, state, and federal governments levy taxes. Income tax is calculated using accounting information. Good accounting records can help individuals and businesses take advantage of lawful deductions. Without good records, the Internal Revenue Service (IRS) can disallow tax deductions, resulting in a higher tax bill plus interest and penalties.

Accounting Matters

What do businesses such as Amazon.com, Walmart, or even your local sandwich shop across from campus have in common? They all rely upon accounting information to make business decisions. Even if you don't plan on majoring in accounting, the knowledge of accounting helps all businesses plan for the future and evaluate past performance. The skills you learn in this class will help you be a better business professional. Businesses can't function, though, without accountants. That is why a degree in accounting opens so many doors upon graduation. A bachelor's degree in accounting could lead you to several different accounting careers.

You've probably heard of a CPA before. **Certified Public Accountants**, or **CPAs**, are licensed professional accountants who serve the general public. CPAs work for public accounting firms, businesses, government entities, or educational institutions. What does it take to be a CPA? Although requirements vary between states, to be certified in a profession, one must meet the educational and/or experience requirements *and* pass a qualifying exam. **The American Institute of Certified Public Accountants (AICPA) Web site** (<http://www.thiswaytocpa.com>) contains a wealth of information about becoming a CPA, career opportunities, and exam requirements.

Certified Management Accountants, or **CMAs**, are certified professionals who specialize in accounting and financial management knowledge. Generally, CMAs work for a single company. **You can find information about becoming a CMA, how a CMA differs from a CPA, and why employers are recognizing the CMA certification on the Institute of Management Accountants (IMA) Web site** (<http://www.imanet.org>). It's worth spending the time and energy for accountants to get certified—certified accountants generally make 10–15% more than their noncertified colleagues when they enter the workforce.

Studying accounting and becoming certified professionally can lead to a financially secure job. According to Robert Half's *2016 Salary Guide*, the top positions in demand that rely on

Certified Public Accountants (CPAs)

Licensed professional accountants who serve the general public.

What if I want more information about becoming a CPA or CMA?

Certified Management Accountants (CMAs)

Certified professionals who specialize in accounting and financial management knowledge. They typically work for a single company.





accounting skills are controllers, financial analysts, tax accountants, auditors, cost accountants, paraprofessional/bookkeeper, and business systems analysts. How much do these types of accountants make? Exhibit 1-3 provides a snapshot of the earning potential for key positions.

Exhibit 1-3 | Comparison of Accounting Positions

Position	Job Description	Salary Range
Controllers	Compile financial statements, interact with auditors, and oversee regulatory reporting.	\$83,250–\$234,750
Financial analysts	Review financial data and help to explain the story behind the numbers.	\$48,250–\$136,500
Business systems analysts	Use accounting knowledge to create computer systems.	\$46,250–\$131,000
Tax accountants	Help companies navigate tax laws.	\$48,250–\$135,250
Auditors	Perform reviews of companies to ensure compliance to rules and regulations.	\$48,250–\$141,250
Cost accountants	Typically work in a manufacturing business. Help analyze accounting data.	\$46,500–\$121,500
Paraprofessional/Bookkeeper	Record financial transactions and help prepare financial records.	\$43,250–\$63,250

Based on Robert Half's 2016 Salary Guide https://www.roberthalf.com/sites/default/files/Media_Root/images/at-pdfs/robert_half_2016_salary_guide.pdf

Accountants generally work either in public, private, or governmental accounting. Public accounting involves services such as auditing and tax preparation. Well-known public accounting firms include Ernst & Young, Deloitte, PwC, and KPMG. Private accounting involves working for a single company such as Amazon.com, Walmart, or Dell. Other accountants work for the federal or state governments. Wherever accountants work, demand for their services is high. According to the U.S. Bureau of Labor Statistics, employment of accountants and auditors is expected to grow 11% from 2014–2024.

Try It!

Match the accounting terminology to the definitions.

- | | |
|-------------------------------------|---|
| 1. Certified management accountants | a. information system that measures business activities, processes that information into reports, and communicates the results to decision makers |
| 2. Accounting | b. professional accountants who serve the general public |
| 3. Managerial accounting | c. person or business to whom a business owes money |
| 4. Certified public accountants | d. field of accounting that focuses on providing information for internal decision makers |
| 5. Financial accounting | e. professionals who work for a single company |
| 6. Creditor | f. field of accounting that focuses on providing information for external decision makers |

Check your answers online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.



WHAT ARE THE ORGANIZATIONS AND RULES THAT GOVERN ACCOUNTING?

Learning Objective 2

Describe the organizations and rules that govern accounting

Financial Accounting Standards Board (FASB)

The private organization that oversees the creation and governance of accounting standards in the United States.

Securities and Exchange Commission (SEC)

U.S. governmental agency that oversees the U.S. financial markets.

Generally Accepted Accounting Principles (GAAP)

Accounting guidelines, currently formulated by the Financial Accounting Standards Board (FASB); the main U.S. accounting rule book.

Faithful Representation

Providing information that is complete, neutral, and free from error.

Economic Entity Assumption

An organization that stands apart as a separate economic unit.

All professions have regulations. Let's look at the organizations and rules that govern the accounting profession.

Governing Organizations

In the United States, the **Financial Accounting Standards Board (FASB)**, a privately funded organization, oversees the creation and governance of accounting standards. The FASB works with governmental regulatory agencies like the **Securities and Exchange Commission (SEC)**. The SEC is the U.S. governmental agency that oversees the U.S. financial markets. It also oversees those organizations that set standards (like the FASB). The FASB also works with congressionally created groups like the Public Company Accounting Oversight Board (PCAOB) and private groups like the American Institute of CPAs (AICPA), Institute of Management Accountants (IMA), and International Accounting Standards Board (IASB).

Generally Accepted Accounting Principles

The guidelines for accounting information are called **Generally Accepted Accounting Principles (GAAP)**. GAAP is the main U.S. accounting rule book and is currently created and governed by the FASB. In order to use and prepare financial statements, it's important that we understand GAAP. GAAP rests on a conceptual framework that identifies the objectives, characteristics, elements, and implementation of financial statements and creates the acceptable accounting practices. The primary objective of financial reporting is to provide information useful for making investment and lending decisions. To be useful, information must be relevant and have **faithful representation**.¹ Relevant information allows users of the information to make a decision. Information that is faithfully representative is complete, neutral, and free from error. These basic accounting assumptions and principles are part of the foundation for the financial reports that companies present.

The Economic Entity Assumption

The most basic concept in accounting is that of the **economic entity assumption**. An economic (business) entity is an organization that stands apart as a separate economic unit. We draw boundaries around each entity to keep its affairs distinct from those of other entities. An entity refers to one business, separate from its owners.

A business can be organized as a sole proprietorship, partnership, corporation, or limited-liability company (LLC). Exhibit 1-4 summarizes the similarities and differences among the four types of business organizations.

Distinguishing Characteristics and Organization of a Corporation

In this book, we spend most of our time studying accounting for corporations. There are several features that distinguish a corporation from other types of business organizations. Let's look at them now.

Separate Legal Entity A corporation is a business entity formed under state law. The state grants a charter (also called *articles of incorporation*), which is the document that gives the state's permission to form a corporation. This is called an *authorization* because the state "authorizes" or approves the establishment of the corporate entity.

¹ This wording was changed from relevant and reliable by the *Statement of Financial Accounting Concepts No. 8*.


Exhibit 1-4 | Business Organizations

	Sole Proprietorship	Partnership	Corporation	Limited-Liability Company (LLC)
Definition	A business with a single owner	A business with two or more owners and not organized as a corporation	A business organized under state law that is a separate legal entity	A company in which each member is only liable for his or her own actions
Number of owners	One (called the <i>proprietor</i>)	Two or more (called <i>partners</i>)	One or more (called <i>stockholders</i>)	One or more (called <i>members or partners</i>)
Life of the organization	Terminates at owner's choice or death	Terminates at a partner's choice or death	Indefinite	Indefinite
Personal liability of the owner(s) for the business's debts	Owner is personally liable	Partners are personally liable	Stockholders are not personally liable	Members are not personally liable
Taxation	Not separate taxable entities. The owner pays tax on the proprietorship's earnings.	Partnership is not taxed. Instead partners pay tax on their share of the earnings.	Separate taxable entity. Corporation pays tax.	LLC is not taxed. Instead members pay tax on their share of earnings.
Type of business	Small businesses	Professional organizations of physicians, attorneys, and accountants	From small business to large multinational businesses	An alternative to the partnership

A corporation is a distinct entity from a legal perspective. It is an entity that exists apart from its owners, who are called the **stockholders** or *shareholders*. However, the corporation has many of the rights that a person has. For example, a corporation may buy, own, and sell property; enter into contracts; sue; and be sued. Items that the business owns (its assets) and those items that the business has to pay later (its liabilities) belong to the corporation and not to the individual stockholders.

The ownership interest of a corporation is divided into shares of stock. A person becomes a stockholder by purchasing the stock of the corporation. The corporate charter specifies how much stock the corporation is authorized to issue (sell) to the public. Due to this fact, it is usually easier for corporations to raise capital.

Continuous Life and Transferability of Ownership Stockholders may transfer stock as they wish—by selling or trading the stock to another person, giving the stock away, bequeathing it in a will, or disposing of the stock in any other way. Because corporations have continuous lives regardless of changes in the ownership of their stock, the transfer of the stock has no effect on the continuity of the corporation. Sole proprietorships and partnerships, in contrast, end when their ownership changes for any reason. A corporation's life is not dependent on a specific individual's ownership.

No Mutual Agency No mutual agency means that the stockholder of a corporation cannot commit the corporation to a contract unless that stockholder is acting in a different role, such as an officer in the business. Mutual agency of the owners is not present in a corporation as it is in a partnership.

Limited Liability of Stockholders A stockholder has limited liability for the corporation's debts. The most that stockholders can lose is the amount they originally paid for the stock. (Depending on state law, this limited liability would also apply to a limited-liability company

Sole Proprietorship

A business with a single owner.

Partnership

A business with two or more owners and not organized as a corporation.

Corporation

A business organized under state law that is a separate legal entity.

Limited-Liability Company (LLC)

A company in which each member is only liable for his or her own actions.

Stockholder

A person who owns stock in a corporation.



member; however, conversely, sole proprietors and partners are personally liable for the debts of their businesses.)

The combination of limited liability and no mutual agency means that persons can invest unlimited amounts in a corporation with only the fear of losing whatever amount the individual has invested if the business fails. This attractive feature enables a corporation to raise more money than proprietorships and partnerships.

Separation of Ownership and Management Stockholders own the business, but a board of directors—elected by the stockholders—appoints corporate officers to manage the business. Thus, stockholders do not have to disrupt their personal affairs to manage the business.

This separation between stockholders (owners of the corporation) and management may create problems. Corporate officers may decide to run the business for their own benefit rather than for the benefit of the company. Stockholders may find it difficult to lodge an effective protest against management because of the distance between them and the top managers.

Corporate Taxation Corporations are separate taxable entities. They pay a variety of taxes not paid by sole proprietorships or partnerships. Depending on the state in which the organization incorporated and the state(s) in which the corporation operates, the taxes could include one or both of the following:

- Federal and state income taxes. Corporate earnings are subject to double taxation. First, corporations pay their own income tax on corporate income. Then, the stockholders pay personal income tax on the dividends that they receive from corporations. This is different from sole proprietorships and partnerships, which pay no business income tax. Instead, the tax falls solely on the individual owners.
- Annual franchise tax levied by the state. The franchise tax is paid to keep the corporation charter in force and enables the corporation to continue in business.

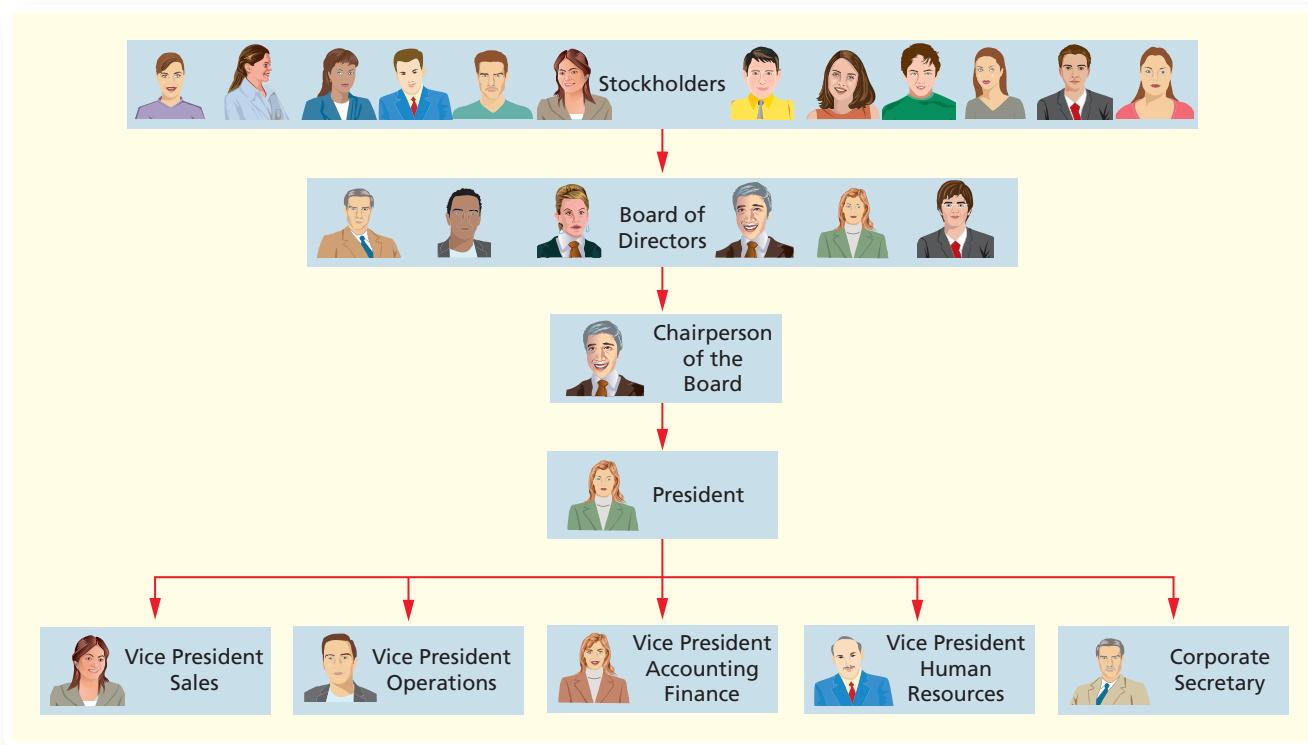
Government Regulation To protect persons who loan money to a corporation or who invest in its stock, states monitor the actions of corporations. Corporations are subjected to more governmental regulation than other forms of business, which is a disadvantage for corporations and can be expensive.

Organization of a Corporation As noted earlier, creation of a corporation begins when its organizers, called the *incorporators*, obtain a charter from the state. The charter includes the authorization for the corporation to issue a certain number of shares of stock, which represent the ownership in the corporation. The incorporators pay fees, sign the charter, and file the required documents with the state. Once the first share of stock is issued, the corporation comes into existence. The incorporators agree to a set of bylaws, which act as the constitution for governing the corporation. Bylaws are the rule book that guides the corporation.

The ultimate control of the corporation rests with the stockholders, who normally receive one vote for each share of stock they own. The stockholders elect the members of the board of directors, which sets policy for the corporation and appoints the officers. The board elects a chairperson, who usually is the most powerful person in the corporation. The board also designates the president, who as chief executive officer manages day-to-day operations. Most corporations also have vice presidents in charge of sales, operations, accounting and finance, and other key areas. Exhibit 1-5 shows the authority structure in a corporation.



Exhibit 1-5 | Structure of a Corporation



In order to demonstrate the economic entity assumption and several other concepts in this chapter, we will use a fictitious corporation—Smart Touch Learning—an e-learning business that specializes in providing online courses in accounting, economics, marketing, and management. This fictitious business will be used often throughout the book.

Assume Sheena Bright started the business by organizing it as a corporation. She contributed cash of \$30,000 in exchange for stock of \$30,000. Following the economic entity assumption, the \$30,000 is recorded separately from Sheena's personal assets, such as her clothing and car. To mix the \$30,000 of business cash with Sheena's personal assets would make it difficult to measure the success or failure of Smart Touch Learning. The economic entity assumption requires that each entity be separate from other businesses and from the owners.

The Cost Principle

The **cost principle** states that acquired assets and services should be recorded at their actual cost (also called *historical cost*). The cost principle means we record a transaction at the amount shown on the receipt—the actual amount paid. Even though the purchaser may believe the price is a bargain, the item is recorded at the price actually paid and not at the “expected” cost. For example, assume our fictitious company Smart Touch Learning purchased land for \$20,000. The business might believe the land is instead worth \$25,000. The cost principle requires that Smart Touch Learning record the land at \$20,000, not \$25,000.

The cost principle also holds that the accounting records should continue reporting the historical cost of an asset over its useful life. Why? Because cost is a reliable measure. Suppose Smart Touch Learning holds the land for six months. During that time land prices rise, and the land could be sold for \$30,000. Should its accounting value—the figure on the books—be the actual cost of \$20,000 or the current market value of \$30,000?

Cost Principle

A principle that states that acquired assets and services should be recorded at their actual cost.



Under international reporting standards, the company would be allowed to restate and report the land at \$30,000. The ability to report some assets and liabilities at their current fair value each year under international standards is a significant difference from U.S. rules.



According to the cost principle, the accounting value of the land would remain at the actual cost of \$20,000.

The Going Concern Assumption

Going Concern Assumption

Assumes that the entity will remain in operation for the foreseeable future.

Another reason for measuring assets at historical cost is the **going concern assumption**. This assumes that the entity will remain in operation for the foreseeable future. Under the going concern assumption, accountants assume that the business will remain in operation long enough to use existing resources for their intended purpose.

The Monetary Unit Assumption

In the United States, we record transactions in dollars because the dollar is the medium of exchange. The value of a dollar changes over time, and a rise in the price level is called *inflation*. During periods of inflation, a dollar will purchase less. But accountants assume that the dollar's purchasing power is stable. This is the basis of the **monetary unit assumption**, which requires that the items on the financial statements be measured in terms of a monetary unit.

Monetary Unit Assumption

The assumption that requires the items on the financial statements to be measured in terms of a monetary unit.

International Financial Reporting Standards

The concepts and principles that we have discussed so far apply to businesses that follow U.S. GAAP and are traded on a U.S. stock exchange, such as the New York Stock Exchange. The SEC requires that U.S. businesses follow U.S. GAAP. Companies who are incorporated in or do significant business in another country might be required to publish financial statements using **International Financial Reporting Standards (IFRS)**, which are published by the **International Accounting Standards Board (IASB)**. IFRS is a set of global accounting standards that are used by more than 116 nations. They are generally less specific and based more on principle than U.S. GAAP. IFRS leaves more room for professional judgment. For example, unlike U.S. GAAP, IFRS allows periodic revaluation of certain assets and liabilities to restate them to market value, rather than keeping them at historical cost. At one point in time it was thought that the SEC would endorse IFRS. However, the SEC has backed away from this strategy and is currently considering whether a single set of global accounting standards is achievable.

Ethics in Accounting and Business

Ethical considerations affect accounting. Investors and creditors need relevant and faithfully representative information about a company that they are investing in or lending money to. Companies want to be profitable and financially strong to attract investors and attempt to present their financial statements in a manner that portrays the business in the best possible way. Sometimes these two opposing viewpoints can cause conflicts of interest. For example, imagine a company that is facing a potential million-dollar lawsuit due to a defective product. The company might not want to share this information with investors because it would potentially hurt the business's profitability. On the other hand, investors would want to know about the pending lawsuit so that they could make an informed decision about investing in the business. To handle these conflicts of interest and to provide reliable information, the SEC requires publicly held companies to have their financial statements audited by independent accountants. An **audit** is an examination of a company's financial statements and records. The independent accountants then issue an opinion that states whether the financial statements give a fair picture of the company's financial situation.

The vast majority of accountants do their jobs professionally and ethically, but we often don't hear about them. Unfortunately, only those who cheat make the headlines. In recent years, we have seen many accounting scandals.

Audit

An examination of a company's financial statements and records.



In response to the Enron and WorldCom reporting scandals, the U.S. government took swift action. It passed the **Sarbanes-Oxley Act (SOX)**, intended to curb financial scandals. SOX requires management to review internal control and take responsibility for the accuracy and completeness of their financial reports. In addition, SOX made it a criminal offense to falsify financial statements. The Sarbanes-Oxley Act also created a new watchdog agency, the Public Company Accounting Oversight Board (PCAOB), to monitor the work of independent accountants who audit public companies. More recent scandals, such as the Bernie Madoff scandal in which Mr. Madoff pleaded guilty to defrauding thousands of investors by filing falsified trading reports, have further undermined the public's faith in financial reporting. This may result in more legislation that will influence future reporting.

Sarbanes-Oxley Act (SOX)

Requires management to review internal control and take responsibility for the accuracy and completeness of their financial reports.

Try It!

Match the accounting terminology to the definitions.

- | | |
|--------------------------------|--|
| 7. Cost principle | a. oversees the creation and governance of accounting standards in the United States |
| 8. GAAP | b. requires an organization to be a separate economic unit |
| 9. Faithful representation | c. oversees U.S. financial markets |
| 10. SEC | d. states that acquired assets and services should be recorded at their actual cost |
| 11. FASB | e. creates International Financial Reporting Standards |
| 12. Monetary unit assumption | f. the main U.S. accounting rule book |
| 13. Economic entity assumption | g. assumes that an entity will remain in operation for the foreseeable future |
| 14. Going concern assumption | h. assumes that items on the financial statements are recorded in a monetary unit |
| 15. IASB | i. requires information to be complete, neutral, and free from material error |

Check your answers online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercises S1-2 through S1-5. [Pearson MyLab Accounting](#)

WHAT IS THE ACCOUNTING EQUATION?

The basic tool of accounting is the **accounting equation**. It measures the resources of a business (what the business owns or has control of) and the claims to those resources (what the business owes to creditors and to the owners). The accounting equation is made up of three parts—assets, liabilities, and equity—and shows how these three parts are related. Assets appear on the left side of the equation, and the liabilities and equity appear on the right side.

$$\boxed{\text{Assets} = \text{Liabilities} + \text{Equity}}$$

Remember, the accounting equation is an equation—so the left side of the equation always equals the right side of the equation.

Learning Objective 3

Describe the accounting equation and define assets, liabilities, and equity

Accounting Equation

The basic tool of accounting, measuring the resources of the business (what the business owns or has control of) and the claims to those resources (what the business owes to creditors and to the owners).
 $\text{Assets} = \text{Liabilities} + \text{Equity}$.



Example: If a business has assets of \$230,000 and liabilities of \$120,000, its equity must be \$110,000 ($\$230,000 - \$120,000$).

$$\boxed{\begin{aligned} \text{Assets} &= \text{Liabilities} + \text{Equity} \\ \$230,000 &= \$120,000 + ? \\ \$230,000 &= \$120,000 + \$110,000 \end{aligned}}$$

Assets

Assets

Economic resources that are expected to benefit the business in the future. Something the business owns or has control of.

Liabilities

Debts that are owed to creditors.

Equity

The owners' claims to the assets of the business.

Contributed Capital

Owner contributions to a corporation.

Revenues

Amounts earned from delivering goods or services to customers.

Expenses

The costs of selling goods or services.

Dividend

A distribution of a corporation's earnings to stockholders.

Common Stock

Represents the basic ownership of a corporation.

Retained Earnings

Equity earned by profitable operations of a corporation that is not distributed to stockholders.

An **asset** is an economic resource that is expected to benefit the business in the future. Assets are something of value that the business owns or has control of. Cash, Merchandise Inventory, Furniture, and Land are examples of assets.

Liabilities

Claims to those assets come from two sources: liabilities and equity. **Liabilities** are debts that are owed to creditors. Liabilities are something the business owes and represent the creditors' claims on the business's assets. For example, a creditor who has loaned money to a business has a claim to some of the business's assets until the business pays the debt. Many liabilities have the word *payable* in their titles. Examples include Accounts Payable, Notes Payable, and Salaries Payable.

Equity

The owners of a corporation are referred to as stockholders (also called *shareholders*). The owners' claims to the assets of the business are called **equity** (also called *stockholders' equity*). Equity represents the amount of assets that are left over after the company has paid its liabilities. It is the company's net worth.

Equity increases with owner contributions and revenues. Owner contributions to a corporation are referred to as **contributed capital**. A stockholder can contribute cash or other assets (such as equipment) to the business and receive capital. Equity is also increased by revenues. **Revenues** are earnings that result from delivering goods or services to customers. Examples of revenues are Sales Revenue, Service Revenue, and Rent Revenue.

Equity decreases with expenses and distributions to owners. **Expenses** are the costs of selling goods or services. Expenses are the opposite of revenues and, therefore, decrease equity. Examples of expenses are Rent Expense, Salaries Expense, Advertising Expense, and Utilities Expense.

A profitable corporation may make distributions to stockholders in the form of **dividends**. Dividends can be paid in the form of cash, stock, or other property. Dividends are not expenses. A corporation may or may not make dividend payments to the stockholders. Dividends are the opposite of owner contributions and, therefore, decrease equity.

Equity consists of two main components: contributed capital and retained earnings. Contributed capital (also called *paid-in capital*) is the amount contributed to the corporation by its owners (the stockholders). The basic element of contributed capital is stock, which the corporation issues to the stockholders as evidence of their ownership. **Common stock** represents the basic ownership of every corporation.

Retained earnings is the equity earned by profitable operations that is not distributed to stockholders. There are three types of events that affect retained earnings: dividends, revenues, and expenses. Dividends represent decreases in retained earnings through the distribution of cash, stock, or other property to stockholders. Revenues are increases in retained earnings from delivering goods or services to customers. Revenues are earnings. For example, if Smart Touch Learning provided e-learning services and earned \$5,500 of revenue, the business's retained earnings increased by \$5,500. Expenses are the decreases in



retained earnings that result from operations. For example, Smart Touch Learning paid salaries of \$1,200 to its employees, and that is an expense that decreases retained earnings.

The accounting equation can now be expanded to show the components of equity.

$$\text{ASSETS} = \left\{ \begin{array}{c} \text{LIABILITIES} + \\ \text{Contributed Capital} + \text{Retained Earnings} \\ \text{Common Stock} - \text{Dividends} + \text{Revenues} - \text{Expenses} \end{array} \right\}$$

Businesses strive for net income. When revenues are greater than expenses, the result of operations is a profit or **net income**. When expenses are greater than revenues, the result is a **net loss**.

Net Income

The result of operations that occurs when total revenues are greater than total expenses.

Net Loss

The result of operations that occurs when total expenses are greater than total revenues.

Try It!

16. Using the expanded accounting equation, solve for the missing amount.

Assets	\$ 71,288
Liabilities	2,260
Common Stock	?
Dividends	14,420
Revenues	53,085
Expenses	28,675

Check your answer online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercises S1-6 through S1-8. [Pearson MyLab Accounting](#)

HOW DO YOU ANALYZE A TRANSACTION?

Accounting is based on actual transactions. A **transaction** is any event that affects the financial position of the business *and* can be measured with faithful representation. Transactions affect what the company has (assets), owes (liabilities), and/or its net worth (equity). Many events affect a company, including economic booms and recessions. Accountants, however, do not record the effects of those events. An accountant records only those events that have dollar amounts that can be measured reliably, such as the purchase of a building, a sale of merchandise, and the payment of rent.

Transaction Analysis for Smart Touch Learning

To illustrate accounting for a business, we'll use Smart Touch Learning, the business introduced earlier. We'll account for the transactions of Smart Touch Learning during November 2018 and show how each transaction affects the accounting equation.

Learning Objective 4

Use the accounting equation to analyze transactions

Transaction

An event that affects the financial position of the business and can be measured with faithful representation.



Transaction 1—Stockholder Contribution

Assume Sheena Bright contributes \$30,000 cash to Smart Touch Learning, a corporation, in exchange for stock. The e-learning business receives \$30,000 cash and issues common stock to Sheena Bright. The effect of this transaction on the accounting equation of the business is as follows:

ASSETS	=	LIABILITIES + EQUITY
Cash		Contributed Capital
(1) +30,000		Common Stock +30,000

Let's take a close look at the transaction above following these steps:

Step 1: Identify the accounts and the account type. Each transaction must affect at least two accounts but could affect more than two. The two accounts involved in this transaction are *Cash (Asset)* and *Common Stock (Equity)*.

Step 2: Decide if each account increases or decreases. Remember to always view this from the *business's* perspective, not from the stockholders' or customers' perspective. *Cash increases*. The business has more cash than it had before. *Common Stock increases*. The business received a \$30,000 contribution and issued stock.

Step 3: Determine if the accounting equation is in balance. For each transaction, the amount on the left side of the equation must equal the amount on the right side. $\$30,000 = \$30,000$

Transaction 2—Purchase of Land for Cash

The business purchases land for an office location, paying cash of \$20,000. This transaction affects the accounting equation of Smart Touch Learning as follows:

ASSETS	=	LIABILITIES + EQUITY
Cash + Land		Contributed Capital
Bal. \$30,000		+ Common Stock
(2) -20,000 +20,000		\$30,000
Bal. \$10,000 + \$20,000		\$30,000

Let's review the transaction using the steps we learned:

Step 1: Identify the accounts and the account type. The two accounts involved are *Cash (Asset)* and *Land (Asset)*.

Step 2: Decide if each account increases or decreases. *Cash decreases*. The business paid cash and therefore has less cash. *Land increases*. The business now has land.

Step 3: Determine if the accounting equation is in balance. $\$10,000 + \$20,000 = \$30,000$



Transaction 3—Purchase of Office Supplies on Account

Smart Touch Learning buys office supplies on account (credit), agreeing to pay \$500 within 30 days. This transaction increases both the assets and the liabilities of the business as follows:

ASSETS			LIABILITIES	EQUITY
Cash	Office Supplies	Land		
Bal. \$10,000		+ \$20,000	Accounts Payable	Contributed Capital Common Stock \$30,000
(3) +500			+500	+500
Bal. \$10,000	+ \$500	+ \$20,000	\$500	+ \$30,000

Step 1: Identify the accounts and the account type. The two accounts involved are *Office Supplies (Asset)* and *Accounts Payable (Liability)*. Office Supplies is an asset, not an expense, because the supplies are something of value that the company has. The office supplies aren't used up yet, but will be in the future. The liability created by purchasing "on account" is an **Accounts Payable**, which is a short-term liability that will be paid in the future. A payable is always a liability.

Accounts Payable

A short-term liability that will be paid in the future.

Step 2: Decide if each account increases or decreases. *Office Supplies increases.* The business now has more office supplies than it had before. *Accounts Payable increases.* The business now owes more debt than it did before.

Step 3: Determine if the accounting equation is in balance. $\$10,000 + \$500 + \$20,000 = \$500 + \$30,000$

Notice how the steps help when analyzing transactions. It's important that, as you are learning, you use the steps to complete the transactions. Moving forward, try writing the steps out yourself before looking at the transaction analysis.

Transaction 4—Earning of Service Revenue for Cash

Smart Touch Learning earns service revenue by providing training services for clients. The business earns \$5,500 of revenue and collects this amount in cash. The effect on the accounting equation is an increase in Cash and an increase in Service Revenue as follows:

ASSETS			LIABILITIES	EQUITY
Cash	Office Supplies	Land		
Bal. \$10,000	+ \$500	+ \$20,000	Accounts Payable	Contributed Capital + Retained Earnings
(4) +5,500			\$500	Common Stock + Service Revenue
Bal. \$15,500	+ \$500	+ \$20,000	\$500	+ \$30,000 + 5,500

A revenue transaction grows the business, as shown by the increases in assets and equity.



Transaction 5—Earning of Service Revenue on Account

Smart Touch Learning performs a service for clients who do not pay immediately. The business receives the clients' promise to pay \$3,000 within one month. This promise is an asset, an **Accounts Receivable**, because the business expects to collect the cash in the future. In accounting, we say that Smart Touch Learning performed this service *on account*. It is in performing the service (doing the work), not collecting the cash, that the company *earns* the revenue. As in Transaction 4, increasing revenue increases equity. Smart Touch Learning records the earning of \$3,000 of revenue on account as follows:

ASSETS				=	LIABILITIES +		EQUITY	
Cash	+	Accounts Receivable	Office Supplies		Accounts Payable	+	Common Stock	Contributed Capital + Retained Earnings
Bal. \$15,500					\$500		\$30,000	Service Revenue
(5)		+3,000						+3,000
Bal. \$15,500	+	\$3,000	+	\$500			\$30,000	+ \$8,500
					\$500			

The term *on account* can be used to represent either *Accounts Receivable* or *Accounts Payable*. If the business will be receiving cash in the future, the company will record an *Accounts Receivable*. If the business will be paying cash in the future, the company will record an *Accounts Payable*.

Transaction 6—Payment of Expenses with Cash

The business pays \$3,200 in cash expenses: \$2,000 for office rent and \$1,200 for employee salaries. The effects on the accounting equation are as follows:

ASSETS				=	LIABILITIES + EQUITY			
Cash	+	Accounts Receivable	Office Supplies		Accounts Payable	+	Common Stock	Contributed Capital + Retained Earnings
Bal. \$15,500	+				\$500		\$30,000	Service Revenue
(6) -3,200								Rent Expense - Salaries Expense
Bal. \$12,300	+	\$3,000	+	\$500			\$30,000	+ \$8,500 - \$2,000 - \$1,200
					\$500			

Expenses have the opposite effect of revenues. Expenses shrink the business, as shown by the decreased balances of assets and equity. Each expense is recorded separately. We record the cash payment in a single amount for the sum of the expenses: \$3,200 (\$2,000 + \$1,200). Notice that the accounting equation remains in balance ($\$12,300 + \$3,000 + \$500 + \$20,000 = \$500 + \$30,000 + \$8,500 - \$2,000 - \$1,200$).

Transaction 7—Payment on Account (Accounts Payable)

The business pays \$300 to the store from which it purchased office supplies in Transaction 3. In accounting, we say that the business pays \$300 *on account*. The effect on



the accounting equation is a decrease in Cash and a decrease in Accounts Payable as shown here:

ASSETS				=	LIABILITIES +	EQUITY			
					Contributed Capital	+ Retained Earnings			
Cash	+	Accounts Receivable	Office Supplies	+ Land	Accounts Payable	Common Stock	Service Revenue	Rent Expense	- Salaries Expense
Bal. \$12,300		\$3,000	\$500	+ \$20,000	\$500	\$30,000	\$8,500	-\$2,000	-\$1,200
(7) -300					-300				
Bal. \$12,000		\$3,000	\$500	+ \$20,000	\$200	\$30,000	\$8,500	-\$2,000	-\$1,200

The payment of cash on account has no effect on the amount of Office Supplies (Asset). Smart Touch Learning has not increased the amount of its office supplies; instead, it is paying off a liability (Accounts Payable decreased \$300) with cash (Cash decreased \$300). **To record an increase to Office Supplies, in this transaction, would be accounting for the purchase of office supplies twice.** We have already recorded the purchase of office supplies in Transaction 3; in this transaction, we are now ready to record only the payment on account.

Transaction 8—Collection on Account (Accounts Receivable)

In Transaction 5, the business performed services for clients on account. Smart Touch Learning now collects \$2,000 from a client. We say that Smart Touch Learning collects the cash *on account*. The business will record an increase in the asset Cash. Should it also record an increase in Service Revenue? No, because the business already recorded the revenue when it earned the revenue in Transaction 5. The phrase “collect cash on account” means to record an increase in Cash and a decrease in Accounts Receivable. Accounts Receivable is decreased because the \$2,000 that the business was to collect at some point in the future is being collected today. The effect on the accounting equation is as follows:

ASSETS				=	LIABILITIES +	EQUITY			
					Contributed Capital	+ Retained Earnings			
Cash	+	Accounts Receivable	Office Supplies	+ Land	Accounts Payable	Common Stock	Service Revenue	Rent Expense	- Salaries Expense
Bal. \$12,000		\$3,000	\$500	+ \$20,000	\$200	\$30,000	\$8,500	-\$2,000	-\$1,200
(8) +2,000					-2,000				
Bal. \$14,000		\$1,000	\$500	+ \$20,000	\$200	\$30,000	\$8,500	-\$2,000	-\$1,200

This transaction is recorded as an increase in one asset (Cash) and a decrease in another asset (Accounts Receivable). Is the accounting equation still in balance? Yes. **As long as you record an increase and decrease of the same amount on one side of the accounting equation, the accounting equation remains in balance.** In other words, total Assets, Liabilities, and Equity are all unchanged from the preceding total. Why? Because Smart Touch Learning exchanged one asset (Cash) for another (Accounts Receivable), causing a zero effect on the total amount of assets in the accounting equation ($+$2,000 - \$2,000 = \$0$).

Why didn't we record an increase to Office Supplies? We are making a payment for the supplies; wouldn't we increase Office Supplies and decrease Cash?



Don't I have to put an amount on the left side of the accounting equation and an amount on the right side of the accounting equation for the equation to balance?





Transaction 9—Payment of Cash Dividend

Smart Touch Learning distributes a \$5,000 cash dividend to the stockholder, Sheena Bright. The effect on the accounting equation is:

ASSETS				=	LIABILITIES +	EQUITY		
					Contributed Capital +	Retained Earnings		
Cash	+ Accounts Receivable	+ Office Supplies	+ Land		Accounts Payable	Common Stock	- Dividends	+ Service Revenue - Rent Expense - Salaries Expense
Bal. \$14,000	+ \$1,000	+ \$500	+ \$20,000	(9) -5,000	\$200	\$30,000	+ \$8,500	- \$2,000 - \$1,200
Bal. \$ 9,000	+ \$1,000	+ \$500	+ \$20,000		\$200	\$30,000	- \$5,000	+ \$8,500 - \$2,000 - \$1,200

The dividend decreases the business's cash and equity. *Dividends do not represent an expense because they are not related to the earning of revenue. Therefore, dividends do not affect the business's net income or net loss.*

A summary of all nine transactions for Smart Touch Learning is presented in Exhibit 1-6.

Exhibit 1-6 | Analysis of Transactions, Smart Touch Learning

1. Smart Touch Learning received \$30,000 cash and issued common stock to Sheena Bright, stockholder.
2. Paid \$20,000 cash for land.
3. Bought \$500 of office supplies on account.
4. Received \$5,500 cash from clients for service revenue earned.
5. Performed services for clients on account, \$3,000.
6. Paid cash expenses: office rent, \$2,000; employee salaries, \$1,200.
7. Paid \$300 on the accounts payable created in Transaction 3.
8. Collected \$2,000 on the accounts receivable created in Transaction 5.
9. Paid cash dividends of \$5,000 to stockholder, Sheena Bright.

ASSETS				=	LIABILITIES +	EQUITY		
					Contributed Capital +	Retained Earnings		
Cash	+ Accounts Receivable	+ Office Supplies	+ Land		Accounts Payable	Common Stock	- Dividends	+ Service Revenue - Rent Expense - Salaries Expense
(1) +30,000					+30,000			
(2) -20,000						\$30,000		
Bal. \$10,000								
(3)		+500			+500			
Bal. \$10,000		+ \$500	+ \$20,000		\$500	+ \$30,000		
(4) +5,500					\$500	+ \$30,000	+ 5,500	
Bal. \$15,500		+ \$500	+ \$20,000		\$500	+ \$30,000	+ \$5,500	
(5) +3,000					\$500	+ \$30,000	+ 3,000	
Bal. \$15,500	+ \$3,000	+ \$500	+ \$20,000		\$500	+ \$30,000	+ \$8,500	
(6) -3,200					\$500	+ \$30,000		-2,000 -1,200
Bal. \$12,300	+ \$3,000	+ \$500	+ \$20,000		\$500	+ \$30,000	+ \$8,500	- \$2,000 - \$1,200
(7) -300					-300			
Bal. \$12,000	+ \$3,000	+ \$500	+ \$20,000		\$200	+ \$30,000	+ \$8,500	- \$2,000 - \$1,200
(8) +2,000		-2,000			\$200	+ \$30,000	+ \$8,500	- \$2,000 - \$1,200
Bal. \$14,000	+ \$1,000	+ \$500	+ \$20,000		\$200	+ \$30,000	+ \$8,500	- \$2,000 - \$1,200
(9) -5,000					\$200	+ \$30,000	- 5,000	
Bal. \$ 9,000	+ \$1,000	+ \$500	+ \$20,000		\$200	+ \$30,000	+ \$8,500	- \$2,000 - \$1,200
\$30,500								
\$30,500								



Try It!

17. Using the information provided, analyze the effects of Lawlor Lawn Service's transactions on the accounting equation.

May 1	Received \$1,700 and issued common stock.
May 3	Purchased a mower on account, \$1,440.
May 5	Performed lawn services for client on account, \$200.
May 17	Paid \$60 cash for gas used in mower.
May 28	Paid cash dividends of \$300.

Check your answers online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercises S1-9 and S1-10. **Pearson MyLab Accounting**

HOW DO YOU PREPARE FINANCIAL STATEMENTS?

We have now recorded Smart Touch Learning's transactions, and they are summarized in Exhibit 1-6. Notice how total assets equal total liabilities plus equity ($\$30,500 = \$30,500$).

But a basic question remains: How will people actually use this information? The information in Exhibit 1-6 does not tell a lender whether Smart Touch Learning can pay off a loan. The exhibit does not tell whether the business is profitable.

To address these important questions, we need financial statements. **Financial statements** are business documents that are used to communicate information needed to make business decisions. Four financial statements are prepared. These statements are prepared in the order listed in Exhibit 1-7.

Because financial statements are used to communicate information, they always include a heading with important details about the reports. The standard 3-line heading tells the reader of the statement who, what, and when—the name of the business, the title of the report, and the specific date or time period of the report.

Exhibit 1-7 | Financial Statements

Financial Statement	Information Provided and Purpose	How Is It Prepared?
Income statement	Provides information about profitability for a particular period for the company.	$\text{Revenues} - \text{Expenses} = \text{Net Income or Net Loss}$
Statement of retained earnings	Informs users about how much of the earnings were kept and reinvested in the company.	$\begin{aligned} &\text{Retained Earnings, Beginning} \\ &+ \text{Net Income or} - \text{Net Loss for the period} \\ &- \text{Dividends for the period} \\ &= \text{Retained Earnings, Ending} \end{aligned}$
Balance sheet	Provides valuable information to financial statement users about economic resources the company has (assets) as well as debts the company owes (liabilities). Allows decision makers to determine their opinion about the financial position of the company.	$\text{Assets} = \text{Liabilities} + \text{Stockholders' Equity}$
Statement of cash flows	Reports on a business's cash receipts and cash payments for a period of time.	$\begin{aligned} &\text{Cash flows from operating activities} \\ &\text{Cash flows from investing activities} \\ &\text{Cash flows from financing activities} \end{aligned}$

Learning Objective 5

Prepare financial statements

Financial Statements

Business documents that are used to communicate information needed to make business decisions.



Income Statement

Income Statement

Reports the *net income* or *net loss* of the business for a specific period.

Let's start by reviewing the **income statement**. The income statement (also called the *statement of earnings*) presents a summary of a business entity's revenues and expenses for a period of time, such as a month, quarter, or year. The income statement tells us whether the business enjoyed net income or suffered a net loss. Remember:

- Net income means total revenues are greater than total expenses.
- Net loss means total expenses are greater than total revenues.

It's important to remember that the only two types of accounts that are reported on the income statement are revenues and expenses. Exhibit 1-8 shows the income statement for Smart Touch Learning. Every income statement contains similar information.

Exhibit 1-8 | Income Statement

SMART TOUCH LEARNING Income Statement Month Ended November 30, 2018		
Revenues:		
Service Revenue		\$ 8,500
Expenses:		
Rent Expense	\$ 2,000	
Salaries Expense	1,200	
Total Expenses		3,200
Net Income		\$ 5,300

The heading includes the name of the business, the title of the statement, and the time period. An income statement always represents a period of time, for example, a month or year.

The revenue accounts are always listed first and then subtotalized if necessary.

Each expense account is listed separately from largest to smallest and then subtotalized if necessary.

Net income is calculated as total revenues minus total expenses.

Statement of Retained Earnings

Statement of Retained Earnings

Reports how the company's retained earnings balance changed from the beginning to the end of the period.

The next statement prepared is the **statement of retained earnings**. The statement of retained earnings shows the changes in retained earnings for a business entity during a time period, such as a month, quarter, or year.

Review the statement of retained earnings for Smart Touch Learning in Exhibit 1-9. Notice that the net income for the month is the net income that was calculated on the income statement. This is the main reason why the income statement is prepared before the statement of retained earnings. The net income (or net loss) must first be calculated on the income statement and then carried to the statement of retained earnings.



Exhibit 1-9 | Statement of Retained Earnings

SMART TOUCH LEARNING	
Statement of Retained Earnings	
Month Ended November 30, 2018	
Retained Earnings, November 1, 2018	\$ 0
Net income for the month	5,300
	<u>5,300</u>
Dividends	(5,000)
	<u>(5,000)</u>
Retained Earnings, November 30, 2018	<u><u>\$ 300</u></u>

The heading includes the name of the business, the title of the statement, and the time period. A statement of retained earnings always represents a period of time.

The beginning retained earnings is \$0 because Smart Touch Learning began this month; therefore, it had no beginning retained earnings. The beginning retained earnings will always be the ending retained earnings from the previous time period.

Net income is transferred from the income statement.

The dividends are subtracted from retained earnings. If there had been a net loss rather than a net income, this would also be subtracted.

Balance Sheet

The **balance sheet** (also called the *statement of financial position*) lists a business entity's assets, liabilities, and stockholders' equity as of a specific date, usually the end of a month, quarter, or year. **The balance sheet is a snapshot of the entity. An investor or creditor can quickly assess the overall health of a business by viewing the balance sheet.**

Review the balance sheet for Smart Touch Learning in Exhibit 1-10. Every balance sheet is prepared in a similar manner.

Balance Sheet

Reports on the assets, liabilities, and stockholders' equity of the business as of a specific date.

What does the balance sheet tell an investor or creditor?



Exhibit 1-10 | Balance Sheet

SMART TOUCH LEARNING			
Balance Sheet			
November 30, 2018			
Assets		Liabilities	
Cash	\$ 9,000	Accounts Payable	\$ 200
Accounts Receivable	1,000		
Office Supplies	500		
Land	20,000		
		Stockholders' Equity	
		Common Stock	30,000
		Retained Earnings	300
		Total Stockholders' Equity	<u>30,300</u>
		Total Liabilities and Stockholders' Equity	<u><u>\$ 30,500</u></u>
Total Assets	\$ 30,500		

Each asset account is listed separately and then totaled. Cash is always listed first.

The heading again shows the name of the business and the title of the financial statement. Notice that the date is different. The balance sheet shows the date as a specific date, not a period of time.

Liabilities are listed separately and then totaled. Liabilities that are to be paid first are listed first.

Retained Earnings is taken directly from the statement of retained earnings.

The balance sheet must always balance.
Assets = Liabilities + Stockholders' Equity



TYING IT ALL TOGETHER

At the beginning of the chapter, we introduced **Starbucks Corporation** as a leading retailer in the specialty coffee market. Starbucks purchases and roasts high-quality coffees and sells other beverages (such as tea). In addition, Starbucks sells a variety of fresh food items including snack offerings.

What type of asset accounts would Starbucks have and what financial statement would those assets be reported on?

Starbucks reports many assets on its balance sheet, including the following: Cash; Account Receivable; Inventories; and Property, Plant, and Equipment.

If Starbucks owed money to a vendor, how would this be reported on its financial statements?

Money owed to a vendor is reported on the balance sheet as Accounts Payable. As of September 27, 2015, Starbucks Corporation reported \$684.2 million of Accounts Payable. This represents an increase in debt from the previous year of \$533.7 million.

How does Starbucks earn revenue and where would this be reported on its financial statements?

Starbucks reports three main revenue sources on its income statement: revenue received from operating stores owned by the company, revenue received from stores licensed to sell Starbucks products, and revenue from consumer packaged goods such as packaged coffee and other beverages sold at grocery stores. The largest source of revenue for Starbucks comes from its company-operated stores and represents 79% of total revenue.

What type of expenses might Starbucks have and what financial statement would this be reported on?

Starbucks reports its expenses on the income statement. Its largest expense for the year ended September 27, 2015, is Cost of Sales at \$7,787.5 million (i.e., the cost to purchase the items it sells). The income statement also includes store operating expenses of \$5,411.1 million for costs (such as utilities, salaries, and benefits for employees). Starbucks also reports \$522.4 million in other operating expenses for the year ending September 27, 2015. Other operating expenses might include items such as advertising expenses.

When you are preparing the financial statements, start by identifying which account goes on which statement. Each account will only go on one statement, except for Retained Earnings and Cash. For example, Service Revenue is only reported on the income statement. Liabilities, such as Accounts Payable, are only reported on the balance sheet. Cash and Retained Earnings appear on two statements. Cash is reported on the balance sheet and statement of cash flows, and Retained Earnings is reported on the statement of retained earnings and balance sheet.

Statement of Cash Flows

The **statement of cash flows** reports the cash coming in (positive amounts) and the cash going out (negative amounts) during a period. It only reports transactions that involve cash because it reports the net increase or decrease in *cash* during the period and the ending *cash* balance. **If a transaction does not involve cash, such as the purchase of supplies on account, it will not be reported on the statement of cash flows.**

The statement of cash flows is divided into three distinct sections: operating, investing, and financing. *Operating activities* involve cash receipts for services and cash payments for expenses. *Investing activities* include the purchase and sale of land and equipment for cash. *Financing activities* include cash contributions by stockholders and cash dividends paid to the stockholders.

Take a look at the statement of cash flows for Smart Touch Learning (Exhibit 1-11). Notice the important items that the statement of cash flows contains.

Would the purchase of supplies on account be reported on the statement of cash flows?



Statement of Cash Flows
Reports on a business's cash receipts and cash payments for a specific period.

**Exhibit 1-11 | Statement of Cash Flows**

SMART TOUCH LEARNING Statement of Cash Flows Month Ended November 30, 2018		
Cash flows from operating activities:		
Receipts:		
Collections from customers	\$ 7,500	
Payments:		
To suppliers	\$ (2,300)	
To employees	(1,200)	(3,500)
Net cash provided by operating activities		4,000
Cash flows from investing activities:		
Acquisition of land	(20,000)	
Net cash used by investing activities		(20,000)
Cash flows from financing activities:		
Issued common stock	30,000	
Payment of cash dividends	(5,000)	
Net cash provided by financing activities		25,000
Net increase in cash		9,000
Cash balance, November 1, 2018	0	
Cash balance, November 30, 2018		\$ 9,000

The heading includes the name of the business, the title of the statement, and the time period. A statement of cash flows always represents a period of time.

Each dollar amount is calculated by evaluating the cash column on Exhibit 1-6. For example, collections from customers is calculated by adding the cash received from customers in Transaction 4 (\$5,500) plus Transaction 8 (\$2,000).

Operating activities involve cash receipts for services provided and cash payments for expenses paid.

Investing activities include the purchase and sale of land and equipment for cash.

Financing activities include issuance of stock to stockholders and payment of cash dividends.

The ending cash balance must match the cash balance on the balance sheet.

Try It!

18. Using the following information, complete the income statement, statement of retained earnings, and balance sheet for DR Painting for the month of March 2018. The business began operations on March 1, 2018.

Accounts Receivable	\$ 1,400	Salaries Expense	\$ 800
Accounts Payable	1,000	Service Revenue	7,000
Cash	22,300	Office Supplies	1,800
Stock issued during March	40,000	Truck	20,000
Dividends paid during March	1,500	Utilities Expense	200

Check your answers online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.



HOW DO YOU USE FINANCIAL STATEMENTS TO EVALUATE BUSINESS PERFORMANCE?

Learning Objective 6

Use financial statements and return on assets (ROA) to evaluate business performance

Each of the financial statements provides different information about the company to the users of the financial statements. Review Exhibit 1-7 for the information provided and the purpose of each financial statement.

Kohl's Corporation

In this chapter, we have reviewed the transactions and financial statements of Smart Touch Learning, a fictitious company. Now it's time to apply what we have learned to a real-world company. In each chapter, we will review the financial statements of **Kohl's Corporation** to learn how to apply the concepts presented in the chapter to evaluate its business performance. Kohl's Corporation is a moderately-priced retailer of apparel, footwear, accessories, beauty, and home products with more than 1,100 department stores in 49 states. Kohl's has a merchandise mix that includes both national brands (52% of total sales in 2015) and private and exclusive brands (48% of total sales in 2015). Its private brands include Apt. 9, Croft & Barrow, Jumping Beans, SO, and Sonoma Goods for Life.

Take a moment to review the 2015 financial statements for Kohl's Corporation. Visit <http://www.pearsonglobaleditions.com/Sitemap/Horngren/> for a link to Kohl's Corporations's annual report. Let's start by identifying the financial statements that we've discussed in this chapter. The income statement is presented on page F-4 of the annual report and is called the *Consolidated Statements of Income*. Notice that the income statement calculates net income (revenue minus expenses). Kohl's net income for the year ending January 30, 2016, was \$673 (in millions) or \$673,000,000.

The balance sheet is presented on page F-3 of the annual report. Can you find assets, liabilities, and equity? As we have learned in this chapter, Kohl's assets of \$13,606 million are equal to its liabilities and equity, \$13,606 million.

Return on Assets (ROA)

One of the many tools that users of financial statements can use to determine how well a company is performing is the company's **return on assets (ROA)**. Return on assets measures how profitably a company uses its assets. Return on assets is calculated by dividing net income by average total assets. Average total assets is calculated by adding the beginning and ending total assets for the time period and then dividing by two.

DECISIONS

How can individuals make decisions about investing in the stock market?

Lori Cummings just inherited \$10,000 from her grandmother. She has decided that she will invest the money in the stock market. She is thinking about investing in one of her favorite clothing stores. The problem is she can't decide between Kohl's or Target.

How should Lori decide between the companies? What resources should she use?

Solution

Lori should begin by reviewing the financial statements of each business. She can locate them on the companies' Web sites or on the Securities and Exchange Commission's Web site (<http://www.sec.gov/edgar.shtml>). She should review the income statements and compare net income. Which business was more profitable?

She should look at the balance sheets, carefully reviewing each part of the accounting equation. What was the dollar amount of assets? How much debt does the business have? In addition, she could go online and research the individual companies using a Web site such as Yahoo! Finance. These Web sites provide news and information about the company, such as current headlines, key statistics, and industry comparisons.

Lori should also consider diversifying her investment. Diversifying involves investing in more than one company and in a variety of industries and companies of different sizes. Diversification reduces the risk of an investment. Lori should consider investing half of the \$10,000 in a company in a different industry, such as her favorite restaurant or food manufacturer.



$$\text{Return on assets} = \text{Net income} / \text{Average total assets}$$

$$\text{Average total assets} = (\text{Beginning total assets} + \text{Ending total assets}) / 2$$

Let's take a moment to calculate Kohl's return on assets and measure how profitably it uses its assets. On its 2015 income statement, Kohl's reported net income of \$673 million. The corporation reported beginning total assets (found on the balance sheet) of \$14,333 million and ending total assets of \$13,606 million. Kohl's return on assets for 2015 is (all amounts in millions):

$$\begin{aligned}\text{Return on assets} &= \$673 / ((\$14,333 + \$13,606) / 2) \\ &= \$673 / \$13,970* \\ &= 0.0482 = 4.8\%*\end{aligned}$$

*rounded

How do we as an investor know if 4.8% is good or bad? We have to compare the return on assets of competing companies such as **Target Corporation**, TJX Companies, Inc., and J.C. Penney Corporation, Inc. What if we told you that Target Corporation's return on assets was 8.3%? Due to Target's higher ROA, we now know that Target has a stronger return on its assets than does Kohl's. What does this mean? It means that Target produces more profit per every dollar of assets than Kohl's does. As you learn more about accounting, you will explore more financial tools that are available to help investors evaluate a company's performance. Only after an investor looks at the big picture of a company will he or she have a good sense of the company's investment potential.

Try It!

19. Using the following information, calculate the return on assets (ROA).

Net income for November 2018	\$ 5,000
Total assets, November 1, 2018	76,000
Total assets, November 30, 2018	80,250

Check your answer online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercise S1-16. **Pearson MyLab Accounting**

REVIEW

> Things You Should Know

1. Why is accounting important?

- Accounting is the language of business.
- Accounting is used by decision makers including individuals, businesses, investors, creditors, and taxing authorities.
- Accounting can be divided into two major fields: financial accounting and managerial accounting.
- Financial accounting is used by external decision makers, and managerial accounting is used by internal decision makers.
- All businesses need accountants. Accountants work in private, public, and governmental jobs.
- Accountants can be licensed as either a certified public accountant (CPA) or certified management accountant (CMA).

2. What are the organizations and rules that govern accounting?

- Generally Accepted Accounting Principles (GAAP) are the rules that govern accounting in the United States.
- The Financial Accounting Standards Board (FASB) is responsible for the creation and governance of accounting standards.
- Economic entity assumption: Requires an organization to be a separate economic unit such as a sole proprietorship, partnership, corporation, or limited-liability company.
- Cost principle: Acquired assets and services should be recorded at their actual cost.
- Going concern assumption: Assumes that an entity will remain in operation for the foreseeable future.
- Monetary unit assumption: Assumes financial transactions are recorded in a monetary unit.

3. What is the accounting equation?

- $\text{Assets} = \text{Liabilities} + \text{Equity}$
 - Assets: Items the business owns or controls (examples: cash, furniture, land)
 - Liabilities: Items the business owes (examples: accounts payable, notes payable, salaries payable)
 - Equity: Stockholders' claims to the assets through contributed capital and retained earnings (examples: common stock, dividends, revenues, expenses)

4. How do you analyze a transaction?

- A transaction affects the financial position of a business and can be measured with faithful representation.
- Transactions are analyzed using three steps:
 - **Step 1:** Identify the accounts and account type (Asset, Liability, or Equity).
 - **Step 2:** Decide whether each account increases or decreases.
 - **Step 3:** Determine whether the accounting equation is in balance.

5. How do you prepare financial statements?

- Financial statements are prepared in the following order:
 1. Income statement:
 - Reports the net income or net loss of a business for a specific period.
 - $\text{Revenues} - \text{Expenses} = \text{Net Income or Net Loss}$
 2. Statement of retained earnings:
 - Reports on the changes in retained earnings for a specific period.
 - $\text{Beginning Retained Earnings} + \text{Net Income (or} - \text{Net Loss)} - \text{Dividends} = \text{Ending Retained Earnings}$
 3. Balance sheet:
 - Reports on an entity's assets, liabilities, and stockholders' equity as of a specific date.
 - $\text{Assets} = \text{Liabilities} + \text{Stockholders' Equity}$
 4. Statement of cash flows:
 - Reports on a business's cash receipts and cash payments for a specific period.
 - Includes three sections:
 - Cash flows from operating activities: Involves cash receipts for services and cash payments for expenses.
 - Cash flows from investing activities: Includes the purchase and sale of land and equipment for cash.
 - Cash flows from financing activities: Includes cash contributions by stockholders and cash dividends paid to the stockholders.

6. How do you use financial statements to evaluate business performance?

- Income statement evaluates profitability.
- Statement of retained earnings shows the amount of earnings that were kept and reinvested in the company.
- Balance sheet details the economic resources the company has, the debts the company owes, and the company's net worth.
- Statement of cash flows shows the change in cash.
- Return on assets (ROA) = $\text{Net income} / \text{Average total assets}$.

> Check Your Understanding

Check your understanding of the chapter by completing this problem and then looking at the solution. Use this practice to help identify which sections of the chapter you need to study more.

Ron Smith opens an apartment-locator business near a college campus. The company will be named Campus Apartment Locators. During the first month of operations, July 2018, the business completes the following transactions:

- a. Receives a \$35,000 contribution from Ron Smith and issues common stock to Ron Smith.
- b. Purchases \$350 of office supplies on account.
- c. Pays cash of \$30,000 to acquire a lot next to campus.
- d. Locates apartments for clients and receives cash of \$1,900.
- e. Pays \$100 on the accounts payable the business created in Transaction (b).
- f. Pays cash expenses for office rent, \$400, and utilities, \$100.
- g. Pays cash dividends of \$1,200 to stockholders.

Requirements

1. Analyze the preceding transactions in terms of their effects on the accounting equation of Campus Apartment Locators. Use Exhibit 1-6 as a guide. (See Learning Objective 4)
 2. Prepare the income statement, statement of retained earnings, balance sheet, and statement of cash flows of the business after recording the transactions. (See Learning Objective 5)
 3. Calculate the return on assets (ROA). (See Learning Objective 6)

> Solution

Requirement 1

Requirement 2

CAMPUS APARTMENT LOCATORS
Income Statement
Month Ended July 31, 2018

CAMPUS APARTMENT LOCATORS	
Statement of Retained Earnings	
Month Ended July 31, 2018	
Retained Earnings, July 1, 2018	\$ 0
Net income for the month	1,400
	<hr/>
	1,400
Dividends	(1,200)
Retained Earnings, July 31, 2018	\$ 200
	<hr/>

CAMPUS APARTMENT LOCATORS	
Balance Sheet	
July 31, 2018	
Assets	Liabilities
Cash \$ 5,100	Accounts Payable \$ 250
Office Supplies 350	
Land 30,000	Stockholders' Equity
	Common Stock 35,000
	Retained Earnings 200
	Total Stockholders' Equity 35,200
Total Assets \$ 35,450	Total Liabilities and Stockholders' Equity \$ 35,450
	<hr/>

CAMPUS APARTMENT LOCATORS	
Statement of Cash Flows	
Month Ended July 31, 2018	
Cash flows from operating activities:	
Receipts:	
Collections from customers	\$ 1,900
Payments:	
To suppliers (600)	
Net cash provided by operating activities	1,300
Cash flows from investing activities:	
Acquisition of land \$ (30,000)	
Net cash used by investing activities	(30,000)
Cash flows from financing activities:	
Issued common stock 35,000	
Payment of cash dividends (1,200)	
Net cash provided by financing activities	33,800
Net increase in cash	5,100
Cash balance, July 1, 2018	0
Cash balance, July 31, 2018	\$ 5,100
	<hr/>

Requirement 3

Return on assets = Net income / Average total assets

Average total assets = (Beginning total assets + Ending total assets) / 2

Average total assets = (\$0 + \$35,450) / 2 = \$17,725

Return on assets = \$1,400 / \$17,725 = 0.079 = 7.9%*

*rounded

> Key Terms

- | | | |
|---|--|--|
| Accounting (p. 28) | Equity (p. 38) | Managerial Accounting (p. 29) |
| Accounting Equation (p. 37) | Expenses (p. 38) | Monetary Unit Assumption (p. 36) |
| Accounts Payable (p. 41) | Faithful Representation (p. 32) | Net Income (p. 39) |
| Accounts Receivable (p. 42) | Financial Accounting (p. 29) | Net Loss (p. 39) |
| Assets (p. 38) | Financial Accounting Standards Board (FASB) (p. 32) | Partnership (p. 33) |
| Audit (p. 36) | Financial Statements (p. 45) | Retained Earnings (p. 38) |
| Balance Sheet (p. 47) | Generally Accepted Accounting Principles (GAAP) (p. 32) | Return on Assets (ROA) (p. 50) |
| Certified Management Accountants (CMAs) (p. 30) | Going Concern Assumption (p. 36) | Revenues (p. 38) |
| Certified Public Accountants (CPAs) (p. 30) | Income Statement (p. 46) | Sarbanes-Oxley Act (SOX) (p. 37) |
| Common Stock (p. 38) | International Accounting Standards Board (IASB) (p. 36) | Securities and Exchange Commission (SEC) (p. 32) |
| Contributed Capital (p. 38) | International Financial Reporting Standards (IFRS) (p. 36) | Sole Proprietorship (p. 33) |
| Corporation (p. 33) | Liabilities (p. 38) | Statement of Cash Flows (p. 48) |
| Cost Principle (p. 35) | Limited-Liability Company (LLC) (p. 33) | Statement of Retained Earnings (p. 46) |
| Creditor (p. 30) | | Stockholder (p. 33) |
| Dividend (p. 38) | | Transaction (p. 39) |
| Economic Entity Assumption (p. 32) | | |

> Quick Check

Learning Objective 1

1. Accounting is the information system that
 - a. measures business activities.
 - b. communicates the results to decision makers.
 - c. processes information into reports.
 - d. All of the above.

Learning Objective 1

2. Which of the following is not an external user of a business's financial information?
 - a. Taxing authorities
 - b. Customers
 - c. Employees
 - d. Investors
3. International Financial Reporting Standards (IFRS) are currently formulated by the
 - a. Institute of Management Accountants (IMA).
 - b. International Accounting Standards Board (IASB).
 - c. American Institute of Certified Public Accountants (AICPA).
 - d. Financial Accounting Standards Board (FASB).

Learning Objective 2

4. Which type of business organization is owned by only one owner?
- a. Corporation
 - b. Partnership
 - c. Sole proprietorship
 - d. Items a, b, and c are all correct.
5. Which of the following characteristics best describes a corporation?
- a. A business with a single owner
 - b. Is not taxed
 - c. Stockholders not personally liable for entity's debts
 - d. Not a separate taxable entity
6. Which of the following requires accounting information to be complete, neutral, and free from material error?
- a. Faithful representation concept
 - b. Cost principle
 - c. Economic entity assumption
 - d. Going concern assumption
7. At the end of a recent year, Global Cleaning Service, a full-service house and office cleaning service, had total assets of \$3,630 and equity of \$2,280. How much were Global Cleaning Service's liabilities?
- a. \$5,910
 - b. \$3,630
 - c. \$1,350
 - d. \$2,280
8. Consider the overall effects on Global Cleaning Service from selling and performing services on account for \$6,400 and paying expenses totaling \$2,500. What is Global Cleaning Service's net income or net loss?
- a. Net income of \$3,900
 - b. Net loss of \$3,900
 - c. Net income of \$6,400
 - d. Net income of \$8,900
9. Assume that Global Cleaning Service performed cleaning services for a department store on account for \$180. How would this transaction affect Global Cleaning Service's accounting equation?
- a. Increase both assets and liabilities by \$180
 - b. Increase both assets and equity by \$180
 - c. Increase both liabilities and equity by \$180
 - d. Decrease liabilities by \$180, and increase equity by \$180
10. The balance sheet reports the
- a. financial position on a specific date.
 - b. results of operations on a specific date.
 - c. financial position for a specific period.
 - d. results of operations for a specific period.
11. Assume Global Cleaning Service had net income of \$570 for the year. Global Cleaning Service's beginning and ending total assets were \$4,520 and \$4,180, respectively. Calculate Global Cleaning Service's return on assets for the year.
- a. 12.6%
 - b. 13.6%
 - c. 13.1%
 - d. 7.63%

Learning Objective 2**Learning Objective 2****Learning Objective 2****Learning Objective 3****Learning Objective 3****Learning Objective 4****Learning Objective 5****Learning Objective 6**

Check your answers at the end of the chapter.

ASSESS YOUR PROGRESS

> Review Questions

1. What is accounting?
2. Briefly describe the two major fields of accounting.
3. Describe the various types of individuals who use accounting information and how they use that information to make important decisions.
4. What are two certifications available for accountants? Briefly explain each certification.
5. What is the role of the Financial Accounting Standards Board (FASB)?
6. Explain the purpose of Generally Accepted Accounting Principles (GAAP), including the organization currently responsible for the creation and governance of these standards.
7. Describe the similarities and differences among the four different types of business entities discussed in the chapter.
8. A business purchases an acre of land for \$7,400. The current market value is \$7,800, and the land was assessed for property tax purposes at \$7,520. What value should the land be recorded at, and which accounting principle supports your answer?
9. What does the going concern assumption mean for a business?
10. Which concept states that accounting information should be complete, neutral, and free from material error?
11. Financial statements in the United States are reported in U.S. dollars. What assumption supports this statement?
12. Explain the role of the International Accounting Standards Board (IASB) in relation to International Financial Reporting Standards (IFRS). Name three countries which predominantly follow the IFRS system today.
13. What is the accounting equation? Briefly explain each of the three parts.
14. How does retained earnings increase? What are the two ways that retained earnings decreases?
15. How is net income calculated? Define *revenues* and *expenses*.
16. What are the steps used when analyzing a business transaction?
17. List the four financial statements. Briefly describe each statement.
18. What is the calculation for ROA? Explain what ROA measures.

Short Exercises

Learning Objective 1

S1-1 Identifying users of accounting information

For each user of accounting information, identify if the user would use financial accounting or managerial accounting.

- | | |
|----------------------------|-----------------------------|
| a. investor | e. controller |
| b. banker | f. stockholder |
| c. IRS | g. human resources director |
| d. manager of the business | h. creditor |

S1-2 Determining organizations that govern accounting

Suppose you are starting a business, Wholly Shirts, to imprint logos on T-shirts. In organizing the business and setting up its accounting records, you take your information to a CPA to prepare financial statements for the bank. Name the organization that governs the majority of the guidelines that the CPA will use to prepare financial statements for Wholly Shirts. What are those guidelines called?

Learning Objective 2**S1-3 Identifying types of business organizations**

Chloe Michaels plans on opening Chloe Michaels Floral Designs. She is considering the various types of business organizations and wishes to organize her business with unlimited life and wants owners of the business to not be held personally liable for the business's debts. Additionally, Chloe wants the business to be a separate taxable entity. Which type of business organization will meet Chloe's needs best?

Learning Objective 2**S1-4 Identifying types of business organizations**

You would like to start a cellular telephone equipment service business. You are considering organizing the business as a sole proprietorship. Identify the advantages and disadvantages of owning a sole proprietorship.

Learning Objective 2**S1-5 Applying accounting assumptions and principles**

Michael McNamee is the proprietor of a property management company, Apartment Exchange, near the campus of Pensacola State College. The business has cash of \$10,000 and furniture that cost \$15,000 and has a market value of \$16,000. The business debts include accounts payable of \$7,500. Michael's personal home is valued at \$900,000, and his personal bank account has a balance of \$10,200. Consider the accounting principles and assumptions discussed in the chapter, and identify the principle or assumption that best matches the situation:

- a. Apartment Exchange records furniture at its cost of \$15,000, not its market value of \$16,000.
- b. Michael expects Apartment Exchange to remain in operation for the foreseeable future.
- c. Apartment Exchange reports its financial statements in U.S. dollars.
- d. Michael's personal assets are not recorded on Apartment Exchange's balance sheet.

Learning Objective 2**S1-6 Using the accounting equation**

Thompson Handyman Services has total assets for the year of \$18,400 and total liabilities of \$9,050.

Learning Objective 3**Requirements**

1. Use the accounting equation to solve for equity.
2. If next year assets increased by \$4,300 and equity decreased by \$3,850, what would be the amount of total liabilities for Thompson Handyman Services?

Learning Objective 3**S1-7 Using the accounting equation**

Roland's Overhead Doors reports the following financial information:

Assets	\$ 45,800
Liabilities	17,220
Common Stock	27,460
Dividends	6,500
Revenues	8,850
Expenses	?

Requirements

1. Use the accounting equation to solve for the missing information.
2. Did Roland's Overhead Doors report net income or net loss?

Learning Objective 3**S1-8 Identifying accounts**

Consider the following accounts:

- | | |
|------------------------|---------------------|
| a. Accounts Payable | f. Service Revenue |
| b. Cash | g. Office Supplies |
| c. Common Stock | h. Dividends |
| d. Accounts Receivable | i. Land |
| e. Rent Expense | j. Salaries Expense |

Identify each account as Asset, Liability, or Equity.

Learning Objective 4**S1-9 Using the accounting equation to analyze transactions**

Tiny Town Kennel earns service revenue by caring for the pets of customers. Tiny Town Kennel is organized as a corporation. During the past month, Tiny Town Kennel has the following transactions:

- a. Received \$520 cash for service revenue earned.
- b. Paid \$325 cash for salaries expense.
- c. Received a \$1,000 contribution in exchange for common stock.
- d. Earned \$640 for service revenue, but the customer has not paid Tiny Town Kennel yet.
- e. Received utility bill of \$85, which will be paid next month.
- f. Cash dividends of \$100 were paid to stockholders.

Indicate the effects of the business transactions on the accounting equation for Tiny Town Kennel. Transaction (a) is answered as a guide.

- a. *Increase asset (Cash); Increase equity (Service Revenue)*

Learning Objective 4**S1-10 Using the accounting equation to analyze transactions**

Elaine's Inflatables earns service revenue by providing party planning services and inflatable playscapes. Elaine's Inflatables is organized as a corporation. During the past month, Elaine's Inflatables had the following transactions:

- a. Received contributions of \$10,000 in exchange for common stock.
- b. Purchased equipment for \$5,000 on account.

- c. Paid \$400 for office supplies.
- d. Earned and received \$2,500 cash for service revenue.
- e. Paid \$400 for wages to employees.
- f. Cash dividends of \$1,000 were paid to stockholders.
- g. Earned \$1,000 for services provided. Customer has not yet paid.
- h. Paid \$1,000 for rent.
- i. Received a bill for \$250 for the monthly utilities. The bill has not yet been paid.

Indicate the effects of the business transactions on the accounting equation for Elaine's Inflatables. Transaction (a) is answered as a guide.

- a. *Increase asset (Cash); Increase equity (Common Stock)*

S1-11 Identifying accounts on the financial statements

Learning Objective 5

Consider the following accounts:

- | | |
|------------------------|---------------------|
| a. Accounts Payable | f. Service Revenue |
| b. Cash | g. Office Supplies |
| c. Common Stock | h. Dividends |
| d. Accounts Receivable | i. Land |
| e. Rent Expense | j. Salaries Expense |

Identify the financial statement (or statements) that each account would appear on.

Use I for Income Statement, RE for Statement of Retained Earnings, B for Balance Sheet, and C for Statement of Cash Flows.

Use the following information to answer Short Exercises S1-12 through S1-14.

Centerpiece Arrangements has just completed operations for the year ended December 31, 2018. This is the third year of operations for the company. The following data have been assembled for the business:

Insurance Expense	\$ 4,500	Salaries Expense	\$ 46,000
Service Revenue	70,000	Accounts Payable	17,600
Utilities Expense	1,400	Office Supplies	1,700
Rent Expense	16,000	Dividends	4,800
Common Stock	9,000	Accounts Receivable	8,000
Cash	7,200	Equipment	12,100
Retained Earnings, January 1, 2018	5,100		

S1-12 Preparing the income statement

Learning Objective 5

Prepare the income statement of Centerpiece Arrangements for the year ended December 31, 2018.

S1-13 Preparing the statement of retained earnings

Learning Objective 5

Prepare the statement of retained earnings of Centerpiece Arrangements for the year ended December 31, 2018.

S1-14 Preparing the balance sheet

Learning Objective 5

Prepare the balance sheet of Centerpiece Arrangements as of December 31, 2018.

Learning Objective 5**S1-15 Preparing the statement of cash flows**

Polk Street Homes had the following cash transactions for the month ended July 31, 2018.

Cash receipts:

Collections from customers	\$ 25,000
Issued common stock	13,000

Cash payments:

Rent	500
Utilities	2,000
Salaries	1,500
Purchase of equipment	25,000
Payment of cash dividends	4,000
Cash balance, July 1, 2018	14,000
Cash balance, July 31, 2018	19,000

Prepare the statement of cash flows for Polk Street Homes for the month ended July 31, 2018.

Learning Objective 6**S1-16 Calculating ROA**

Smiley Yogurt Limited had net income for the month of August of \$42,450. Assets as of the beginning and end of the month totaled \$848,000, and \$850,000, respectively. Calculate Smiley Yogurt Limited's Return on Assets for the month of August.

> Exercises**Learning Objective 1****E1-17 Identifying users of accounting information**

For each of the users of accounting information, identify whether the user is an external decision maker (E) or an internal decision maker (I):

- | | |
|-----------------------------|--------------------|
| a. customer | e. investor |
| b. company manager | f. controller |
| c. Internal Revenue Service | g. cost accountant |
| d. lender | h. SEC |

Learning Objective 2**E1-18 Using accounting vocabulary**

Consider the following accounting terms and definitions, and match each term to the definition:

- | | |
|-------------------------------|---|
| 1. Economic entity assumption | a. Oversees the creation and governance of International Financial Reporting Standards (IFRS) |
| 2. Stockholders | b. Type of business with more than one owner, all of whom are personally liable |
| 3. Going concern assumption | c. A concept that draws a boundary around an entity to keep its affairs from its owners |
| 4. IASB | d. Has only one owner |
| 5. Sole proprietorship | e. Type of business with owners who are not personally liable |

- | | |
|-----------------------------|--|
| 6. Monetary unit assumption | f. Assumes that the dollar's purchasing power is stable |
| 7. Partnership | g. Sets policy for the corporation and supervises its operation |
| 8. Board of directors | h. Provides information that is complete, neutral and free from error |
| 9. Corporation | i. Assumes that the entity will remain in operation for the foreseeable future |
| 10. Faithful representation | j. Parties having ultimate control of the corporation |

E1-19 Using accounting vocabulary

Consider the following accounting terms and definitions, and match each term to the definition:

- | | |
|------------------------------------|--|
| 1. Accounting equation | a. An economic resource that is expected to be of benefit in the future |
| 2. Asset | b. Debts that are owed to creditors |
| 3. Balance sheet | c. Excess of total expenses over total revenues |
| 4. Expense | d. Excess of total revenues over total expenses |
| 5. Income statement | e. The basic tool of accounting, stated as
$Assets = Liabilities + Equity$ |
| 6. Liability | f. Decreases in equity that occur in the course of selling goods or services |
| 7. Net income | g. Increases in equity that occur in the course of selling goods or services |
| 8. Net loss | h. Reports on a business's cash receipts and cash payments during a period |
| 9. Revenue | i. Reports on an entity's assets, liabilities, and stockholders' equity as of a specific date |
| 10. Statement of cash flows | j. Reports on an entity's revenues, expenses, and net income or loss for the period |
| 11. Statement of retained earnings | k. Reports how the company's retained earnings balance changed from the beginning to the end of the period |

E1-20 Using the accounting equation

Compute the missing amount in the accounting equation for each entity from the financial information presented:

	Assets	Liabilities	Equity
Yoga Sports	\$?	\$ 50,000	\$ 30,000
Fitness Gym	70,000	?	52,000
Tiger Fitness	92,000	52,000	?

Learning Objectives 3, 5

Learning Objective 3

Learning Objective 3**E1-21 Using the accounting equation**

Wizco Advertising's balance sheet data at May 31, 2018, and June 30, 2018, follow:

	May 31, 2018	June 30, 2018
Total Assets	\$ 122,000	\$ 287,000
Total Liabilities	66,000	144,000

For each of the following situations that occurred in June, 2018 with regard to common stock and dividends of a corporation, compute the amount of net income or net loss during June 2018.

- The company issued \$10,000 of common stock and paid no dividends.
- The company issued no common stock. It paid cash dividends of \$3,000.
- The company issued \$12,500 of common stock and paid cash dividends of \$30,000.

Learning Objective 3**E1-22 Using the accounting equation**

Mountain Drycleaners started 2018 with total assets of \$19,000 and total liabilities of \$14,000. At the end of 2018, Mountain's total assets stood at \$12,000 and total liabilities were \$9,000.

Requirements

- Did the stockholders' equity of Mountain Drycleaners increase or decrease during 2018? By how much?
- Identify the four possible reasons that stockholders' equity can change.

Learning Objective 3**E1-23 Using the accounting equation**

During 2018, Beta Coffee Limited reported revenue of \$50,000. Total expenses for the year were \$30,000. Beta Coffee Limited ended the year with total assets of \$63,000, and it owed debts totaling \$22,000. At year-end 2017, the business reported total assets of \$43,000 and total liabilities of \$22,000.

Requirements

- Compute Beta Coffee Limited's net income for 2018.
- Did Beta Coffee Limited's stockholders' equity increase or decrease during 2018? By how much?

Learning Objective 3**E1-24 Using the accounting equation**

The records of Felix Company show the following at December 31, 2018:

Assets & Liabilities:		Equity:	
Beginning:		Common Stock	\$ 11,000
Assets	\$ 67,000	Dividends	8,000
Liabilities	11,000	Revenues	205,000
Ending:		Expenses	?
Assets	\$ 46,000	Retained Earnings, January 1, 2018	45,000
Liabilities	34,000		

Requirements

1. Compute the missing amount for Felix Company. You will need to determine Retained Earnings, December 31, 2018, and total stockholders' equity, December 31, 2018.
2. Did Felix earn a net income or suffer a net loss for the year? Compute the amount.

E1-25 Using the accounting equation to analyze transactions

As the manager of a Papa Sean's restaurant, you must deal with a variety of business transactions. Give an example of a transaction that has each of the following effects on the accounting equation:

- a. Increase one asset and decrease another asset.
- b. Decrease an asset and decrease equity.
- c. Decrease an asset and decrease a liability.
- d. Increase an asset and increase equity.
- e. Increase an asset and increase a liability.

E1-26 Using the accounting equation to analyze business transactions

Indicate the effects of the following business transactions on the accounting equation of Vivian's Online Video store. Transaction (a) is answered as a guide.

- a. Received cash of \$10,000 from issuance of common stock.

Answer: Increase asset (Cash); Increase equity (Common Stock)

- b. Earned video rental revenue on account, \$2,800.
- c. Purchased office furniture on account, \$300.
- d. Received cash on account, \$400.
- e. Paid cash on account, \$100.
- f. Rented videos and received cash of \$200.
- g. Paid monthly office rent of \$1,000.
- h. Paid \$100 cash to purchase office supplies.

E1-27 Using the accounting equation to analyze business transactions

Indicate the effects of the following business transactions on the accounting equation for Beauty Cosmetics providing facial services to customers. Transaction (a) is answered as a guide.

- a. Beauty Cosmetics received cash from issuance of common stock to stockholders.

Answer: Increase asset (Cash); Increase equity (Common Stock)

- b. Paid cash to purchase equipment.
- c. Performed facial services to customers on account.
- d. Borrowed money from a bank for the expansion of Beauty Cosmetics.
- e. Purchased office supplies on account.
- f. Paid cash on the transaction created in e.
- g. Paid salaries to employees who worked for the week.
- h. Collected cash from customers.
- i. Cash dividends paid to stockholders.
- j. Incurred rent expense for the week but will be paid next Wednesday.

Learning Objective 4**Learning Objective 4****Learning Objective 4**

Learning Objective 4**E1-28 Using the accounting equation to analyze business transactions**

The analysis of the first eight transactions of Advanced Accounting Service follows. Describe each transaction.

	ASSETS			=	LIABILITIES +		EQUITY		
	Cash	+	Accounts Receivable		Accounts Payable	+	Contributed Capital	+	Retained Earnings
1	+31,000						+31,000		
2			+3,800						+3,800
Bal.	\$31,000	+	\$3,800				\$31,000		+\$3,800
3				+13,400			+13,400		
Bal.	\$31,000	+	\$3,800	+ \$13,400			\$13,400		+\$3,800
4	+190		-190				\$13,400		
Bal.	\$31,190	+	\$3,610	+ \$13,400			\$13,400		+\$3,800
5	-410			+410			\$13,400		
Bal.	\$30,780	+	\$3,610	+ \$13,810			\$13,400		+\$3,800
6	-8,000						-8,000		
Bal.	\$22,780	+	\$3,610	+ \$13,810			\$5,400		+\$3,800
7	+790						\$5,400		+790
Bal.	\$23,570	+	\$3,610	+ \$13,810			\$5,400		+\$4,590
8	-1,500						\$5,400		-1,500
Bal.	\$22,070	+	\$3,610	+ \$13,810			\$5,400		+\$4,590 - \$1,500

Learning Objective 4**E1-29 Using the accounting equation to analyze business transactions**

Ashley Stamper opened a medical practice. During July, the first month of operation, the business, titled Ashley Stamper, MD, experienced the following events:

- Jul. 6 Received a contribution of \$68,000 from Stamper and opened a bank account in the name of A. Stamper, MD. The corporation issued common stock to Stamper.
- 9 Paid \$56,000 cash for land.
- 12 Purchased medical supplies for \$1,500 on account.
- 15 Officially opened for business.
- 20 Paid cash expenses: employees' salaries, \$1,300; office rent, \$1,500; utilities, \$100.
- 31 Earned service revenue for the month, \$13,000, receiving cash.
- 31 Paid \$1,050 on account.

Analyze the effects of these events on the accounting equation of the medical practice of Ashley Stamper, MD, using the following format:

	ASSETS			=	LIABILITIES +		EQUITY		
	Cash	+	Medical Supplies		Accounts Payable	+	Contributed Capital	+	Retained Earnings
							Common Stock	- Dividends	+ Service Revenue - Salaries Expense - Rent Expense - Utilities Expense

E1-30 Preparing the financial statements**Learning Objective 5**

Estella Osage publishes an online travel magazine. In need of cash, the business applies for a loan with National Bank. The bank requires borrowers to submit financial statements. With little knowledge of accounting, Estella Osage, a stockholder, does not know how to proceed.

Requirements

1. What are the four financial statements that the business will need to prepare?
2. Is there a specific order in which the financial statements must be prepared?
3. Explain how to prepare each statement.

Use the following information to answer Exercises E1-31 through E1-33.

The account balances of Wilson Towing Service at June 30, 2018, follow:

Equipment	\$ 25,850	Service Revenue	\$ 15,000
Office Supplies	1,000	Accounts Receivable	9,000
Notes Payable	6,800	Accounts Payable	8,000
Rent Expense	900	Retained Earnings, June 1, 2018	3,250
Cash	1,400	Salaries Expense	2,400
Dividends	3,500	Common Stock	11,000

E1-31 Preparing the income statement**Learning Objective 5****Requirements**

1. Prepare the income statement for Wilson Towing Service for the month ending June 30, 2018.
2. What does the income statement report?

Net Income \$11,700

E1-32 Preparing the statement of retained earnings**Learning Objective 5****Requirements**

1. Prepare the statement of retained earnings for Wilson Towing Service for the month ending June 30, 2018.
2. What does the statement of retained earnings report?

Ending Retained Earnings
\$11,450

E1-33 Preparing the balance sheet**Learning Objective 5****Requirements**

1. Prepare the balance sheet for Wilson Towing Service as of June 30, 2018.
2. What does the balance sheet report?

Total Assets \$37,250

Use the following information to answer Exercises E1-34 through E1-36.

The assets, liabilities, and equities of Damon Design Studio have the following balances at December 31, 2018. The retained earnings was \$39,000 at the beginning of the year. At year end, common stock was \$13,000 and dividends were \$57,000.

Notes Payable	\$ 14,000	Office Furniture	\$ 48,400
Rent Expense	23,000	Utilities Expense	7,200
Cash	3,200	Accounts Payable	3,600
Office Supplies	5,100	Service Revenue	154,600
Salaries Expense	65,000	Accounts Receivable	9,300
Property Tax Expense	2,200	Miscellaneous Expense	3,800

Learning Objective 5

Net Income \$53,400

Learning Objective 5

Ending Retained Earnings \$35,400

Learning Objective 5

Total Assets \$66,000

Learning Objective 5

E1-34 Preparing the income statement

Prepare the income statement for Damon Design Studio for the year ending December 31, 2018.

E1-35 Preparing the statement of retained earnings

Prepare the statement of retained earnings for Damon Design Studio for the year ending December 31, 2018.

E1-36 Preparing the balance sheet

Prepare the balance sheet for Damon Design Studio as of December 31, 2018.

E1-37 Preparing the statement of cash flows

For each transaction, identify the appropriate section on the statement of cash flows to report the transaction. Choose from: Cash flows from operating activities (O), Cash flows from investing activities (I), Cash flows from financing activities (F), or Is not reported on the statement of cash flows (X). If reported on the statement, decide whether the transaction should be shown as a positive cash flow (+) or a negative cash flow (-):

- a. Received cash for services performed.
- b. Performed services for a customer on account.
- c. Received cash for services not yet performed.
- d. Purchased a truck with cash.
- e. Purchased a truck signing a note payable.
- f. Borrowed money signing a note payable.
- g. Issuance of common stock with cash received.
- h. Paid cash dividends to stockholders.
- i. Incurred rental expense on account.
- j. Paid utilities bills for the month.

E1-38 Preparing the statement of cash flows

Morning Bean Food Equipment Company had the following transactions for the month ending January 31, 2018. Morning Bean's cash balance on January 1, 2018, was \$11,800.

-
- | | |
|--------|---|
| Jan. 1 | Common stock was issued to stockholders for \$5,000 cash. |
| 7 | Purchased equipment for \$2,400 on account. |
| 14 | Paid \$19,000 cash for land. |
| 17 | Paid cash expenses: employees' salaries, \$1,300; office rent, \$1,600; utilities, \$450. |
| 23 | Paid cash dividends of \$500. |
| 26 | Earned service revenue for the month, \$8,500, receiving cash. |
-

Learning Objective 5

Decrease in cash \$9,350

Prepare the statement of cash flows of Morning Bean Food Equipment Company for the month ended January 31, 2018.

E1-39 Calculating Return on Assets

Alpha Appliance Service had net income for the year of \$28,800. In addition, the balance sheet reports the following balances:

	Jan 1, 2018	Dec 31, 2018
Notes Payable	\$ 42,000	\$ 74,000
Cash	36,000	174,600
Office Furniture	28,000	48,000
Building	170,000	170,000
Accounts Payable	11,000	10,500
Total Stockholders' Equity	208,200	374,300
Accounts Receivable	2,800	18,400
Equipment	19,000	47,000
Office Supplies	5,400	800

Calculate the return on assets (ROA) for Alpha Appliance Service for the year ending December 31, 2018.

Learning Objective 6**> Problems Group A****P1-40A Using the accounting equation for transaction analysis**

Meg McKinney opened a public relations firm called Solid Gold on August 1, 2018.

The following amounts summarize her business on August 31, 2018:

Learning Objective 4

Cash \$13,600

ASSETS	=	LIABILITIES + EQUITY
Cash + Accounts + Office + Land Receivable Supplies	=	Contributed Capital + Retained Earnings Accounts Payable + Common Stock - Dividends + Service Revenue - Rent Expense - Advertising Expense \$5,000 + \$11,900 + \$3,200 + \$0 + \$15,000
Bal. \$1,900 + \$3,200 + \$0 + \$15,000		+ \$3,200

During September 2018, the business completed the following transactions:

- a. Received contribution of \$17,000 cash from Meg McKinney in exchange for common stock.
- b. Performed service for a client and received cash of \$800.
- c. Paid off the beginning balance of accounts payable.
- d. Purchased office supplies from OfficeMax on account, \$1,200.
- e. Collected cash from a customer on account, \$2,000.
- f. Cash dividends of \$1,600 were paid to stockholders.
- g. Consulted for a new band and billed the client for services rendered, \$4,500.
- h. Recorded the following business expenses for the month:
Paid office rent: \$1,000.
Paid advertising: \$500.

Analyze the effects of the transactions on the accounting equation of Solid Gold using the format presented in Exhibit 1-6.

Learning Objective 4

Cash \$21,500

P1-41A Using the accounting equation for transaction analysis

Conner Thomas started a new business, Thomas Gymnastics, and completed the following transactions during December:

-
- | | |
|--------|---|
| Dec. 1 | Received \$19,000 cash from Conner in exchange for common stock. |
| 2 | Received \$3,800 cash from customers for services performed. |
| 5 | Paid \$200 cash for office supplies. |
| 9 | Performed services for a customer and billed the customer for services rendered, \$4,500. |
| 10 | Received \$200 invoice for utilities due in two weeks. |
| 15 | Paid for advertising in the local paper, \$250. |
| 20 | Paid utility invoice received on December 10. |
| 25 | Collected cash in full from customer billed on December 9. |
| 28 | Paid rent for the month, \$1,600. |
| 28 | Paid \$1,450 to assistant for wages. |
| 30 | Received \$1,400 cash from customers for services performed. |
| 31 | Cash dividends of \$3,500 were paid to stockholders. |
-

Analyze the effects of the transactions on the accounting equation of Thomas Gymnastics using a format similar to Exhibit 1-6.

OUTDOOR LIFE LANDSCAPING Balance Sheet Month Ended November 30, 2018		
Assets		Liabilities
Cash	\$ 4,600	Accounts Receivable \$ 2,000
Office Supplies	600	Dividends 11,000
Land	34,100	Service Revenue 35,000
Salaries Expense	2,700	Property Tax Expense 3,000
Office Furniture	5,800	Accounts Payable 2,700
Notes Payable	24,600	Retained Earnings 11,150
Rent Expense	450	
		Stockholders' Equity
Total Assets	\$ 72,850	Common Stock 8,000
		Total Liabilities \$ 72,850

Learning Objectives 4, 52b. Ending Retained Earnings
\$19,560**P1-45A Using the accounting equation for transaction analysis and preparing financial statements**

Allen Shonton recently opened his own accounting firm on April 1, which he operates as a corporation. The name of the new entity is Allen Shonton, CPA. Shonton experienced the following events during the organizing phase of the new business and its first month of operations in 2018:

- Apr. 5 Shonton deposited \$75,000 in a new business bank account titled Allen Shonton, CPA. The business issued common stock to Shonton.
- 6 Paid \$300 cash for letterhead stationery for new office.
- 7 Purchased office furniture for the office on account, \$9,500.
- 10 Consulted with tax client and received \$4,000 for services rendered.
- 11 Paid utilities, \$190.
- 12 Finished tax hearings on behalf of a client and submitted a bill for accounting services, \$20,000.
- 18 Paid office rent, \$750.
- 25 Received amount due from client that was billed on April 12.
- 27 Paid full amount of accounts payable created on April 7.
- 30 Cash dividends of \$3,500 were paid to stockholders.

Requirements

1. Analyze the effects of the events on the accounting equation of Allen Shonton, CPA. Use a format similar to Exhibit 1-6.
2. Prepare the following financial statements:
 - a. Income statement.
 - b. Statement of retained earnings.
 - c. Balance sheet.

P1-46A Using the accounting equation for transaction analysis and preparing financial statements

Alexa Petrone recently opened her own law office on March 1, which she operates as a corporation. The name of the new entity is Alexa Petrone, Attorney. Petrone experienced the following events during the organizing phase of the new business and its first month of operation, March 2018. Some of the events were personal and did not affect the law practice. Others were business transactions and should be accounted for by the business.

-
- | | |
|--------|---|
| Mar. 1 | Sold personal investment in Amazon stock, which she had owned for several years, receiving \$30,000 cash. |
| 2 | Deposited the \$30,000 cash from the sale of the Amazon stock in her personal bank account. |
| 3 | Deposited \$65,000 cash in a new business bank account titled Alexa Petrone, Attorney. The business issued common stock to Petrone. |
| 5 | Paid \$600 cash for ink cartridges for the printer. |
| 7 | Purchased computer for the law office, agreeing to pay the account, \$9,200, within three months. |
| 9 | Received \$1,000 cash from customers for services rendered. |
| 15 | Received bill from <i>The Lawyer</i> for magazine subscription, \$340. (Use Miscellaneous Expense account.) |
| 23 | Finished court hearings on behalf of a client and submitted a bill for legal services, \$11,000, on account. |
| 28 | Paid bill from <i>The Lawyer</i> . |
| 30 | Paid utilities, \$840. |
| 31 | Received \$2,900 cash from clients billed on March 23. |
| 31 | Cash dividends of \$1,000 were paid to stockholders. |
-

Requirements

- Analyze the effects of the preceding events on the accounting equation of Alexa Petrone, Attorney. Use a format similar to Exhibit 1-6.
- Prepare the following financial statements:
 - Income statement.
 - Statement of retained earnings.
 - Balance sheet.
 - Statement of cash flows.

> Problems Group B

P1-47B Using the accounting equation for transaction analysis

Meg McIntyre opened a public relations firm called Pop Chart on August 1, 2018. The following amounts summarize her business on August 31, 2018:

Learning Objectives 4, 5

2c. Total Assets \$83,700

Learning Objective 4

Cash \$12,650

ASSETS	=	LIABILITIES +	EQUITY
		Contributed Capital	Retained Earnings
Cash + Accounts + Office + Land Receivable Supplies		Accounts Payable	- Dividends + Service - Rent - Advertising Revenue Expense Expense
Bal. \$2,600 + \$2,500 + \$0 + \$16,000		\$5,000 + \$13,600	+ \$2,500

During September 2018, the business completed the following transactions:

- a. Received contribution of \$14,000 cash from Meg McIntyre in exchange for common stock.
- b. Performed service for a client and received cash of \$1,600.
- c. Paid off the beginning balance of accounts payable.
- d. Purchased office supplies from OfficeMax on account, \$1,200.
- e. Collected cash from a customer on account, \$2,300.
- f. Cash dividends of \$1,500 were paid to stockholders.
- g. Consulted for a new band and billed the client for services rendered, \$4,000.
- h. Recorded the following business expenses for the month:
Paid office rent: \$900.
Paid advertising: \$450.

Analyze the effects of the transactions on the accounting equation of Pop Chart using the format presented above.

Learning Objective 4

Cash \$21,300

P1-48B Using the accounting equation for transaction analysis

Cosmo Thomas started a new business, Thomas Gymnastics, and completed the following transactions during December:

-
- Dec. 1 Received \$19,000 cash from Thomas in exchange for common stock.
 - 2 Received \$3,800 cash from customers for services performed.
 - 5 Paid \$300 cash for office supplies.
 - 9 Performed services for a customer and billed the customer for services rendered, \$4,500.
 - 10 Received \$150 invoice for utilities due in two weeks.
 - 15 Paid for advertising in the local paper, \$350.
 - 20 Paid utility invoice received on Dec. 10.
 - 25 Collected cash in full from customer billed on Dec. 9.
 - 28 Paid rent for the month, \$2,600.
 - 28 Paid \$1,200 to assistant for wages.
 - 30 Received \$1,600 cash from customers for services performed.
 - 31 Cash dividends of \$3,000 were paid to stockholders.
-

Analyze the effects of the transactions on the accounting equation of Thomas Gymnastics using a format similar to Exhibit 1-6.

P1-49B Preparing financial statements

Presented here are the accounts of Gale City Answering Service for the year ended December 31, 2018:

Land	\$ 14,000	Common Stock	\$ 26,000
Notes Payable	32,000	Accounts Payable	16,000
Property Tax Expense	2,900	Accounts Receivable	700
Dividends	28,000	Advertising Expense	13,000
Rent Expense	11,000	Building	174,200
Salaries Expense	65,000	Cash	2,600
Salaries Payable	1,400	Equipment	15,000
Service Revenue	220,000	Insurance Expense	1,600
Office Supplies	17,000	Interest Expense	7,400
Retained Earnings, Dec. 31, 2017	57,000		

Requirements

1. Prepare Gale City Answering Service's income statement.
2. Prepare the statement of retained earnings.
3. Prepare the balance sheet.

P1-50B Preparing financial statements

Pretty Pictures works weddings and prom-type parties. The balance of Retained Earnings was \$20,000 at December 31, 2017. At December 31, 2018, the business's accounting records show these balances:

Insurance Expense	\$ 6,000	Accounts Receivable	\$ 5,000
Cash	42,000	Notes Payable	10,000
Accounts Payable	13,000	Retained Earnings, Dec. 31, 2018	?
Advertising Expense	4,500	Salaries Expense	30,000
Service Revenue	115,000	Equipment	85,500
Dividends	13,000	Common Stock	28,000

Prepare the following financial statements for Pretty Pictures for the year ended December 31, 2018:

- a. Income statement.
- b. Statement of retained earnings.
- c. Balance sheet.

P1-51B Preparing financial statements

The bookkeeper of Juniper Landscaping prepared the company's balance sheet while the accountant was ill. The balance sheet, shown on the next page, contains numerous errors. In particular, the bookkeeper knew that the balance sheet should balance, so he plugged in the retained earnings amount needed to achieve this balance. The retained earnings is incorrect. All other amounts are correct, but some are out of place or should not be included on this statement. Prepare a corrected balance sheet.

Learning Objective 5

1. Net Income \$97,600

Learning Objective 5

- b. Ending Retained Earnings
\$81,500

Learning Objective 5

- Total Assets \$48,700

JUNIPER LANDSCAPING Balance Sheet Month Ended July 31, 2018		
Assets		Liabilities
Cash	\$ 5,300	Accounts Receivable \$ 1,800
Office Supplies	800	Dividends 14,000
Land	34,500	Service Revenue 38,000
Salaries Expense	3,200	Property Tax Expense 3,300
Office Furniture	6,300	Accounts Payable 2,700
Notes Payable	24,700	Retained Earnings 5,300
Rent Expense	300	
		Stockholders' Equity
Total Assets	<u><u>\$ 75,100</u></u>	Common Stock 10,000
		Total Liabilities <u><u>\$ 75,100</u></u>

Learning Objective 5**P1-52B Using the accounting equation for transaction analysis and preparing financial statements**

2c. Total Assets \$58,360

Amos Sharp recently opened his own accounting firm on October 1, which he operates as a corporation. The name of the new entity is Amos Sharp, CPA. Sharp experienced the following events during the organizing phase of the new business and its first month of operations in 2018.

-
- | | |
|--------|--|
| Oct. 5 | Sharp deposited \$45,000 in a new business bank account titled Amos Sharp, CPA. The business issued common stock to Sharp. |
| 6 | Paid \$300 cash for letterhead stationery for new office. |
| 7 | Purchased office furniture for the office on account, \$6,500. |
| 10 | Consulted with tax client and received \$3,300 for services rendered. |
| 11 | Paid utilities, \$340. |
| 12 | Finished tax hearings on behalf of a client and submitted a bill for accounting services, \$16,000. |
| 18 | Paid office rent, \$1,800. |
| 25 | Received amount due from client that was billed on October 12. |
| 27 | Paid full amount of Accounts Payable created on October 7. |
| 31 | Cash dividends of \$3,800 were paid to stockholders. |
-

Requirements

- Analyze the effects of the events on the accounting equation of Amos Sharp, CPA. Use a format similar to Exhibit 1-6.
- Prepare the following financial statements:
 - Income statement.
 - Statement of retained earnings.
 - Balance sheet.

P1-53B Using the accounting equation for transaction analysis and preparing financial statements

Abby Perry recently opened her own law office on December 1, which she operates as a corporation. The name of the new entity is Abby Perry, Attorney. Perry experienced the following events during the organizing phase of the new business and its first month of operation, December 2018. Some of the events were personal and did not affect the law practice. Others were business transactions and should be accounted for by the business.

-
- Dec. 1 Sold personal investment in Amazon stock, which she had owned for several years, receiving \$30,000 cash.
- 2 Deposited the \$30,000 cash from the sale of the Amazon stock in her personal bank account.
- 3 Deposited \$89,000 cash in a new business bank account titled Abby Perry, Attorney. The business issued common stock to Perry.
- 5 Paid \$600 cash for ink cartridges for the printer.
- 7 Purchased computer for the law office, agreeing to pay the account, \$8,000, within three months.
- 9 Received \$2,900 cash from customers for services rendered.
- 15 Received bill from *The Lawyer* for magazine subscription, \$300. (Use Miscellaneous Expense account.)
- 23 Finished court hearings on behalf of a client and submitted a bill for legal services, \$8,000, on account.
- 28 Paid bill from *The Lawyer*.
- 30 Paid utilities, \$900.
- 31 Received \$2,800 cash from clients billed on December 23.
- 31 Cash dividends of \$3,000 were paid to stockholders.
-

Learning Objectives 4, 5

- 2c. Total Assets \$103,700

CRITICAL THINKING

> Using Excel

P1-54 Using Excel to prepare transaction analysis

Download an Excel template for this problem online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

Echo Lake Corporation started operations on November 1, 2018. Nine transactions occur during November. Financial statements are prepared at the end of the month.

Requirements

1. Use Excel to prepare a transaction analysis of the nine transactions. Use the blue shaded areas for inputs.
 - a. For each transaction, record the amount (either an increase or decrease) under the correct account. Enter only non-zero amounts. If an account is not affected by the transaction, leave the amount blank. Be sure to use a minus sign (–) if the amount is a decrease.
 - b. The row totals will be calculated automatically.
 - c. The accounting equation ($\text{Assets} = \text{Liabilities} + \text{Equity}$) should remain in balance after each transaction. The accounting equation is calculated automatically to the right of the transaction table.
2. Prepare the income statement, statement of retained earnings, balance sheet, and statement of cash flows for the company. Each financial statement appears on a separate worksheet tab. Fill in the blue shaded areas using a formula that references the account balances at the end of the month in the Transaction Analysis tab.

> Continuing Problem

P1-55 is the first problem in a continuing problem that will be used throughout the chapters to reinforce the concepts learned.

P1-55 Using the accounting equation for transaction analysis, preparing financial statements, and calculating return on assets (ROA)

Let's Bike Company is a company that rents bicycles for use on cycling trails along the coastline. Leona Cho and Bowie Lee both worked for one of the “Big Four” accounting firms after graduation and became CPAs. As they love cycling, they had a dream of promoting cycling as a healthy activity, which at the same time helps reduce the carbon footprint. They decided to begin a new business that combined their love of cycling with their business knowledge. Cho and Lee decided that they will create a new corporation, Let’s Bike Company, or LBC for short. The business began operations on November 1, 2018.

-
- | | |
|--------|---|
| Nov. 1 | Received \$23,000 cash to begin the company and issued common stock to Cho and Lee. |
| 2 | Purchased bikes for \$5,400 on account. |
| 3 | Purchased office supplies on account, \$980. |
| 8 | Earned \$2,300 cash for rental of bikes to individual customers. |
| 12 | Paid \$3,400 and \$950 related to the purchases on November 2 and 3, 2018, respectively. |
| 15 | Paid \$1,700 cash for wages. |
| 18 | Earned \$3,500 for rental of bikes to Alpha Corporation for a corporate event on account. |

- 20 Paid \$200 dividends to stockholders.
- 24 Received \$2,000 cash from Alpha Corporation for bike rental on November 18, 2018.
- 25 Received a bill for \$180 for utilities. (Use separate payable account.)
- 26 Received a bill for \$200 for cell phone expenses. (Use separate payable account.)
- 29 Paid \$400 dividends to stockholders.
- 30 Paid \$2,200 for the first month's rent.

Requirements

1. Analyze the effects of Let's Bike Company's transactions on the accounting equation. Use the format of Exhibit 1-6, and include these headings: Cash; Accounts Receivable; Office Supplies; Bikes; Accounts Payable; Utilities Payable; Telephone Payable; Common Stock; Dividends; Bike Rental Revenue; Rent Expense; Utilities Expense; Wages Expense; and Telephone Expense.
2. Prepare the income statement of Let's Bike Company for the month ended November 30, 2018.
3. Prepare the statement of retained earnings for the month ended November 30, 2018.
4. Prepare the balance sheet as of November 30, 2018.
5. Calculate the return on assets for Let's Bike Company for November 2018.

> Tying It All Together Case 1-1

Before you begin this assignment, review the *Tying It All Together* feature in the chapter.

Starbucks Corporation is the premier roaster, marketer, and retailer of specialty coffee in the world, operating in 68 countries. Starbucks generates revenues through company-operated stores, licensed stores, and consumer packaged goods. In 2015, revenues from company-operated stores accounted for 79% of total revenues. Starbucks states that its retail objective is to be the leading retailer and brand of coffee and tea by selling the finest quality coffee, tea, and related products. In addition, the company strives to provide the *Starbucks Experience* by exemplifying superior customer service and providing clean and well-maintained stores. Part of this experience involves providing free internet service to customers while they are enjoying their food and beverages.

Requirements

1. How would the cost of internet service be reported by Starbucks and on which financial statement?
2. Suppose Starbucks receives a bill from its internet service provider but has not yet paid the bill. What would be the effect on assets, liabilities, and equity when Starbucks receives this bill?
3. What would be the effect on assets, liabilities, and equity when Starbucks pays its internet service bill?
4. Suppose Starbucks expects that the cost of internet service will increase by 4% in the coming year. What would be the impact on Starbucks' net income? How might Starbucks overcome this impact?

> Decision Case 1-1

Let's examine a case using Greg's Tunes and Sal's Silly Songs. It is now the end of the first year of operations, and the stockholders want to know how well each business came out at the end of the year. Neither business kept complete accounting records, and no dividends were paid. The businesses throw together the data shown on the next page at year-end:

Sal's Silly Songs:	
Total Assets	\$ 23,000
Common Stock	8,000
Total Revenues	35,000
Total Expenses	22,000
Greg's Tunes:	
Total Liabilities	\$ 10,000
Common Stock	6,000
Total Expenses	44,000
Net Income	9,000

To gain information for evaluating the businesses, the stockholders ask you several questions. For each answer, you must show your work to convince the stockholders that you know what you are talking about.

Requirements

1. Which business has more assets?
2. Which business owes more to creditors?
3. Which business has more stockholders' equity at the end of the year?
4. Which business brought in more revenue?
5. Which business is more profitable?
6. Which of the foregoing questions do you think is most important for evaluating these two businesses? Why?
7. Which business looks better from a financial standpoint?

Ethical Issue 1-1

The tobacco companies have paid billions because of smoking-related illnesses. In particular, Philip Morris, a leading cigarette manufacturer, paid more than \$3,000,000,000 in settlement payments in one year.

Requirements

1. Suppose you are the chief financial officer (CFO) responsible for the financial statements of Philip Morris. What ethical issue would you face as you consider what to report in your company's annual report about the cash payments? What is the ethical course of action for you to take in this situation?
2. What are some of the negative consequences to Philip Morris for not telling the truth? What are some of the negative consequences to Philip Morris for telling the truth?

> Fraud Case 1-1

Exeter is a building contractor on the Gulf Coast. After losing a number of big lawsuits, it was facing its first annual net loss as the end of the year approached. The owner, Hank Snow, was under intense pressure from the company's creditors to report positive net income for the year. However, he knew that the controller, Alice Li, had

arranged a short-term bank loan of \$10,000 to cover a temporary shortfall of cash. He told Li to record the incoming cash as “construction revenue” instead of a loan. That would nudge the company’s income into positive territory for the year, and then, he said, the entry could be corrected in January when the loan was repaid.

Requirements

1. How would this action affect the year-end income statement? How would it affect the year-end balance sheet?
2. If you were one of the company’s creditors, how would this fraudulent action affect you?

> Financial Statement Case 1-1

This and similar cases in later chapters focus on the financial statements of a real company—**Target Corporation**, a discount merchandiser that sells a wide assortment of general merchandise and food. Target sells both national and private and exclusive brands, with approximately one-third of its 2015 sales related to private and exclusive brands. As you work each case, you will gain confidence in your ability to use the financial statements of real companies.

Visit <http://www.pearsonglobaleditions.com/Sitemap/Horngren/> to view a link to Target Corporation’s Fiscal 2015 Annual Report.

Requirements

1. How much in cash (including cash equivalents) did Target Corporation have on January 30, 2016?
2. What were the company’s total assets at January 30, 2016? At January 31, 2015?
3. Write the company’s accounting equation at January 30, 2016, by filling in the dollar amounts:

$$\text{Assets} = \text{Liabilities} + \text{Equity}$$

4. Identify total sales (revenues) for the year ended January 30, 2016. How much did total revenue increase or decrease from fiscal year 2014 to fiscal year 2015? (Because Target’s fiscal year end of January 30, 2016 ends at the beginning of 2016, the majority of Target’s financial results were obtained in the calendar year of 2015. As a result, Target calls the fiscal year 2015 even though the year reported on the annual report ends on January 30, 2016.)
5. How much net income (net earnings) or net loss did Target earn for 2015 and for 2014? Based on net income, was 2015 better or worse than 2014?
6. Calculate Target Corporation’s return on assets for the year ending January 30, 2015.
7. How did Target Corporation’s return on assets compare to Kohl’s Corporation return on assets?

Pearson MyLab Accounting

For a wealth of online resources, including exercises, problems, media, and immediate tutorial help, please visit www.myaccountinglab.com.

> Quick Check Answers

1. d 2. c 3. b 4. c 5. c 6. a 7. c 8. a 9. b 10. a 11. c

2

Recording Business Transactions



Where's the Money?

Rachel Long scoured through the stacks of printouts. She had been hired to work on an embezzlement (stealing cash or assets of an entity) case for a local school district. The chief financial officer had called her because he suspected one of his employees was stealing money from the Parent Teacher Association (PTA). Rachel loved working on embezzlement cases. She enjoyed searching through the financial statements, identifying a problem, and then finding the transactions that documented the embezzlement. Rachel knew that if she looked deeply enough she would find the evidence that money was stolen. She always treated these cases as a puzzle that needed to be solved.

Sometimes businesses are unfortunate enough to have employees steal from them, and they need help in identifying the thief and providing enough evidence to turn the matter

over to a law enforcement agency. Businesses often turn to an accountant, such as Rachel, who specializes in fraud, often called a *certified fraud examiner (CFE)*. In addition, businesses hire accountants to help protect their assets by identifying potential problems in their recordkeeping and control of cash and assets.

Where will Rachel start looking when she begins searching for the stolen money? She'll start at the source, by reviewing documents such as invoices, sales receipts, and bank deposit slips. She will then review the transactions that were recorded (or not recorded) from those documents. These two pieces will help Rachel determine whether money was stolen from the school district and how the embezzlement occurred. It's important to Rachel that she not only catches the thief but also helps the school district prevent losses in the future. She will use her knowledge and experience in accounting to help her.



Why Is Recording Business Transactions Important?

Accounting is based on transactions. The recording of those transactions is based on source documents that provide the proof of the financial position of the business. The lack of that proof can lead to discoveries of stolen money and fictitious financial statements. As an example, in 2011, a former Fry's Electronics executive pleaded guilty, was sentenced to 6 years in federal prison, and ordered to pay \$65 million dollars in restitution. The executive's fraud was discovered when another employee saw confidential source documents on the employee's desk that had been falsified. This discovery led to uncovering a dummy company that had received over \$80 million dollars of payments without any evidence to support it. The recording of transactions from source documents is the first step in the accounting process—and one of the most important. In this chapter, you learn about source documents and how to record transactions.





Chapter 2 Learning Objectives



- 1 Explain accounts as they relate to the accounting equation and describe common accounts
- 2 Define debits, credits, and normal account balances using double-entry accounting and T-accounts
- 3 Record transactions in a journal and post journal entries to the ledger
- 4 Prepare the trial balance and illustrate how to use the trial balance to prepare financial statements
- 5 Use the debt ratio to evaluate business performance

Smart Touch Learning started out by recording the company's business transactions in terms of the accounting equation. That procedure works well when learning how to analyze transactions, but it's not a method in which a real-world business actually records transactions. In this chapter, you learn a more efficient way to capture business transactions. First, we need to start with a review of the accounting equation.

WHAT IS AN ACCOUNT?

Recall that the basic tool of accounting is the accounting equation:

$$\text{Assets} = \text{Liabilities} + \text{Equity}$$

The accounting equation is made up of three parts or categories: assets, liabilities, and equity. Each category contains accounts. An **account** is the detailed record of all increases and decreases that have occurred in an individual asset, liability, or equity during a specified period.

Assets

Assets are economic resources that are expected to benefit the business in the future—something the business owns or has control of that has value. Exhibit 2-1 (on the next page) contains a list of asset accounts that most businesses use.

Liabilities

Recall that a *liability* is a debt—that is, something the business owes. A business generally has fewer liability accounts than asset accounts. Exhibit 2-2 (on the next page) contains examples of common liability accounts.

You might be confused by the difference between the asset account, *Accounts Receivable*, and the liability account, *Accounts Payable*. An easy way to remember the distinction between these two accounts involves the words *Receivable* and *Payable*. A *receivable* involves a future *receipt* of cash. A *payable* involves a future *payment* of cash.

Learning Objective 1

Explain accounts as they relate to the accounting equation and describe common accounts

Account

A detailed record of all increases and decreases that have occurred in an individual asset, liability, or equity during a specific period.

I get confused
by the difference
between Accounts
Receivable and
Accounts Payable.
Is there an easy
way to remember
these two accounts?




Exhibit 2-1 | Asset Accounts

Account Name	Explanation
Cash	A business's money. Includes bank balances, bills, coins, and checks.
Accounts Receivable	A customer's promise to pay in the future for services or goods sold. Often described as "On Account."
Notes Receivable	A <i>written</i> promise that a customer will pay a fixed amount of money and <i>interest</i> by a certain date in the future. Usually more formal than an Accounts Receivable.
Prepaid Expense	A payment of an expense in advance. It is considered an asset because the prepayment provides a benefit in the future. Examples of prepaid expenses are <i>Prepaid Rent</i> , <i>Prepaid Insurance</i> , and <i>Office Supplies</i> .
Land	The cost of land a business uses in operations.
Building	The cost of an office building, a store, or a warehouse.
Equipment, Furniture, and Fixtures	The cost of equipment, furniture, and fixtures (such as light fixtures and shelving). A business has a separate asset account for each type.

Exhibit 2-2 | Liability Accounts

Account Name	Explanation
Accounts Payable	A promise made by the business to pay a debt in the future. Arises from a credit purchase.
Notes Payable	A <i>written</i> promise made by the business to pay a debt, usually involving <i>interest</i> , in the future.
Accrued Liability	An amount owed but not paid. A specific type of payable such as <i>Taxes Payable</i> , <i>Rent Payable</i> , and <i>Salaries Payable</i> .
Unearned Revenue	Occurs when a company receives cash from a customer but has not provided the product or service. The promise to provide services or deliver goods in the future.

Notes Payable

A *written* promise made by the business to pay a debt, usually involving *interest*, in the future.

Accrued Liability

A liability for which the business knows the amount owed but the bill has not been paid.

Unearned Revenue

A liability created when a business collects cash from customers in advance of providing services or delivering goods.



Equity

The stockholders' claim to the assets of the business is called *equity* or *stockholders' equity*. As shown in Exhibit 2-3, a company has separate accounts for each element of equity.

Exhibit 2-3 | Equity Accounts

Account Name	Explanation
Common Stock	Represents the net contributions of the stockholders in the business. Increases equity.
Dividends	Distributions of cash or other assets to the stockholders. Decreases equity.
Revenues	Earnings that result from delivering goods or services to customers. Increases equity. Examples include <i>Service Revenue</i> and <i>Rent Revenue</i> .
Expenses	The cost of selling goods or services. Decreases equity. Examples include <i>Rent Expense</i> , <i>Salaries Expense</i> , and <i>Utilities Expense</i> .

Chart of Accounts

Companies need a way to organize their accounts. They use a **chart of accounts** to do this. A chart of accounts lists all company accounts along with the account numbers. The chart of accounts for Smart Touch Learning appears in Exhibit 2-4. Account numbers are just shorthand versions of the account names. One account number equals one account name—just like your Social Security number is unique to you.

Chart of Accounts

A list of all of a company's accounts with their account numbers.

Exhibit 2-4 | Chart of Accounts—Smart Touch Learning

Balance Sheet and Statement of Retained Earnings Accounts		
Assets	Liabilities	Equity
101 Cash	201 Accounts Payable	301 Common Stock
111 Accounts Receivable	211 Salaries Payable	311 Retained Earnings
121 Notes Receivable	221 Interest Payable	321 Dividends
141 Office Supplies	231 Unearned Revenue	
151 Land	241 Notes Payable	
171 Building		
191 Furniture		
Income Statement Accounts (Part of Equity)		
Revenues		Expenses
401 Service Revenue		501 Rent Expense
411 Interest Revenue		511 Salaries Expense
		521 Utilities Expense
		531 Advertising Expense



It can be confusing to choose the correct account to use when there are multiple accounts that sound similar. As an example, let's think about rent. There are four types of rent accounts: Prepaid Rent (asset), Rent Payable (liability), Rent Revenue (equity), or Rent Expense (equity). It is important that we understand the definition of each type of account so that we can use the account correctly. Prepaid Rent represents a prepayment of cash for renting a building in the future. Rent Payable represents a debt owed for renting a building currently, and Rent Expense represents the cost of renting a building currently. Rent Revenue, on the other hand, relates to the earning of revenue related to renting the building to a tenant currently.



Worldwide, accounting systems are based on the same equation: Assets = Liabilities + Equity. Or, in Spanish: Activos = Pasivos + Patrimonio Neto. And accounts are the building blocks for all accounting systems.

Ledger

The record holding all the accounts of a business, the changes in those accounts, and their balances.



What are the similarities and differences between a chart of accounts and a ledger?

Account numbers usually have two or more digits. Assets are often numbered beginning with 1, liabilities with 2, stockholders' equity with 3, revenues with 4, and expenses with 5. The second and third digits in an account number indicate where the account fits within the category. For example, if Smart Touch Learning is using three-digit account numbers, Cash may be account number 101, the first asset account. Accounts Receivable may be account number 111, the second asset. Accounts Payable may be account number 201, the first liability. When numbers are used, all accounts are numbered by this system. However, each company chooses its own account numbering system.

Notice in Exhibit 2-4 (on the previous page) the gap in account numbers between 121 and 141. Smart Touch Learning may need to add another asset account in the future. For example, the business may start selling some type of inventory and want to use account number 131 for Merchandise Inventory. So, the chart of accounts will change as the business evolves.

The chart of accounts varies from business to business, though many account names are common to all companies. For example, you will find Cash on every company's chart of accounts. The chart of accounts contains the list of account names you will use to record a transaction.

Ledger

In addition to a chart of accounts, companies need a way to show all of the increases and decreases in each account along with their balances. Companies use a **ledger** to fulfill this task. A ledger is a collection of all the accounts, the changes in those accounts, and their balances. **A chart of accounts and a ledger are similar in that they both list the account names and account numbers of the business. A ledger, though, provides more detail. It includes the increases and decreases of each account for a specific period and the balance of each account at a specific point in time.**

Try It!

Consider the following accounts and identify each as an asset (A), liability (L), or equity (E).

- | | |
|----------------------|-----------------------|
| 1. Rent Expense | 6. Accounts Payable |
| 2. Common Stock | 7. Unearned Revenue |
| 3. Furniture | 8. Notes Receivable |
| 4. Service Revenue | 9. Dividends |
| 5. Prepaid Insurance | 10. Insurance Expense |

Check your answers online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.



WHAT IS DOUBLE-ENTRY ACCOUNTING?

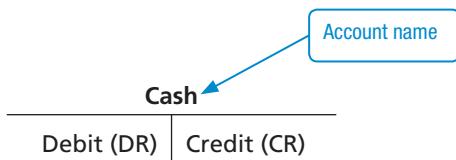
Previously you learned that every transaction must be recorded into at least two accounts. For example, when a stockholder contributes money in exchange for Common Stock, the two accounts involved are Cash and Common Stock. Accounting uses this **double-entry system** to record the dual effects of each transaction. A transaction would be incomplete if only one side were recorded.

Consider a cash purchase of office supplies. What are the dual effects? A cash purchase of office supplies:

1. Increases the account Office Supplies (the business received office supplies).
2. Decreases Cash (the business paid cash).

The T-Account

A shortened form of an account in the ledger is called the **T-account** because it takes the form of the capital letter *T*. The vertical line divides the account into its left and right sides, with the account name at the top. For example, the Cash T-account appears as follows:



The left side of the T-account is called the **debit** side, and the right side is called the **credit** side. To become comfortable using these terms, remember the following: Debits go on the left; credits go on the right. Debit is abbreviated as DR, and Credit is abbreviated as CR.

Increases and Decreases in the Accounts

How we record increases and decreases to an account is determined by the account type (asset, liability, or equity). For any given account, increases are recorded on one side and decreases are recorded on the opposite side. The following T-accounts provide a summary:

ASSETS	+ LIABILITIES	+ EQUITY
↑ Debit ↓ Credit	↓ Debit ↑ Credit	↓ Debit ↑ Credit

In other words, assets are always increased with a *debit* and decreased with a *credit*. Liabilities and equity are always increased with a *credit* and decreased with a *debit*. Whether an account is increased or decreased by a debit or a credit depends on the type of account. Debits are not “good” or “bad.” Neither are credits. Debits are not always increases or always decreases—neither are credits. **The only thing a designation as a debit or credit means is where the item is placed—on the left or right side of the T-account.**

In a computerized accounting information system, the computer interprets debits and credits as increases or decreases, based on the account type. For example, a computer reads a debit to Cash as an increase because it is an asset account. The computer reads a debit to Accounts Payable as a decrease because it is a liability account.

Learning Objective 2

Define debits, credits, and normal account balances using double-entry accounting and T-accounts

Double-Entry System

A system of accounting in which every transaction affects at least two accounts.

T-Account

A summary device that is shaped like a capital *T* with debits posted on the left side of the vertical line and credits on the right side of the vertical line.

Debit

The left side of a T-account.

Credit

The right side of a T-account.

I always thought that a debit meant decrease and a credit meant increase. Am I wrong?





Example: Assume a business wants to record an increase of \$30,000 to the Cash account. The business would record a debit to Cash as follows:

Cash	
Debit	30,000

Cash is an asset account and, remember, asset accounts are increased with debits.

Example: What if the business, instead, wanted to record a decrease of \$20,000 to the Cash account? The business would record a credit to Cash because Cash is an asset account and asset accounts are decreased with credits:

Cash	
20,000	Credit

Expanding the Rules of Debit and Credit

As we have noted, equity contains four account types: Common Stock, Dividends, Revenues, and Expenses. Common Stock and Revenues increase equity, whereas Dividends and Expenses decrease equity. We must now expand the accounting equation and the rules of debits and credits to include all elements of equity:

EQUITY																					
Contributed Capital						+	Retained Earnings														
ASSETS			LIABILITIES			+	Common Stock			-	Dividends			+	Revenues			-	Expenses		
↑ Debit	↓ Credit		↓ Debit	↑ Credit			↓ Debit	↑ Credit			↑ Debit	↓ Credit		↓ Debit	↑ Credit			↑ Debit	↓ Credit		

Notice in the expanded accounting equation that Dividends and Expenses record increases and decreases opposite of Common Stock and Revenues. This is because increases in Dividends and Expenses decrease equity.

The Normal Balance of an Account

Normal Balance

The balance that appears on the increase side of an account.

All accounts have a normal balance. An account's **normal balance** appears on the side—either debit or credit—where we record an *increase* (↑) in the account's balance. For example, assets are increased with a debit, so the normal balance is a debit. Liabilities are increased with a credit, so the normal balance is a credit. Expenses and Dividends are equity accounts that have normal debit balances—unlike the other equity accounts. They have debit balances because they decrease equity. Common Stock and Revenues have a normal balance of credit. Let's look again at the accounting equation, this time with the normal balances marked:

EQUITY																					
Contributed Capital						+	Retained Earnings														
ASSETS			LIABILITIES			+	Common Stock			-	Dividends			+	Revenues			-	Expenses		
↑ Debit	↓ Credit		↓ Debit	↑ Credit			↓ Debit	↑ Credit			↑ Debit	↓ Credit		↓ Debit	↑ Credit			↑ Debit	↓ Credit		



An account with a normal debit balance may occasionally have a credit balance. That indicates a negative amount in the account. For example, Cash will have a credit balance if the business overdraws its bank account. Also, the liability, Accounts Payable—a normal credit balance account—could have a debit balance if the company overpays its accounts payable. In other cases, a non-normal account balance indicates an error. For example, a credit balance in Office Supplies, Furniture, or Buildings is an error because negative amounts of these assets make no sense.

Exhibit 2-5 summarizes the rules of debits and credits and the normal balances for each account type.

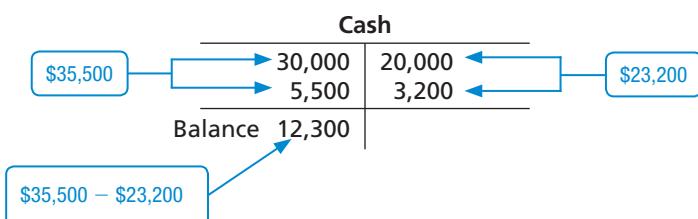
Exhibit 2-5 | Rules of Debits and Credits and Normal Balances for Each Account Type

Account Type	Increases	Decreases	Normal Balance
Assets	Debit	Credit	Debit
Expenses	Debit	Credit	Debit
Dividends	Debit	Credit	Debit
Liabilities	Credit	Debit	Credit
Revenues	Credit	Debit	Credit
Common Stock	Credit	Debit	Credit

An easy way to remember the rules of debits and credits is to memorize this helpful sentence. All elephants do love rowdy children. The first three words in the sentence will help you remember that assets, expenses, and dividends all have normal debit balances. The last three words in the sentence will remind you that liabilities, revenues, and common stock all have normal credit balances.

Determining the Balance of a T-Account

T-accounts can be used to determine the amount remaining in an account or the *balance* of the account. To illustrate, let's look at the following Cash T-Account:



The balance of this Cash account is \$12,300. This is calculated by adding each side of the account separately (\$35,500 and \$23,200) and then subtracting the smaller number from the larger number (\$35,500 – \$23,200). The balance (\$12,300) is always reported on the side with the larger number.



Try It!

For each account, identify if the change would be recorded as a debit (DR) or credit (CR).

- | | |
|-------------------------------------|----------------------------------|
| 11. Increase to Cash | 16. Increase to Interest Revenue |
| 12. Decrease to Accounts Payable | 17. Increase to Rent Expense |
| 13. Increase to Common Stock | 18. Decrease to Office Supplies |
| 14. Increase to Unearned Revenue | 19. Increase to Prepaid Rent |
| 15. Decrease to Accounts Receivable | 20. Increase to Notes Payable |

Check your answers online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercises S2-2 through S2-4. [Pearson MyLab Accounting](#)

HOW DO YOU RECORD TRANSACTIONS?

Learning Objective 3

Record transactions in a journal and post journal entries to the ledger

Source Document

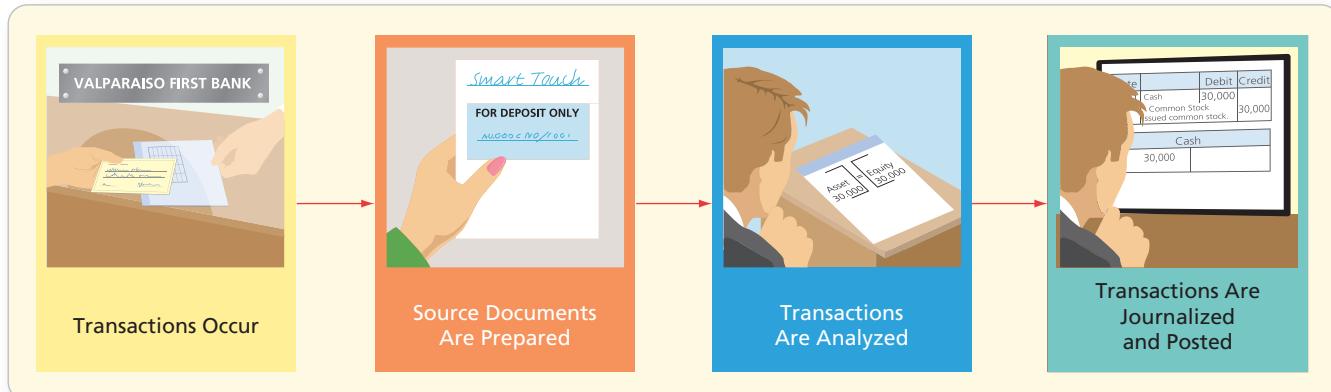
Provides the evidence and data for accounting transactions.

When we reviewed the activity for Smart Touch Learning, we provided you with the transactions. In a real-world business, because of the faithful representation concept, accountants would need to provide evidence for those transactions.

Source Documents—The Origin of the Transactions

Accountants use **source documents** to provide the evidence and data for recording transactions. For example, consider Sheena Bright's contribution of \$30,000 to the business. Exhibit 2-6 illustrates the transaction. In that exhibit, Smart Touch Learning received \$30,000 and deposited it in the bank. The business then gave common stock to Sheena Bright. The check received and the bank deposit slip are the source documents that show the amount of cash received by the business and the equity contribution of the stockholder, Sheena Bright. Based on these documents, the business can determine how to record this transaction.

Exhibit 2-6 | Flow of Accounting Data





ETHICS

Are receipts really important?

Elijah Morris, assistant manager for Red's American Burger Restaurant, is responsible for purchasing equipment and supplies for the restaurant. Elijah recently purchased a \$4,000 commercial-grade refrigerator for the restaurant, but he can't find the receipt. Elijah purchased the refrigerator with personal funds and is asking to be reimbursed by the restaurant. Hannah, the restaurant's accountant, has said that she is unsure if the business can reimburse Elijah without a receipt. Elijah suggests: "Hannah, it won't really matter if I have a receipt or not. You've seen the refrigerator in the restaurant, so you know I purchased it. What difference is a little receipt going to make?"

What should Hannah do? What would you do?

Solution

Hannah should not reimburse Elijah until she receives the receipt—the source document. Elijah could have purchased the refrigerator for less than the amount he is asking in reimbursement. Source documents provide the evidence of the amount of the transaction. If either an auditor or the owner of the restaurant investigated the \$4,000 purchase, he or she would need to see the source document to verify the transaction. If Elijah truly cannot find the receipt, Hannah should ask for an alternative source document such as a credit card or bank statement that shows evidence of the purchase. In addition, Elijah should be warned about using personal funds to purchase equipment for the business.

Other source documents that businesses use include the following:

- **Purchase invoices.** Documents that tell the business how much and when to pay a vendor for purchases on account, such as office supplies.
- **Bank checks.** Documents that illustrate the amount and date of cash payments.
- **Sales invoices.** Documents provided to clients when a business sells services or goods; tells the business how much revenue to record.

Journalizing and Posting Transactions

After accountants review the source documents, they are then ready to record the transactions. Transactions are first recorded in a **journal**, which is the record of transactions in date order.

Journalizing a transaction records the data only in the journal—not in the ledger (the record holding all of the accounts of a business). The data must also be transferred to the ledger. The process of transferring data from the journal to the ledger is called **posting**. We post from the journal to the ledger. Debits in the journal are posted as debits in the ledger and credits as credits—no exceptions.

The following diagram shows this process:

Journal

A record of transactions in date order.

Posting

Transferring data from the journal to the ledger.

Date		Debit	Credit
Nov.1	Cash Common Stock Issued common stock.	30,000	30,000

Transactions are recorded in a journal.

Cash	
30,000	

Data is posted (transferred) to the ledger.

Common Stock	
	30,000



You have learned steps to use when analyzing accounting transactions. Use a modified version of those steps to help when recording transactions in the journal and then posting the journal entries to the ledger. The journalizing and posting process has five steps:

Step 1: Identify the accounts and the account type (asset, liability, or equity).

Step 2: Decide whether each account increases or decreases, then apply the rules of debits and credits.

Step 3: Record the transaction in the journal.

Step 4: Post the journal entry to the ledger.

Step 5: Determine whether the accounting equation is in balance.

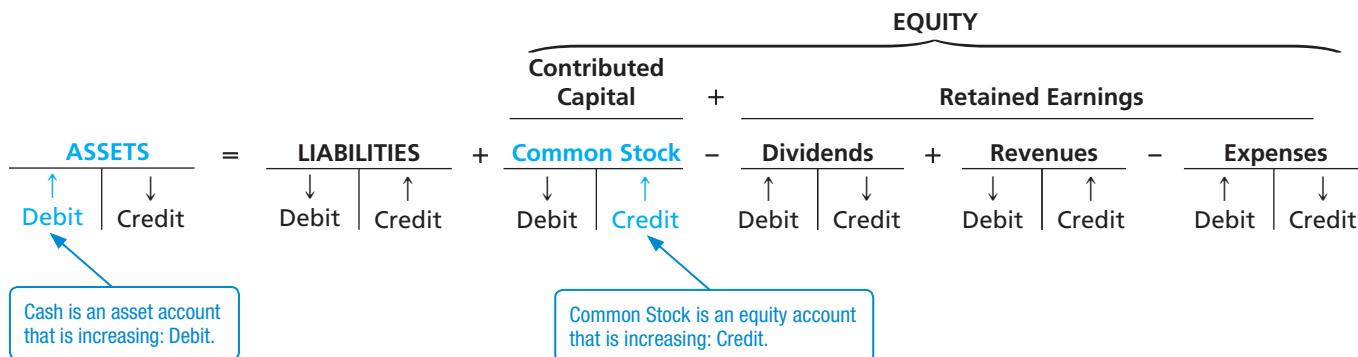
Let's begin by journalizing the first transaction of Smart Touch Learning.

Transaction 1—Stockholder Contribution

On November 1, the e-learning company received \$30,000 cash from Sheena Bright and the business issued common stock to her.

Step 1: Identify the accounts and the account type. The two accounts involved are Cash (Asset) and Common Stock (Equity).

Step 2: Decide whether each account increases or decreases, then apply the rules of debits and credits. Both accounts increase by \$30,000. Reviewing the rules of debits and credits, we use the accounting equation to help determine debits and credits for each account. Cash is an asset account and is increasing, so we will record a debit to Cash. Common Stock is an equity account and is increasing, so we will record a credit to Common Stock.



Step 3: Record the transaction in the journal. The recording of a transaction in the journal creates a journal entry. The journal entry for Transaction 1 is illustrated below. Notice that each journal entry contains four parts.

1. Date of the transaction.

2. Debit account name and dollar amount.

Date	Accounts and Explanation		Debit	Credit
Nov. 1	Cash		30,000	
	Common Stock			30,000
	Issued common stock.			

4. Brief explanation.

3. Credit account name and dollar amount. The credit account name is indented.

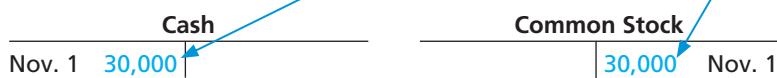
$$\left\{ \begin{array}{l} A \uparrow \\ \text{Cash} \uparrow \\ L \\ \text{Common Stock} \uparrow \end{array} \right. + E \uparrow$$



Step 4: Post the journal entry to the ledger. When transactions are posted from the journal to the ledger, the dollar amount is transferred from the debit and credit columns to the specific account. The date of the journal entry is also transferred to the T-accounts in the ledger. In a computerized system, this step is completed automatically when the transaction is recorded in the journal.

Date	Accounts and Explanation	Debit	Credit
Nov. 1	Cash		30,000
	Common Stock		
	<i>Issued common stock.</i>		30,000

$$\begin{array}{c} \text{A}\uparrow \\ \text{Cash}\uparrow \end{array} = \left\{ \begin{array}{l} \text{L} \\ + \text{E}\uparrow \\ \text{Common Stock}\uparrow \end{array} \right\}$$



Step 5: Determine if the accounting equation is in balance.

$$\begin{array}{c} \text{ASSETS} \\ \text{Cash} \\ (1) + 30,000 \end{array} = \left\{ \begin{array}{l} \text{LIABILITIES} \\ + \text{EQUITY} \\ \text{Common Stock} \\ + 30,000 \end{array} \right\}$$

To help reinforce your learning of the account types, we will illustrate the transaction in the margin. We will indicate the accounts and account type (Step 1) and whether each account is increasing or decreasing (Step 2). These notations would not normally show up in a journal, but we have included them here to reinforce the rules of debits and credits.

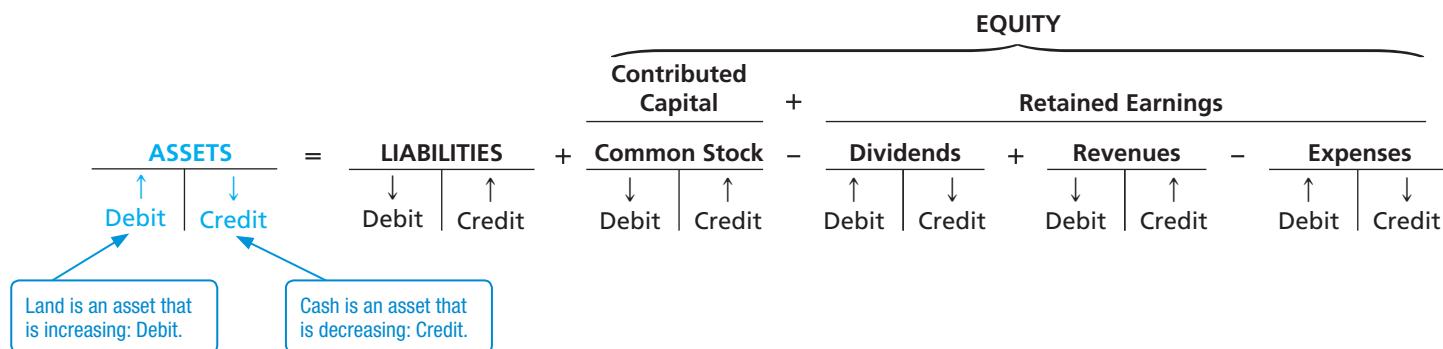
Let's look at Transaction 2 for Smart Touch Learning and apply the steps we just learned.

Transaction 2—Purchase of Land for Cash

On November 2, Smart Touch Learning paid \$20,000 cash for land.

Step 1: Identify the accounts and the account type. The two accounts involved are Cash (Asset) and Land (Asset).

Step 2: Decide whether each account increases or decreases, then apply the rules of debits and credits. Cash decreases. The business paid cash. Therefore, we credit Cash. The land increased, so we debit the Land account.





Step 3: Record the transaction in the journal.

$$\begin{array}{c} \text{A}\uparrow \\ \text{Land}\uparrow \\ \text{Cash}\downarrow \end{array} \left\{ \begin{array}{c} \text{L} \\ + \end{array} \right. \quad \left\{ \begin{array}{c} \text{E} \end{array} \right.$$

Date	Accounts and Explanation	Debit	Credit
Nov. 2	Land	20,000	
	Cash		20,000
	<i>Paid cash for land.</i>		

Step 4: Post the journal entry to the ledger.

Cash		Land	
Nov. 1	30,000	20,000	Nov. 2

Step 5: Determine whether the accounting equation is in balance.

<u>ASSETS</u>		=	<u>LIABILITIES</u>	<u>EQUITY</u>
Cash	+ Land			
Bal. \$30,000				+ Common Stock
(2) -20,000	+20,000			\$30,000
Bal. \$10,000	+ \$20,000			
				\$30,000

We will now record journal entries for several more transactions for Smart Touch Learning. Now that you understand the steps, try to write the steps yourself before looking at the journal entry. Remember, if you need help, we'll provide the effect on the accounting equation in the margin.

Transaction 3—Purchase of Office Supplies on Account

Smart Touch Learning buys \$500 of office supplies on account on November 3.

The supplies will benefit Smart Touch Learning in future periods, so they are an asset to the company until they are used. The asset Office Supplies increased, so we debit Office Supplies. The liability Accounts Payable increased, so we credit Accounts Payable.

$$\begin{array}{c} \text{A}\uparrow \\ \text{Office} \\ \text{Supplies}\uparrow \end{array} \left\{ \begin{array}{c} \text{L}\uparrow \\ \text{Accounts} \\ \text{Payable}\uparrow \end{array} \right. + \quad \left. \begin{array}{c} \text{E} \end{array} \right.$$

Date	Accounts and Explanation	Debit	Credit
Nov. 3	Office Supplies	500	
	Accounts Payable		500
	<i>Purchased office supplies on account.</i>		

Office Supplies		Accounts Payable	
Nov. 3	500		500



Transaction 4—Earning of Service Revenue for Cash

On November 8, Smart Touch Learning collected cash of \$5,500 for service revenue that the business earned by providing e-learning services for clients.

The asset Cash increased, so we debit Cash. Revenue increased, so we credit Service Revenue.

Date	Accounts and Explanation	Debit	Credit
Nov. 8	Cash	5,500	
	Service Revenue		5,500
<i>Performed services and received cash.</i>			

$$\frac{A \uparrow}{\text{Cash} \uparrow} = \left\{ \begin{array}{l} L + E \uparrow \\ \text{Service} \\ \text{Revenue} \uparrow \end{array} \right.$$

Cash			Service Revenue		
Nov. 1	30,000	20,000	Nov. 2		
Nov. 8		5,500		5,500	Nov. 8

Transaction 5—Earning of Service Revenue on Account

On November 10, Smart Touch Learning performed services for clients, for which the clients will pay the company later. The business earned \$3,000 of service revenue on account.

This transaction increased Accounts Receivable, so we debit this asset. Service Revenue is increased with a credit.

Date	Accounts and Explanation	Debit	Credit
Nov. 10	Accounts Receivable	3,000	
	Service Revenue		3,000
<i>Performed services on account.</i>			

$$\frac{A \uparrow}{\text{Accounts} \\ \text{Receivable} \uparrow} = \left\{ \begin{array}{l} L + E \uparrow \\ \text{Service} \\ \text{Revenue} \uparrow \end{array} \right.$$

Accounts Receivable		Service Revenue	
Nov. 10	3,000		5,500 Nov. 8
			3,000 Nov. 10

Notice the differences and the similarities between Transactions 4 and 5. In both transactions, Service Revenue was increased (credited) because in both cases the company had earned revenue. However, in Transaction 4, the company was paid at the time of service. In Transaction 5, on the other hand, the company will receive cash later (Accounts Receivable). This difference is key because the amount of revenue is not determined by when the company *receives* cash. Revenues are recorded when the company *does* the work or provides the service.

Transaction 6—Payment of Expenses with Cash

Smart Touch Learning paid the following cash expenses on November 15: office rent, \$2,000, and employee salaries, \$1,200. We need to debit each expense account to record its increase and credit Cash, an asset, for the total decrease.



$$\begin{array}{c} \text{A} \\ \downarrow \\ \text{Cash} \\ \left\{ \begin{array}{l} \text{L} + \text{E} \\ \text{Rent} \\ \text{Expense} \uparrow \\ \text{Salaries} \\ \text{Expense} \uparrow \end{array} \right. \end{array}$$

Date	Accounts and Explanation	Debit	Credit
Nov. 15	Rent Expense	2,000	
	Salaries Expense	1,200	
	Cash		3,200
<i>Paid cash expenses.</i>			

Cash				Rent Expense	
Nov. 1	30,000	20,000	Nov. 2	Nov. 15	2,000
Nov. 8	5,500	3,200	Nov. 15		
Salaries Expense					
			Nov. 15	1,200	

Compound Journal Entry

A journal entry that is characterized by having multiple debits and/or multiple credits.

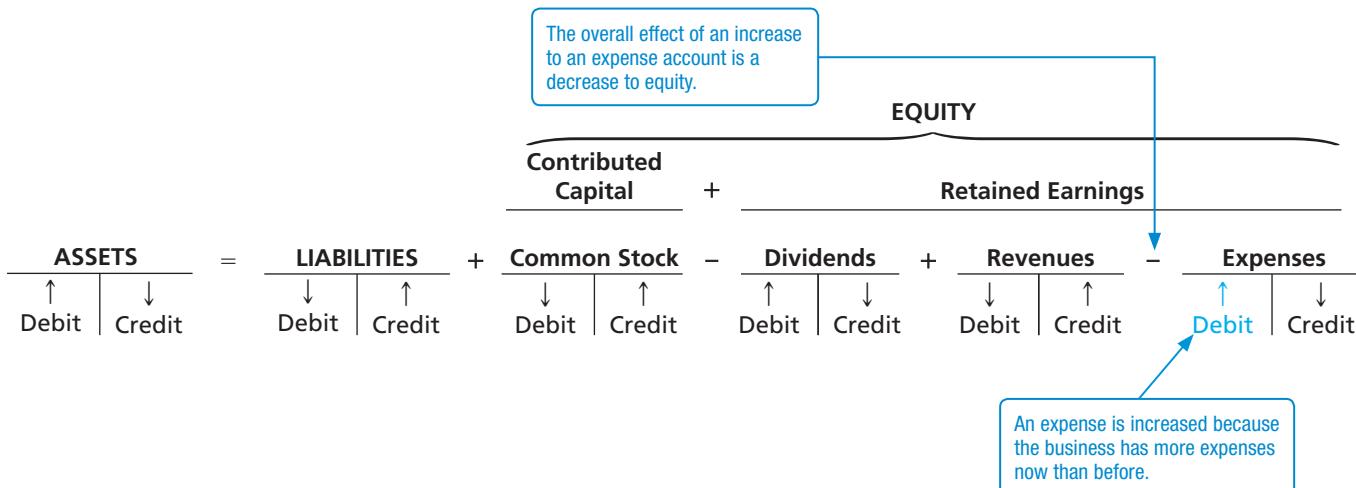


I thought expenses decreased equity, but we are debiting the expense that records an increase to the account.

Notice that the journal entry has three accounts involved—two debits and one credit. This is a compound journal entry. A **compound journal entry** has more than two accounts, but the total dollar value of the debits still must equal the total dollar value of the credits.

Before we move to the next transaction, let's take a moment to carefully look at expenses. In Transaction 6, we recorded a debit to each expense account. The accounting equation and the rules of debits and credits state that a debit to an expense account increases the account.

We are recording an increase to the expense account because the business has more expenses now than it had before. But, remember, the overall effect on the accounting equation is that increases in expenses decrease equity. An easy way to think about it is that we are increasing a negative account.



Transaction 7—Payment on Account (Accounts Payable)

On November 21, Smart Touch Learning paid \$300 on the accounts payable created in Transaction 3. The payment decreased cash, an asset, so we credit Cash. The payment decreased Accounts Payable, so we debit that liability.



Date	Accounts and Explanation	Debit	Credit
Nov. 21	Accounts Payable	300	
	Cash		300
	Paid cash on account.		

$$\frac{A \downarrow}{\text{Cash} \downarrow} = \left\{ \begin{array}{l} L \downarrow + E \\ \text{Accounts} \\ \text{Payable} \downarrow \end{array} \right\}$$

Cash			Accounts Payable		
Nov. 1	30,000	20,000	Nov. 2	Nov. 21	300 500 Nov. 3
Nov. 8	5,500	3,200	Nov. 15		
		300	Nov. 21		

Notice that after recording this transaction and posting to the Accounts Payable account, the balance of Accounts Payable is \$200 (\$500 – \$300). This is the new balance that the business owes to its creditor.

Transaction 8—Collection on Account (Accounts Receivable)

On November 22, Smart Touch Learning collected \$2,000 cash from a client in Transaction 5. Cash is increased, so we debit the asset Cash. Accounts Receivable, also an asset, is decreased, so we credit Accounts Receivable. *Note:* This transaction has no effect on revenue; the related revenue was recorded in Transaction 5.

Date	Accounts and Explanation	Debit	Credit
Nov. 22	Cash	2,000	
	Accounts Receivable		2,000
	Received cash on account.		

$$\frac{A \uparrow}{\text{Cash} \uparrow} = \left\{ \begin{array}{l} L + E \\ \text{Accounts} \\ \text{Receivable} \downarrow \end{array} \right\}$$

Cash			Accounts Receivable		
Nov. 1	30,000	20,000	Nov. 2	Nov. 10	3,000 2,000 Nov. 22
Nov. 8	5,500	3,200	Nov. 15		
Nov. 22	2,000	300	Nov. 21		

Transaction 9—Payment of Cash Dividend

On November 25, a payment of \$5,000 cash was paid for dividends. The dividend decreased the entity's cash, so we credit Cash. The dividend also decreased equity. Decreases in equity that result from dividends are debited to the Dividends account.

Date	Accounts and Explanation	Debit	Credit
Nov. 25	Dividends	5,000	
	Cash		5,000
	Paid dividends.		

$$\frac{A \downarrow}{\text{Cash} \downarrow} = \left\{ \begin{array}{l} L + E \downarrow \\ \text{Dividends} \uparrow \end{array} \right\}$$

Cash			Dividends		
Nov. 1	30,000	20,000	Nov. 2	Nov. 25	5,000
Nov. 8	5,500	3,200	Nov. 15		
Nov. 22	2,000	300	Nov. 21		
		5,000	Nov. 25		



Transaction 10—Prepaid Expenses

On December 1, Smart Touch Learning prepays three months' office rent of \$3,000 (\$1,000 per month \times 3 months). The prepayment of the rent is recorded to the Prepaid Rent account (Asset). It is recorded as an asset because Smart Touch Learning will receive a benefit in the future. The asset, Prepaid Rent, is increasing, so we will need to debit it. Cash is decreasing and will be recorded as a credit.

$$\begin{array}{c} \text{A}\downarrow \\ \text{Prepaid} \\ \text{Rent}\uparrow \\ \text{Cash}\downarrow \end{array} \left\{ \begin{array}{c} \text{L} \\ + \\ \text{E} \end{array} \right\}$$

Date	Accounts and Explanation			Debit	Credit
Dec. 1	Prepaid Rent			3,000	
	Cash				3,000
<i>Paid rent in advance.</i>					

Cash			Prepaid Rent		
Nov. 1	30,000	20,000	Nov. 2	Dec. 1	3,000
Nov. 8	5,500	3,200	Nov. 15		
Nov. 22	2,000	300	Nov. 21		
		5,000	Nov. 25		
		3,000	Dec. 1		

Transaction 11—Payment of Expense with Cash

On December 1, Smart Touch Learning paid employee salaries of \$1,200. Salaries Expense will be debited to record its increase, and Cash will be credited for the decrease.

$$\begin{array}{c} \text{A}\downarrow \\ \text{Cash}\downarrow \end{array} \left\{ \begin{array}{c} \text{L} \\ + \\ \text{E}\downarrow \\ \text{Salaries} \\ \text{Expense}\uparrow \end{array} \right\}$$

Date	Accounts and Explanation			Debit	Credit
Dec. 1	Salaries Expense			1,200	
	Cash				1,200
<i>Paid salaries.</i>					

Cash			Salaries Expense		
Nov. 1	30,000	20,000	Nov. 2	Nov. 15	1,200
Nov. 8	5,500	3,200	Nov. 15	Dec. 1	1,200
Nov. 22	2,000	300	Nov. 21		
		5,000	Nov. 25		
		3,000	Dec. 1		
		1,200	Dec. 1		

Transaction 12—Purchase of Building with Notes Payable

On December 1, Smart Touch Learning purchased a \$60,000 building in exchange for a note payable. The building will benefit the business in the future, so it is recorded as an asset to the company. The asset Building is increased, so we debit Building. The liability Notes Payable increased, so we credit Notes Payable.



Date	Accounts and Explanation	Debit	Credit
Dec. 1	Building	60,000	
	Notes Payable		60,000
<i>Purchased building with note.</i>			

$$\frac{A \uparrow}{\text{Building} \uparrow} = \left\{ \begin{array}{l} \frac{L \uparrow}{\text{Notes}} + \frac{E \downarrow}{\text{Payable} \uparrow} \\ \text{Notes} \\ \text{Payable} \end{array} \right\}$$

Building		Notes Payable	
Dec. 1	60,000		60,000 Dec. 1

Transaction 13—Stockholder Contribution

On December 2, Smart Touch Learning received a contribution of furniture with a fair market value of \$18,000 from Sheena Bright. In exchange, Smart Touch Learning issued common stock. The furniture will benefit the company in the future, so it is recorded as an asset. The asset Furniture is increasing, so we debit it. Common Stock, an equity account, is also increasing and is recorded as a credit.

Date	Accounts and Explanation	Debit	Credit
Dec. 2	Furniture	18,000	
	Common Stock		18,000
<i>Received furniture in exchange for common stock.</i>			

$$\frac{A \uparrow}{\text{Furniture} \uparrow} = \left\{ \begin{array}{l} \frac{L \uparrow}{\text{Common}} + \frac{E \uparrow}{\text{Stock} \uparrow} \\ \text{Common} \\ \text{Stock} \end{array} \right\}$$

Furniture		Common Stock	
Dec. 2	18,000	30,000 Nov. 1 18,000 Dec. 2	

Transaction 14—Accrued Liability

On December 15, Smart Touch Learning received a telephone bill for \$100 and will pay this expense next month. There is no cash payment now. This is an accrued liability. Remember, an accrued liability is a liability for which the business knows the amount owed, but the bill has not been paid. The Utilities Expense increased, so we debit this expense. The liability (Utilities Payable) increased, so we credit Utilities Payable. Alternatively, we could credit Accounts Payable instead of Utilities Payable.

Date	Accounts and Explanation	Debit	Credit
Dec. 15	Utilities Expense	100	
	Utilities Payable		100
<i>Accrued utility liability.</i>			

$$\frac{A}{\text{Utilities Payable} \uparrow} = \left\{ \begin{array}{l} \frac{L \uparrow}{\text{Utilities}} + \frac{E \downarrow}{\text{Expense} \uparrow} \\ \text{Utilities} \\ \text{Payable} \\ \text{Expense} \end{array} \right\}$$

Utilities Payable		Utilities Expense	
100	Dec. 15	Dec. 15	100



Transaction 15—Payment of Expense with Cash

On December 15, Smart Touch Learning paid employee salaries of \$1,200. Salaries Expense will be debited to record its increase, and Cash will be credited for the decrease.

$$\left. \begin{array}{c} A \downarrow \\ \text{Cash} \downarrow \end{array} \right\} = \left\{ \begin{array}{c} L \quad + \quad E \downarrow \\ \text{Salaries} \\ \text{Expense} \uparrow \end{array} \right.$$

Date	Accounts and Explanation			Debit	Credit
Dec. 15	Salaries Expense			1,200	
	Cash				1,200
	<i>Paid salaries.</i>				

Cash				Salaries Expense	
Nov. 1	30,000	20,000	Nov. 2	Nov. 15	1,200
Nov. 8	5,500	3,200	Nov. 15	Dec. 1	1,200
Nov. 22	2,000	300	Nov. 21	Dec. 15	1,200
		5,000	Nov. 25		
		3,000	Dec. 1		
		1,200	Dec. 1		
		1,200	Dec. 15		

Transaction 16—Unearned Revenue

On December 21, a law firm engages Smart Touch Learning to provide e-learning services and agrees to pay \$600 in advance. Smart Touch Learning received cash but has not yet performed the services. Cash increased, so we debit Cash. The promise to perform services in the future will be recorded as Unearned Revenue, a liability account. Unearned Revenue is increasing, so we credit it. Notice that we did not record revenue. Revenue is not recorded until Smart Touch Learning provides the services.

$$\left. \begin{array}{c} A \uparrow \\ \text{Cash} \uparrow \end{array} \right\} = \left\{ \begin{array}{c} L \uparrow \quad + \quad E \\ \text{Unearned} \\ \text{Revenue} \uparrow \end{array} \right.$$

Date	Accounts and Explanation			Debit	Credit
Dec. 21	Cash			600	
	Unearned Revenue				600
	<i>Collected cash for future services.</i>				

Cash				Unearned Revenue	
Nov. 1	30,000	20,000	Nov. 2		600
Nov. 8	5,500	3,200	Nov. 15		Dec. 21
Nov. 22	2,000	300	Nov. 21		
Dec. 21	600	5,000	Nov. 25		
		3,000	Dec. 1		
		1,200	Dec. 1		
		1,200	Dec. 15		



TYING IT ALL TOGETHER

Fry's Electronics, Inc. was founded in 1985 in Sunnyvale, California, and has grown to 34 stores in 9 different states. The majority of its stores can be found in California and Texas. Fry's sells more than 50,000 electronic items, such as computers, tablets, mobile devices, and car electronics. Fry's Electronics also provides technical services, such as in-home installation of security systems, home theaters, and home networks. In addition, Fry's provides technical support for its customers.

Suppose Fry's Electronics rents the retail space where one of its stores is located. Due to an excess of cash, Fry's decides to prepay the next 6 months rent, totaling \$24,000. How would this transaction be recorded by Fry's?

The prepayment of rent expense would be recorded as Prepaid Rent. Prepaid Rent is an asset account that represents payment of an expense in advance. Fry's would record a journal entry as follows:

Date	Accounts and Explanation	Debit	Credit
	Prepaid Rent	24,000	
	Cash		24,000

Why is the prepayment of expenses considered an asset? On what financial statement would the account, Prepaid Rent, be reported?

Prepayment of expenses are considered assets because the prepayment provides a benefit in the future. The rent expense will not be recorded until the monthly rental occurs. Prepaid Rent is reported on the Balance Sheet in the asset section.

Suppose Fry's Electronics rents the retail space from HDK Investments. How would HDK Investments record the receipt of cash for prepaid rent?

HDK Investments would record the receipt of cash as Unearned Revenue. The prepayment of rent would be recorded as unearned revenue because the rental service has not yet been provided. HDK Investments cannot record the prepayment as revenue until the monthly rent has been provided. HDK Investments would record a journal entry as follows:

Date	Accounts and Explanation	Debit	Credit
	Cash	24,000	
	Unearned Revenue		24,000

Notice that when Fry's Electronics recorded the payment of cash, it was a decrease to the asset which is a credit to Cash. However, when HDK Investments recorded the receipt of cash, it was an increase to the asset which is a debit to Cash. A payment of Cash by one business is a receipt of Cash by another.

Instead of prepaying expenses, what else could Fry's Electronics do with its excess cash?

If a company has excess cash, there are several options they could consider. First, the company could keep the cash in a high-interest savings account and earn interest on the cash. The company could also consider investing the money in financial investments such as stocks or bonds. Another option the company should consider is paying down debt.

Transaction 17—Earning of Service Revenue for Cash

On December 28, Smart Touch Learning collected cash of \$8,000 for Service Revenue that the business earned by providing e-learning services for clients.

Date	Accounts and Explanation	Debit	Credit
Dec. 28	Cash	8,000	
	Service Revenue		8,000
<i>Performed services and received cash.</i>			

$$\left. \begin{array}{l} \text{A} \uparrow \\ \text{Cash} \uparrow \end{array} \right\} = \left\{ \begin{array}{l} \text{L} \downarrow + \text{E} \uparrow \\ \text{Service Revenue} \uparrow \end{array} \right\}$$

Cash				Service Revenue	
Nov. 1	30,000	20,000	Nov. 2	5,500	Nov. 8
Nov. 8	5,500	3,200	Nov. 15	3,000	Nov. 10
Nov. 22	2,000	300	Nov. 21	8,000	Dec. 28
Dec. 21	600	5,000	Nov. 25		
Dec. 28	8,000	3,000	Dec. 1		
		1,200	Dec. 1		
		1,200	Dec. 15		

The Ledger Accounts After Posting

Exhibit 2-7 (on the next page) shows the T-accounts of Smart Touch Learning after posting the journal entries from the journal to the ledger. The accounts are grouped



Exhibit 2-7 Smart Touch Learning's Accounts After Posting Journal Entries in November and December



under their headings. Notice that at December 31, Smart Touch Learning has assets of \$114,700 (\$12,200 + \$1,000 + \$500 + \$3,000 + \$18,000 + \$60,000 + \$20,000), liabilities of \$60,900 (\$200 + \$100 + \$600 + \$60,000), and equity of \$53,800 (\$48,000 - \$5,000 + \$16,500 - \$2,000 - \$3,600 - \$100). The accounting equation is in balance (\$114,700 = \$60,900 + \$53,800).

The Four-Column Account: An Alternative to the T-Account

The ledger accounts illustrated thus far appear as T-accounts, with the debits on the left and the credits on the right. The T-account clearly separates debits from credits and is used for teaching. An alternative to using the T-account is the four-column account. The four-column account still has debit and credit columns, but it also adds two additional columns that are used to determine a running balance. Exhibit 2-8 shows the Cash T-account and the Cash four-column account for Smart Touch Learning.

Exhibit 2-8 | T-Account Versus Four-Column Account

Cash						
Date	Item	Post Ref.	Debit	Credit	Balance	
					Debit	Credit
Nov. 1	30,000		20,000	Nov. 2		
Nov. 8	5,500		3,200	Nov. 15		
Nov. 22	2,000		300	Nov. 21		
Dec. 21	600		5,000	Nov. 25		
Dec. 28	8,000		3,000	Dec. 1		
			1,200	Dec. 1		
			1,200	Dec. 15		
Bal.	12,200					

CASH			Account No. 101			
Date	Item	Post Ref.	Debit	Credit	Balance	
					Debit	Credit
2018						
Nov. 1		J1	30,000		30,000	
Nov. 2		J1		20,000	10,000	
Nov. 8		J1	5,500		15,500	
Nov. 15		J1		3,200	12,300	
Nov. 21		J1		300	12,000	
Nov. 22		J1	2,000		14,000	
Nov. 25		J1		5,000	9,000	
Dec. 1		J2		3,000	6,000	
Dec. 1		J2		1,200	4,800	
Dec. 15		J2		1,200	3,600	
Dec. 21		J2	600		4,200	
Dec. 28		J2	8,000		12,200	

The first pair of Debit/Credit columns in the four-column account is for transaction amounts posted to the account from the journal, such as the \$30,000 debit. The second pair of Debit/Credit columns shows the balance of the account as of each date. Because the four-column format provides more information, it is used more often in practice than the T-account. Notice that the balance after the last transaction on December 28 is \$12,200, which is the same balance calculated in the T-account.



Do you notice the column labeled *Post Ref.* in the four-column account in Exhibit 2-8? This column is used in the posting process. When the information is transferred from the journal to the ledger, a posting reference (Post Ref.) is added. This allows a user of the financial data to trace the amount in the ledger back to the journal. In a computerized system, the user would be able to click on the posting reference to view the related journal entry. Exhibit 2-9 shows the posting and associated posting references for Transaction 1 of Smart Touch Learning. Remember, in a computerized environment, this process is completed automatically when the user enters the journal entry.

Exhibit 2-9 | Posting References

Try It!

21. EMB Consulting Services had the following transactions for the month of November. Journalize the transactions and include an explanation with each entry.

-
- | | |
|--------|--|
| Nov. 1 | The business received \$10,000 cash and issued common stock. |
| 15 | Purchased office supplies on account, \$400. |
| 18 | Paid advertising bill, \$150. |
| 20 | Received \$1,000 from customers for services rendered. |
| 28 | Cash dividends of \$500 were paid to stockholders. |
-

Check your answers online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.



WHAT IS THE TRIAL BALANCE?

After the transactions are recorded in the journal and then posted to the ledger, a **trial balance** can be prepared. The trial balance summarizes the ledger by listing all the accounts with their balances—assets first, followed by liabilities, and then equity. In a manual accounting system, the trial balance provides an accuracy check by showing whether total debits equal total credits. In all types of systems, the trial balance is a useful summary of the accounts and their balances because it shows the balances on a specific date for all accounts in a company's accounting system. Exhibit 2-10 is the trial balance of Smart Touch Learning at December 31, 2018.

Exhibit 2-10 | Trial Balance

SMART TOUCH LEARNING Trial Balance December 31, 2018		
Account Title	Balance	
	Debit	Credit
Cash	\$ 12,200	
Accounts Receivable	1,000	
Office Supplies	500	
Prepaid Rent	3,000	
Land	20,000	
Building	60,000	
Furniture	18,000	
Accounts Payable		\$ 200
Utilities Payable		100
Unearned Revenue		600
Notes Payable		60,000
Common Stock		48,000
Dividends	5,000	
Service Revenue		16,500
Rent Expense	2,000	
Salaries Expense	3,600	
Utilities Expense	100	
Total	\$ 125,400	\$ 125,400

Learning Objective 4

Prepare the trial balance and illustrate how to use the trial balance to prepare financial statements

Trial Balance

A list of all ledger accounts with their balances at a point in time.

The trial balance and the balance sheet are not the same. Make sure you understand the differences between these two documents. A trial balance verifies the equality of debits and credits and is an internal document used only by employees of the company. The balance sheet, on the other hand, presents the business's accounting equation and is a financial statement that can be used by both internal and external users.

Preparing Financial Statements from the Trial Balance

In addition to proving the equality of debits and credits, the trial balance is also used to prepare the financial statements. The account balances are taken directly from the trial balance and are used to prepare the income statement, statement of retained earnings, and balance sheet. In Exhibit 2-11 (on the next page), we present the financial statements for the two months ended December 31, 2018, for Smart Touch Learning.


Exhibit 2-11 | Smart Touch Learning's Financial Statements

SMART TOUCH LEARNING Income Statement Two Months Ended December 31, 2018		SMART TOUCH LEARNING Statement of Retained Earnings Two Months Ended December 31, 2018	
Revenues:		Retained Earnings, November 1, 2018	\$ 0
Service Revenue	\$ 16,500	Net income for the two months	10,800
Expenses:			10,800
Salaries Expense	\$ 3,600	Dividends	(5,000)
Rent Expense	2,000		
Utilities Expense	100	Retained Earnings, December 31, 2018	\$ 5,800
Total Expenses	5,700		
Net Income	\$ 10,800		

SMART TOUCH LEARNING Balance Sheet December 31, 2018			
Assets		Liabilities	
Cash	\$ 12,200	Accounts Payable	\$ 200
Accounts Receivable	1,000	Utilities Payable	100
Office Supplies	500	Unearned Revenue	600
Prepaid Rent	3,000	Notes Payable	60,000
Land	20,000	Total Liabilities	60,900
Building	60,000		
Furniture	18,000		
		Stockholders' Equity	
		Common Stock	48,000
		Retained Earnings	5,800
		Total Stockholders' Equity	53,800
Total Assets	\$ 114,700	Total Liabilities and Stockholders' Equity	\$ 114,700

Correcting Trial Balance Errors

Throughout the accounting process, total debits should always equal total credits. If they do not, there is an error. Computerized accounting systems eliminate many errors because most software will not let you make a journal entry that does not balance. But computers cannot *eliminate* all errors because humans can input the wrong data.

Balancing errors can be detected by computing the difference between total debits and total credits on the trial balance. Then perform one or more of the following actions:

- Search the trial balance for a missing account.** For example, suppose the accountant omitted the Dividends account from the trial balance in Exhibit 2-10. Total debits would then be \$120,400 ($\$125,400 - \$5,000$). Trace each account from the ledger to the trial balance, and you will locate the missing account.
- Divide the difference between total debits and total credits by 2.** A debit treated as a credit, or vice versa, doubles the amount of the error. Suppose the accountant posted a \$500 credit as a debit. Total debits contain the \$500, and total credits omit the \$500. The out-of-balance amount is \$1,000. Dividing the difference by 2 identifies the \$500



amount of the transaction. Then search the journal or ledger for a \$500 transaction and trace it to the account affected.

- Divide the out-of-balance amount by 9.** If the result is evenly divisible by 9, the error may be a *slide error* (example: writing \$1,000 as \$100 or writing \$100 as \$1,000) or a *transposition* (example: listing \$1,200 as \$2,100). Suppose, for example, that the accountant entered the \$5,000 Dividends as \$50,000 on the trial balance. This is a slide error. Total debits would differ from total credits by \$45,000 ($\$50,000 - \$5,000 = \$45,000$). Dividing \$45,000 by 9 yields \$5,000, the correct amount of the dividends. Look for an account in the ledger with a \$5,000 balance until you reach the Dividends account. You have then found the error.

Total debits can equal total credits on the trial balance; however, there still could be errors in individual account balances because an incorrect account might have been selected in an individual journal entry.

Try It!

22. Using the following accounts and their balances, prepare the trial balance for Cooper Furniture Repair as of December 31, 2018. All accounts have normal balances.

Cash	\$ 7,000	Advertising Expense	\$ 1,200
Unearned Revenue	4,500	Utilities Expense	800
Equipment	10,000	Rent Expense	5,000
Service Revenue	8,000	Accounts Payable	2,300
Common Stock	12,200	Dividends	3,000

Check your answers online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercise S2-8. [Pearson MyLab Accounting](#)

HOW DO YOU USE THE DEBT RATIO TO EVALUATE BUSINESS PERFORMANCE?

Previously you learned that evaluating a company's return on assets (Net income / Average total assets) can help in determining how well a company is performing. In this chapter, you learn about another tool that can be used when reviewing financial statements. The **debt ratio** shows the proportion of assets financed with debt and is calculated by dividing total liabilities by total assets. It can be used to evaluate a business's ability to pay its debts.

$$\text{Debt ratio} = \text{Total liabilities} / \text{Total assets}$$

Learning Objective 5

Use the debt ratio to evaluate business performance

Debt Ratio

Shows the proportion of assets financed with debt.
 $\text{Total liabilities} / \text{Total assets}$.

Think about the accounting equation (Assets = Liabilities + Equity). The equation shows who can claim the assets. The liabilities represent the claims of the creditors, and the equity represents the claims of the stockholders. Companies that have a high percentage of liabilities are at greater risk of default. If they are unable to pay their creditors as the amounts become due, the creditors have the right to claim the assets. The debt ratio calculates the percentage of assets that are financed with liabilities.



Let's look at **Kohl's Corporation** and evaluate its ability to pay its debts. On its January 30, 2016, balance sheet (a link is located online at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>), Kohl's reported (in millions) total liabilities of \$8,115 ($\$2,714 + \$2,792 + \$1,789 + \$257 + \563) and total assets of \$13,606. The debt ratio for Kohl's as of January 30, 2016, follows:

$$\begin{aligned}\text{Debt ratio} &= \text{Total liabilities} / \text{Total assets} \\ &= \$8,115 / \$13,606 \\ &= 0.596 = 59.6\%^*\end{aligned}$$

*rounded

A debt ratio of 59.6% means that more than half, approximately sixty percent, of the assets of Kohl's Corporation are financed with debt. The other 40.4% (100% – 59.6%) are financed by stockholders of the corporation. The debt ratio indicates the risk of a company. The higher the debt ratio, the higher the risk. All liabilities must eventually be paid, and the debt ratio is one indication of the ability of the company to fulfill these obligations.

DECISIONS

Would you purchase equipment with debt?

Jackson Russell works as a district sales manager for a large pharmaceutical sales company. Jackson would like to purchase a new high-tech marketing display that he will be able to use at upcoming medical conferences. The marketing display will allow his customers to access up-to-date information and research statistics on the pharmaceuticals that his company sells by using multiple touch screen computers. He believes that the marketing display will significantly increase the sales revenue of the products he sells. The only problem is that the marketing display will cost \$50,000, and he does not have the cash in his budget to purchase the display. Jackson will need to purchase the display using debt, which will increase the district's debt ratio from 20% to 58%. Jackson is aware that his company closely monitors the district's debt ratio and has a policy that the district must maintain a ratio below 55%. Should Jackson purchase the equipment?

Solution

If the company has a policy that the district's debt ratio must remain below 55%, then Jackson should not purchase the equipment. However, there might be a way to structure the purchase so that the district's debt ratio would stay below 55%. Jackson either needs to incur less debt or increase his total assets. He could do this in several possible ways. One alternative might be for Jackson to pay for part of the display equipment with cash and only finance part of it with debt. Even putting as little as \$10,000 cash down on the equipment would keep the debt ratio below 55%. Another alternative might be for his district to recognize revenue. If there are open sales opportunities that his employees could close, they might be able to increase total assets (and revenue) and, thereby, decrease the debt ratio.

Try It!

23. Using the following accounts and their balances, calculate the debt ratio for Cooper Furniture Repair as of December 31.

Cash	\$ 7,000	Advertising Expense	\$ 1,200
Unearned Revenue	4,500	Utilities Expense	800
Equipment	10,000	Rent Expense	5,000
Service Revenue	8,000	Accounts Payable	2,300
Common Stock	12,200	Dividends	3,000

Check your answer online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

REVIEW

> Things You Should Know

1. What is an account?

- An account is a detailed record of all increases and decreases that have occurred in an individual asset, liability, or equity during a specific period.
- Common asset accounts: Cash, Accounts Receivable, Notes Receivable, Prepaid Expenses, Land, Building, Furniture
- Common liability accounts: Accounts Payable, Notes Payable, Taxes Payable, Salaries Payable, Unearned Revenue
- Common equity accounts: Common Stock, Dividends, Revenues, Expenses
- A chart of accounts lists a company's accounts along with account numbers.
- A ledger shows the increases and decreases in each account along with their balances.

2. What is double-entry accounting?

- Double-entry accounting requires transactions to be recorded into at least two accounts.
- The T-account is shaped like a capital *T* with debits posted to the left side of the vertical line and credits posted to the right side of the vertical line.
- Debit = Left
- Credit = Right
- Assets, Dividends, and Expenses are increased with a debit and decreased with a credit.
- Liabilities, Common Stock, and Revenues are increased with a credit and decreased with a debit.
- The normal balance of an account is the increase side of an account.

3. How do you record transactions?

- Source documents provide the evidence and data for transactions.
- Transactions are recorded in a journal, and then the journal entries are posted (transferred) to the ledger.
- Transactions are journalized and posted using five steps:
Step 1: Identify the accounts and the account type.
Step 2: Decide whether each account increases or decreases, then apply the rules of debits and credits.
Step 3: Record the transaction in the journal.
Step 4: Post the journal entry to the ledger.
Step 5: Determine whether the accounting equation is in balance.

4. What is the trial balance?

- The trial balance summarizes the ledger by listing all the accounts with their balances.
- Assets are listed first, followed by liabilities, and then equity.
- The trial balance ensures that debits equal credits and is used to prepare the financial statements.

5. How do you use the debt ratio to evaluate business performance?

- The debt ratio can be used to evaluate a business's ability to pay its debts.
- Debt ratio = Total liabilities / Total assets.

> Check Your Understanding

Check your understanding of the chapter by completing this problem and then looking at the solution. Use this practice to help identify which sections of the chapter you need to study more.

The trial balance of Harper Service Center as of March 31, 2018, follows:

HARPER SERVICE CENTER Trial Balance March 31, 2018		
Account Title	Debit	Credit
Cash	\$ 23,900	
Accounts Receivable	4,500	
Office Supplies	0	
Land	0	
Accounts Payable		\$ 2,000
Utilities Payable		0
Unearned Revenue		0
Notes Payable		0
Common Stock		18,500
Dividends	0	
Service Revenue		10,000
Salaries Expense	800	
Rent Expense	1,000	
Interest Expense	0	
Utilities Expense	300	
Total	<u><u>\$ 30,500</u></u>	<u><u>\$ 30,500</u></u>

During April, the business engaged in the following transactions:

-
- Apr. 2 Borrowed \$45,000 from the bank and signed a note payable in the name of the business.
- 4 Paid cash of \$40,000 to acquire land.
- 9 Performed services for a customer and received cash of \$5,000.
- 13 Purchased office supplies on account, \$300.
- 15 Performed services for a customer on account, \$2,600.
- 18 Paid \$1,200 on account.
- 21 Paid the following cash expenses: salaries, \$3,000; rent, \$1,500; and interest, \$400.
- 25 Received \$3,100 from a customer on account.
- 27 Received a \$200 utility bill that will be paid next month.
- 29 Received \$1,500 for services to be performed next month.
- 30 Cash dividends of \$1,800 were paid to stockholders.
-

Requirements

1. Open the accounts listed in the trial balance using the balances indicated. Use the T-account format. (See Learning Objective 2)
2. Journalize each transaction including explanations. (See Learning Objective 3)
3. Post the journal entries to the ledger (use T-account format). (See Learning Objective 3)
4. Prepare the trial balance of Harper Service Center as of April 30, 2018. (See Learning Objective 4)

> Solution

Requirement 1

ASSETS		=	LIABILITIES		+	EQUITY							
						Contributed Capital		+	Retained Earnings				
						Common Stock		-	Dividends	+	Service Revenue	-	Salaries Expense
Cash	Bal. 23,900		Accounts Payable		+ 2,000 Bal.		18,500 Bal.		Bal. 0		10,000 Bal.		Bal. 800
Accounts Receivable	Bal. 4,500		Utilities Payable										Rent Expense Bal. 1,000
Office Supplies	Bal. 0		Unearned Revenue										Interest Expense Bal. 0
Land	Bal. 0		Notes Payable										Utilities Expense Bal. 300

Requirement 2

Date	Accounts and Explanation	Debit	Credit
Apr. 2	Cash Notes Payable <i>Borrowed cash on notes payable.</i>	45,000	45,000
4	Land Cash <i>Purchased land with cash.</i>	40,000	40,000
9	Cash Service Revenue <i>Performed services and received cash.</i>	5,000	5,000
13	Office Supplies Accounts Payable <i>Purchased office supplies on account.</i>	300	300
15	Accounts Receivable Service Revenue <i>Performed services on account.</i>	2,600	2,600
18	Accounts Payable Cash <i>Paid cash on account.</i>	1,200	1,200
21	Salaries Expense Rent Expense Interest Expense Cash <i>Paid cash expenses.</i>	3,000 1,500 400 4,900	
25	Cash Accounts Receivable <i>Received cash on account.</i>	3,100	3,100
27	Utilities Expense Utilities Payable <i>Received utility bill.</i>	200	200
29	Cash Unearned Revenue <i>Collected cash for future services.</i>	1,500	1,500
30	Dividends Cash <i>Paid dividends.</i>	1,800	1,800

Requirement 3

ASSETS		=	LIABILITIES		+	EQUITY									
						Contributed Capital				+	Retained Earnings				
						Common Stock		-	Dividends		+	Service Revenue		-	Salaries Expense
							18,500	Bal.	Bal.	0		10,000	Bal.	Bal.	800
Cash			Accounts Payable												Apr. 21 3,000
Bal. 23,900	40,000	Apr. 4	Apr. 18 1,200	2,000	Bal.										Bal. 3,800
Apr. 2 45,000	1,200	Apr. 18		300	Bal.										Rent Expense
Apr. 9 5,000	4,900	Apr. 21				18,500	Bal.		Bal.	0		10,000	Bal.	Bal.	1,000
Apr. 25 3,100	1,800	Apr. 30													Apr. 21 1,500
Apr. 29 1,500															Bal. 2,500
Bal. 30,600			Utilities Payable												Interest Expense
				0	Bal.										Bal. 0
				200	Apr. 27										Apr. 21 400
				200	Bal.										Bal. 400
			Accounts Receivable												Utilities Expense
Bal. 4,500	3,100	Apr. 25													Bal. 300
Apr. 15 2,600															Apr. 27 200
Bal. 4,000			Unearned Revenue												Bal. 500
				0	Bal.										
				1,500	Apr. 29										
			Office Supplies												
Bal. 0															
Apr. 13 300															
Bal. 300			Notes Payable												
				0	Bal.										
				45,000	Apr. 2										
			Land												
Bal. 0															
Apr. 4 40,000															
Bal. 40,000															

Requirement 4

HARPER SERVICE CENTER		
Trial Balance		
April 30, 2018		
		Balance
Account Title		Debit
Cash		\$ 30,600
Accounts Receivable		4,000
Office Supplies		300
Land		40,000
Accounts Payable		\$ 1,100
Utilities Payable		200
Unearned Revenue		1,500
Notes Payable		45,000
Common Stock		18,500
Dividends		1,800
Service Revenue		17,600
Salaries Expense		3,800
Rent Expense		2,500
Interest Expense		400
Utilities Expense		500
Total		\$ 83,900

> Key Terms

Account (p. 83)	Double-Entry System (p. 87)	Prepaid Expense (p. 84)
Accrued Liability (p. 84)	Journal (p. 91)	Source Document (p. 90)
Chart of Accounts (p. 85)	Ledger (p. 86)	T-Account (p. 87)
Compound Journal Entry (p. 96)	Normal Balance (p. 88)	Trial Balance (p. 105)
Credit (p. 87)	Notes Payable (p. 84)	Unearned Revenue (p. 84)
Debit (p. 87)	Notes Receivable (p. 84)	
Debt Ratio (p. 107)	Posting (p. 91)	

> Quick Check

Learning Objective 1

1. The detailed record of the changes in a particular asset, liability, or stockholders' equity is called
- a. an account.
 - b. a journal.
 - c. a ledger.
 - d. a trial balance.

Learning Objective 1

2. Which of the following accounts is a liability?
- a. Accounts Receivable
 - b. Service Revenue
 - c. Unearned Revenue
 - d. Prepaid Rent Expense

Learning Objective 2

3. The left side of an account is used to record which of the following?
- a. Debit or credit, depending on the type of account
 - b. Increases
 - c. Credits
 - d. Debits

Learning Objective 2

4. Which of the following statements is correct?
- a. Prepaid Expenses are decreased with a debit.
 - b. Unearned Revenue is increased with a debit.
 - c. Rent Expense is increased with a credit.
 - d. Accounts Payable is increased with a credit.

Learning Objective 3

5. Your business purchased office supplies of \$2,500 on account. The journal entry to record this transaction is as follows:

Date	Accounts and Explanation	Debit	Credit
a.	Office Supplies Accounts Receivable	2,500	2,500
b.	Office Supplies Accounts Payable	2,500	2,500
c.	Accounts Payable Office Supplies	2,500	2,500
d.	Cash Accounts Payable	2,500	2,500

6. Sedlor Properties purchased office supplies on account for \$800. Which journal entry records the payment on account of those office supplies?

Learning Objective 3

Date	Accounts and Explanation	Debit	Credit
a.	Accounts Payable Accounts Receivable	800	800
b.	Accounts Payable Cash	800	800
c.	Cash Accounts Payable	800	800
d.	Office Supplies Cash	800	800

7. Posting a \$2,500 purchase of office supplies on account appears as follows:

Learning Objective 3

a.	Office Supplies 2,500	Accounts Receivable 2,500
b.	Office Supplies 2,500	Accounts Payable 2,500
c.	Cash 2,500	Office Supplies 2,500
d.	Office Supplies 2,500	Accounts Payable 2,500

8. Pixel Copies recorded a cash collection on account by debiting Cash and crediting Accounts Payable. What will the trial balance show for this error?

Learning Objective 4

- a. Cash is overstated
b. Liabilities are overstated
c. Expenses are overstated
d. The trial balance will not balance

9. Which sequence correctly summarizes the accounting process?

Learning Objectives 3, 4

- a. Journalize transactions, post to the accounts, prepare a trial balance
b. Journalize transactions, prepare a trial balance, post to the accounts
c. Post to the accounts, journalize transactions, prepare a trial balance
d. Prepare a trial balance, journalize transactions, post to the accounts

10. Mirthville Laundry reported assets of \$1,150 and equity of \$675. What is Mirthville's debt ratio?

Learning Objective 5

- a. 41%
b. 70%
c. 59%
d. Not enough information is provided

Check your answers at the end of the chapter.

ASSESS YOUR PROGRESS

> Review Questions

1. Identify the three categories of the accounting equation, and list at least four accounts associated with each category.
2. What is the purpose of the chart of accounts? Explain the numbering typically associated with the accounts.
3. What does a ledger show? What's the difference between a ledger and the chart of accounts?
4. Accounting uses a double-entry system. Explain what this sentence means.
5. What is a T-account? On which side is the debit? On which side is the credit? Where does the account name go on a T-account?
6. What does a normal balance of an account represent?
7. When are credits increases? When are credits decreases?
8. Identify which types of accounts have a normal debit balance and which types of accounts have a normal credit balance.
9. What are source documents? Provide examples of source documents that a business might use.
10. Where are transactions initially recorded?
11. Explain the five steps in journalizing and posting transactions.
12. What are the four parts of a journal entry?
13. What is involved in the posting process?
14. What is the purpose of the trial balance?
15. What is the difference between the trial balance and the balance sheet?
16. If total debits equal total credits on the trial balance, is the trial balance error-free? Explain your answer.
17. What is the calculation for the debt ratio? Explain what the debt ratio evaluates.

> Short Exercises

Learning Objective 1

S2-1 Identifying accounts

Consider the following accounts and identify each account as an asset (A), liability (L), or equity (E).

- | | |
|----------------------|---------------------|
| a. Notes Receivable | f. Taxes Payable |
| b. Common Stock | g. Rent Expense |
| c. Prepaid Insurance | h. Furniture |
| d. Notes Payable | i. Dividends |
| e. Rent Revenue | j. Unearned Revenue |

S2-2 Identifying increases and decreases in accounts**Learning Objective 2**

For each account, identify whether the changes would be recorded as a debit (DR) or credit (CR).

- a. Increase to Accounts Receivable
- b. Decrease to Unearned Revenue
- c. Decrease to Cash
- d. Increase to Interest Expense
- e. Increase to Salaries Payable
- f. Decrease to Prepaid Rent
- g. Increase to Common Stock
- h. Increase to Notes Receivable
- i. Decrease to Accounts Payable
- j. Increase to Interest Revenue

S2-3 Identifying normal balances**Learning Objective 2**

For each account, identify whether the normal balance is a debit (DR) or credit (CR).

- a. Notes Payable
- b. Dividends
- c. Service Revenue
- d. Land
- e. Unearned Revenue
- f. Common Stock
- g. Utilities Expense
- h. Office Supplies
- i. Advertising Expense
- j. Interest Payable

S2-4 Calculating the balance of a T-account**Learning Objective 2**

Accounts Payable			
May 2	5,000	18,000	May 1
May 22	14,000	900	May 5
		5,500	May 15
		400	May 23

Calculate the Accounts Payable balance.

S2-5 Journalizing transactions**Learning Objective 3**

Trent Jackson opened a medical practice in Oceanside, California, and had the following transactions during the month of January.

-
- | | |
|--------|---|
| Jan. 1 | The business received \$38,000 cash and issued common stock to Jackson. |
| 2 | Purchased medical supplies on account, \$16,000. |
| 4 | Performed services for patients receiving \$1,400. |
| 12 | Paid monthly office rent of \$2,500. |
| 15 | Recorded \$7,000 revenue for services rendered to patients on account. |
-

Journalize the transactions of Trent Jackson, M.D. Include an explanation with each entry.

Learning Objective 3**S2-6 Journalizing transactions**

Harper Sales Consultants completed the following transactions during the latter part of January:

-
- | | |
|---------|---|
| Jan. 22 | Performed services for customers on account, \$7,500. |
| 30 | Received cash on account from customers, \$8,000. |
| 31 | Received a utility bill, \$220, which will be paid during February. |
| 31 | Paid monthly salary to salesman, \$2,500. |
| 31 | Received \$2,310 for three months of consulting service to be performed starting in February. |
| 31 | Cash dividends of \$950 were paid to stockholders. |
-

Journalize the transactions of Harper Sales Consultants. Include an explanation with each journal entry.

Learning Objective 3**S2-7 Journalizing transactions and posting to T-accounts**

Roland Foster Optical Dispensary completed the following transactions during the latter part of March:

-
- | | |
|---------|--|
| Mar. 15 | Purchased office supplies on account, \$2,800. |
| 28 | Paid \$1,000 on account. |
-

Requirements

1. Journalize the transactions of Roland Foster Optical Dispensary. Include an explanation with each journal entry.
2. The following T-accounts have been opened for you: Cash (Beginning Balance of \$13,000), Office Supplies, and Accounts Payable. Post the journal entries from Requirement 1 to the accounts, and compute the balance in each account.

Learning Objective 4**S2-8 Preparing a trial balance**

Smithson Floor Coverings reported the following summarized data at December 31, 2018. Accounts appear in no particular order, and all have normal balances.

Service Revenue	\$ 26,000	Salaries Payable	\$ 25,000
Equipment	36,000	Salaries Expense	1,600
Rent Expense	17,000	Cash	7,000
Common Stock	24,000	Accounts Receivable	3,600
Accounts Payable	2,200	Interest Payable	6,000
Dividends	16,100	Utilities Expense	1,900

Prepare the trial balance of Smithson Floor Coverings at December 31, 2018.

Learning Objective 5**S2-9 Calculating debt ratio**

Super Wash Carpet Care had the following total assets, liabilities, and equity as of October 31:

Assets	\$ 250,000
Liabilities	100,000
Equity	150,000

What is Super Wash Carpet Care's debt ratio as of October 31?

> Exercises

E2-10 Using accounting vocabulary

Match the accounting terms with the corresponding definitions.

- | | |
|----------------------------|--|
| 1. Posting | a. A detailed record of all increases and decreases that have occurred in a particular asset, liability, or equity during a period |
| 2. Account | b. The record holding all the accounts of a business, the changes in those accounts, and their balances |
| 3. Debit | c. A journal entry that is characterized by having multiple debits and/or multiple credits |
| 4. Journal | d. A record of transactions in date order |
| 5. Chart of accounts | e. Left side of a T-account |
| 6. Trial balance | f. Side of an account where increases are recorded |
| 7. Normal balance | g. Transferring amounts from the journal to the ledger |
| 8. Ledger | h. Right side of a T-account |
| 9. Credit | i. A list of all accounts with their balances at a point in time |
| 10. Compound journal entry | j. A list of all accounts with their account numbers |

Learning Objectives 1, 2, 3, 4

E2-11 Creating a chart of accounts

Raymond Autobody Shop has the following accounts:

Accounts Payable	Service Revenue
Cash	Equipment
Utilities Expense	Common Stock
Automotive Supplies	Advertising Expense
Dividends	Unearned Revenue
Retained Earnings	

Learning Objective 1

Create a chart of accounts for Raymond Autobody Shop using the standard numbering system. Each account is separated by a factor of 10. For example, the first asset account will be 100 and the next asset account will be 110.

E2-12 Identifying accounts, increases in accounts, and normal balances

- | | |
|------------------------|----------------------|
| a. Interest Revenue | f. Unearned Revenue |
| b. Accounts Payable | g. Prepaid Rent |
| c. Common Stock | h. Utilities Expense |
| d. Office Supplies | i. Dividends |
| e. Advertising Expense | j. Service Revenue |

Learning Objectives 1, 2

Requirements

- Identify each account as asset (A), liability (L), or equity (E).
- Identify whether the account is increased with a debit (DR) or credit (CR).
- Identify whether the normal balance is a debit (DR) or credit (CR).

- | | |
|----------------------------|--|
| 1. Posting | a. A detailed record of all increases and decreases that have occurred in a particular asset, liability, or equity during a period |
| 2. Account | b. The record holding all the accounts of a business, the changes in those accounts, and their balances |
| 3. Debit | c. A journal entry that is characterized by having multiple debits and/or multiple credits |
| 4. Journal | d. A record of transactions in date order |
| 5. Chart of accounts | e. Left side of a T-account |
| 6. Trial balance | f. Side of an account where increases are recorded |
| 7. Normal balance | g. Transferring amounts from the journal to the ledger |
| 8. Ledger | h. Right side of a T-account |
| 9. Credit | i. A list of all accounts with their balances at a point in time |
| 10. Compound journal entry | j. A list of all accounts with their account numbers |

E2-11 Creating a chart of accounts

Raymond Autobody Shop has the following accounts:

Accounts Payable	Service Revenue
Cash	Equipment
Utilities Expense	Common Stock
Automotive Supplies	Advertising Expense
Dividends	Unearned Revenue
Retained Earnings	

Learning Objective 1

Create a chart of accounts for Raymond Autobody Shop using the standard numbering system. Each account is separated by a factor of 10. For example, the first asset account will be 100 and the next asset account will be 110.

E2-12 Identifying accounts, increases in accounts, and normal balances

- | | |
|------------------------|----------------------|
| a. Interest Revenue | f. Unearned Revenue |
| b. Accounts Payable | g. Prepaid Rent |
| c. Common Stock | h. Utilities Expense |
| d. Office Supplies | i. Dividends |
| e. Advertising Expense | j. Service Revenue |

Learning Objectives 1, 2

Requirements

- Identify each account as asset (A), liability (L), or equity (E).
- Identify whether the account is increased with a debit (DR) or credit (CR).
- Identify whether the normal balance is a debit (DR) or credit (CR).

Learning Objective 2**E2-13 Identifying increases and decreases in accounts and normal balances**

Insert the missing information into the accounting equation. Signify increases as Incr. and decreases as Decr.

(a)		=	LIABILITIES		+					(b)		
						Contributed Capital		+			Retained Earnings	
						Common Stock		-			Revenues	
ASSETS		=	(c)		+	(g)	(h)	-	(d)	+	(k)	(l)
(e) Debit	Decr. (n)		Decr. (o)	(f) Credit		(p)	Credit		(i) (q)	(j) Credit	Debit (k)	Credit (l)
											Incr. (r)	Credit (m)

Learning Objective 3**E2-14 Identifying source documents**

For each transaction, identify a possible source document.

- The business received \$20,000 cash and issued common stock to stockholders.
- Purchased office supplies on account, \$500.
- Recorded \$1,000 revenue for services rendered to customers.

Learning Objective 3**E2-15 Analyzing and journalizing transactions**

As the manager of Margarita Mexican Restaurant, you must deal with a variety of business transactions. Provide an explanation for the following transactions:

- Debit Equipment and credit Cash.
- Debit Dividends and credit Cash.
- Debit Wages Payable and credit Cash.
- Debit Equipment and credit Common Stock.
- Debit Cash and credit Unearned Revenue.
- Debit Advertising Expense and credit Cash.
- Debit Cash and credit Service Revenue.

Use the following information to answer Exercises E2-16 and E2-17.

The following transactions occurred for Lawrence Engineering:

- | | |
|--------|--|
| Jul. 2 | Received \$14,000 contribution from Brett Lawrence in exchange for common stock. |
| 4 | Paid utilities expense of \$370. |
| 5 | Purchased equipment on account, \$1,600. |
| 10 | Performed services for a client on account, \$2,900. |
| 12 | Borrowed \$7,100 cash, signing a notes payable. |
| 19 | Cash dividends of \$200 were paid to stockholders. |
| 21 | Purchased office supplies for \$840 and paid cash. |
| 27 | Paid the liability from July 5. |

E2-16 Analyzing and journalizing transactions

Journalize the transactions of Lawrence Engineering. Include an explanation with each journal entry. Use the following accounts: Cash; Accounts Receivable; Office Supplies; Equipment; Accounts Payable; Notes Payable; Common Stock; Dividends; Service Revenue; and Utilities Expense.

Learning Objective 3**E2-17 Posting journal entries to T-accounts****Requirements**

1. Open the following T-accounts for Lawrence Engineering: Cash; Accounts Receivable; Office Supplies; Equipment; Accounts Payable; Notes Payable; Common Stock; Dividends; Service Revenue; and Utilities Expense.
2. Post the journal entries to the T-accounts. Also transfer the dates to the T-accounts.
3. Compute the July 31 balance for each account.

Learning Objective 3

3. Cash Balance \$18,090

Use the following information to answer Exercises E2-18 and E2-19.

The following transactions occurred for Wilke Technology Solutions:

-
- | | |
|-------|---|
| May 1 | The business received cash of \$105,000 and issued common stock to Zoe Wilke. |
| 2 | Purchased office supplies on account, \$550. |
| 4 | Paid \$57,000 cash for building and land. The building had a fair market value of \$45,000. |
| 6 | Performed services for customers and received cash, \$3,600. |
| 9 | Paid \$350 on accounts payable. |
| 17 | Performed services for customers on account, \$3,500. |
| 19 | Paid rent expense for the month, \$1,200. |
| 20 | Received \$1,500 from customers for services to be performed next month. |
| 21 | Paid \$900 for advertising in next month's <i>IT Technology</i> magazine. |
| 23 | Received \$3,100 cash on account from a customer. |
| 31 | Incurred and paid salaries, \$1,700. |
-

E2-18 Analyzing and journalizing transactions

Journalize the transactions of Wilke Technology Solutions. Include an explanation with each journal entry. Use the following accounts: Cash; Accounts Receivable; Office Supplies; Prepaid Advertising; Land; Building; Accounts Payable; Unearned Revenue; Common Stock; Service Revenue; Rent Expense; and Salaries Expense.

Learning Objective 3**E2-19 Posting journal entries to four-column accounts****Requirements**

1. Open four-column accounts using the following account numbers: Cash, 110; Accounts Receivable, 120; Office Supplies, 130; Prepaid Advertising, 140; Land, 150; Building, 160; Accounts Payable, 210; Unearned Revenue, 220; Common Stock, 310; Service Revenue, 410; Rent Expense, 510; and Salaries Expense, 520.
2. Post the journal entries to the four-column accounts, and determine the balance in the account after each transaction. Assume that the journal entries were recorded on page 10 of the journal. Make sure to complete the Post. Ref. columns in the journal and ledger.

Learning Objective 3

2. Cash Balance \$52,050

Learning Objective 3

E2-20 Analyzing transactions from T-accounts

The first nine transactions of Solomon Car Repair have been posted to the T-accounts. Provide an explanation for each of the nine transactions.

Learning Objective 3

E2-21 Journalizing transactions from T-accounts

In December 2018, the first five transactions of Abing's Lawn Care Company have been posted to the T-accounts. Prepare the journal entries that served as the sources for the five transactions. Include an explanation for each entry.

Cash		Office Supplies		Building		Equipment	
(1)	57,000	40,000	(3)	(2)	800		
(4)	46,000	3,800	(5)	(3)	40,000		(5) 3,800
Accounts Payable		Notes Payable		Common Stock			
	800	(2)		46,000	(4)	57,000	(1)

Learning Objective 4

E2-22 Preparing a trial balance

The accounts of Arlington Moving Company follow with their normal balances as of August 31, 2018. The accounts are listed in no particular order.

Common Stock	\$ 47,400	Trucks	\$ 130,000
Insurance Expense	600	Fuel Expense	2,000
Accounts Payable	4,300	Dividends	5,700
Service Revenue	91,000	Utilities Expense	400
Building	42,000	Accounts Receivable	8,500
Advertising Expense	300	Notes Payable	57,000
Salaries Expense	6,000	Office Supplies	200
Cash	4,000		

Prepare Arlington's trial balance as of August 31, 2018.

E2-23 Preparing a trial balance from T-accounts

The T-accounts of McMahon Farm Equipment Repair follow as of May 31, 2018.

Learning Objective 4

Total Debits \$80,700

Prepare McMahon Farm Equipment Repair's trial balance as of May 31, 2018.

E2-24 Journalizing transactions, posting journal entries to four-column accounts, and preparing a trial balance

The following transactions occurred during the month for Talia Park, CPA:

Learning Objectives 3, 4

3. Total Debits \$24,670

- Jun. 1 Park opened an accounting firm by contributing \$12,700 cash and office furniture with a fair market value of \$5,100 in exchange for common stock.

5 Paid monthly rent of \$1,300.

9 Purchased office supplies on account, \$700.

14 Paid employee's salary, \$1,900.

18 Received a bill for utilities to be paid next month, \$360.

21 Paid \$600 of the accounts payable created on June 9.

25 Performed accounting services on account, \$5,700.

28 Paid cash dividends of \$7,000.

Requirements

1. The following four-column accounts of Talia Park, CPA have been opened for you: Cash, 110; Accounts Receivable, 120; Office Supplies, 130; Office Furniture, 140; Accounts Payable, 210; Utilities Payable, 220; Common Stock, 310; Dividends, 320; Service Revenue, 410; Salaries Expense, 510; Rent Expense, 520; and Utilities Expense, 530. Journalize the transactions and then post the journal entries to the four-column accounts. Explanations are not required for the journal entries. Keep a running balance in each account. Assume the journal entries are recorded on page 10 of the journal.
 2. Prepare the trial balance as of June 30, 2018.

Learning Objective 4**E2-25 Analyzing accounting errors**

Courtney Meehan has trouble keeping her debits and credits equal. During a recent month, Meehan made the following accounting errors:

- a. In preparing the trial balance, Meehan omitted a \$5,000 Notes Payable. The debit to Cash was correct.
- b. Meehan posted a \$1,000 Utilities Expense as \$100. The credit to Cash was correct.
- c. In recording a \$600 payment on account, Meehan debited Furniture instead of Accounts Payable.
- d. In journalizing a receipt of cash for service revenue, Meehan debited Cash for \$50 instead of the correct amount of \$500. The credit was correct.
- e. Meehan recorded a \$210 purchase of office supplies on account by debiting Office Supplies for \$120 and crediting Accounts Payable for \$120.

Requirements

1. For each of these errors, state whether total debits equal total credits on the trial balance.
2. Identify each account that has an incorrect balance and the amount and direction of the error (e.g., “Accounts Receivable \$500 too high”).

Learning Objective 4**E2-26 Correcting errors in a trial balance**

Total Debits \$35,600

The accountant for Color Me Painting Specialists is having a hard time preparing the trial balance as of November 30, 2018:

COLOR ME PAINTING SPECIALISTS		
Trial Balance		
November 30, 2018		
	Balance	
Account Title	Debit	Credit
Painting Equipment	\$ 10,000	
Cash	12,900	
Accounts Receivable	1,200	
Advertising Expense	600	
Dividends		\$ 3,600
Accounts Payable		3,100
Rent Expense	2,700	
Common Stock	17,000	
Service Revenue		11,700
Unearned Revenue	1,600	
Salaries Expense	2,100	
Office Supplies		100
Utilities Expense	200	
Total	<u><u>\$ 48,300</u></u>	<u><u>\$ 18,500</u></u>

Prepare the corrected trial balance as of November 30, 2018. Assume all amounts are correct and all accounts have normal balances.

E2-27 Correcting errors in a trial balance**Learning Objective 4**

The following trial balance of Joy McDowell Tutoring Service as of May 31, 2018, does not balance.

Total Debits \$35,300

JOY MCDOWELL TUTORING SERVICE		
Trial Balance		
May 31, 2018		
Account Title	Balance	
	Debit	Credit
Cash	\$ 2,800	
Accounts Receivable	2,000	
Office Supplies	600	
Computer Equipment	15,800	
Accounts Payable		\$ 11,100
Utilities Payable		800
Common Stock		11,600
Dividends	10,400	
Service Revenue		9,600
Salaries Expense	1,900	
Rent Expense	800	
Utilities Expense	700	
Total	<u><u>\$ 35,000</u></u>	<u><u>\$ 33,100</u></u>

Investigation of the accounting records reveals that the bookkeeper:

- a. Recorded a \$400 cash revenue transaction by debiting Accounts Receivable.
The credit entry was correct.
- b. Posted a \$2,000 credit to Accounts Payable as \$200.
- c. Did not record Utilities Expense or the related Utilities Payable in the amount of \$300.
- d. Understated Common Stock by \$100.

Prepare the corrected trial balance as of May 31, 2018, complete with a heading; journal entries are not required.

Learning Objective 5

Total Assets \$174,900

E2-28 Calculating the debt ratio

Jason Hilton, M.D., reported the following trial balance as of September 30, 2018:

JASON HILTON M.D.		
Trial Balance		
September 30, 2018		
Account Title	Balance	
	Debit	Credit
Cash	\$ 36,000	
Accounts Receivable	7,600	
Office Supplies	2,700	
Land	22,000	
Building	85,000	
Office Equipment	29,000	
Accounts Payable		\$ 2,500
Utilities Payable		500
Unearned Revenue		22,088
Notes Payable		77,000
Common Stock		100,000
Dividends	55,000	
Service Revenue		59,912
Salaries Expense	24,000	
Utilities Expense	400	
Advertising Expense	300	
Total	<u><u>\$ 262,000</u></u>	<u><u>\$ 262,000</u></u>

Calculate the debt ratio for Jason Hilton, M.D.

> Problems Group A

P2-29A Journalizing transactions, posting journal entries to T-accounts, and preparing a trial balance

Vince York practices medicine under the business title Vince York, M.D. During July, the medical practice completed the following transactions:

-
- | | |
|--------|---|
| Jul. 1 | York contributed \$63,000 cash to the business in exchange for common stock. |
| 5 | Paid monthly rent on medical equipment, \$510. |
| 9 | Paid \$23,000 cash to purchase land to be used in operations. |
| 10 | Purchased office supplies on account, \$1,600. |
| 19 | Borrowed \$22,000 from the bank for business use. |
| 22 | Paid \$1,100 on account. |
| 28 | The business received a bill for advertising in the daily newspaper to be paid in August, \$240. |
| 31 | Revenues earned during the month included \$6,400 cash and \$6,000 on account. |
| 31 | Paid employees' salaries \$2,200, office rent \$1,900, and utilities \$560. Record as a compound entry. |
| 31 | The business received \$1,120 for medical screening services to be performed next month. |
| 31 | Paid cash dividends of \$7,200. |
-

Learning Objectives 3, 4

2. Cash Balance \$56,050

Learning Objectives 3, 4

4. Total Debits \$58,300

P2-30A Journalizing transactions, posting journal entries to T-accounts, and preparing a trial balance

Ann Simpson started her practice as a design consultant on September 1, 2018. During the first month of operations, the business completed the following transactions:

-
- | | |
|--------|---|
| Sep. 1 | Received \$48,000 cash and issued common stock to Simpson. |
| 4 | Purchased office supplies, \$1,200, and furniture, \$1,300, on account. |
| 6 | Performed services for a law firm and received \$1,900 cash. |
| 7 | Paid \$18,000 cash to acquire land to be used in operations. |
| 10 | Performed services for a hotel and received its promise to pay the \$1,200 within one week. |
| 14 | Paid for the furniture purchased on September 4 on account. |
| 15 | Paid assistant's semimonthly salary, \$1,500. |
| 17 | Received cash on account, \$1,000. |
| 20 | Prepared a design for a school on account, \$650. |
| 25 | Received \$2,100 cash for design services to be performed in October. |
| 28 | Received \$2,900 cash for consulting with Plummer & Gordon. |
| 29 | Paid \$600 cash for a 12-month insurance policy starting on October 1. |
| 30 | Paid assistant's semimonthly salary, \$1,500. |
| 30 | Paid monthly rent expense, \$600. |
| 30 | Received a bill for utilities, \$350. The bill will be paid next month. |
| 30 | Paid cash dividends of \$3,700. |
-

Requirements

1. Record each transaction in the journal using the following account titles: Cash; Accounts Receivable; Office Supplies; Prepaid Insurance; Land; Furniture; Accounts Payable; Utilities Payable; Unearned Revenue; Common Stock; Dividends; Service Revenue; Salaries Expense; Rent Expense; and Utilities Expense. Explanations are not required.
2. Open a T-account for each of the accounts.
3. Post the journal entries to the T-accounts, using transaction dates as posting references in the ledger accounts. Label the balance of each account *Bal.*
4. Prepare the trial balance of Ann Simpson, Designer, as of September 30, 2018.

P2-31A Journalizing transactions, posting journal entries to four-column accounts, and preparing a trial balance

Theodore McMahon opened a law office on January 1, 2018. During the first month of operations, the business completed the following transactions:

-
- | | |
|--------|---|
| Jan. 1 | McMahon contributed \$79,000 cash to the business, Theodore McMahon, Attorney. The business issued common stock to McMahon. |
| 3 | Purchased office supplies, \$1,000, and furniture, \$1,300, on account. |
| 4 | Performed legal services for a client and received \$1,500 cash. |
| 7 | Purchased a building with a market value of \$80,000, and land with a market value of \$29,000. The business paid \$70,000 cash and signed a note payable to the bank for the remaining amount. |
| 11 | Prepared legal documents for a client on account, \$600. |
| 15 | Paid assistant's semimonthly salary, \$1,130. |
| 16 | Paid for the office supplies purchased on January 3 on account. |
| 18 | Received \$2,100 cash for helping a client sell real estate. |
| 19 | Defended a client in court and billed the client for \$900. |
| 25 | Received a bill for utilities, \$450. The bill will be paid next month. |
| 29 | Received cash on account, \$900. |
| 30 | Paid \$960 cash for a 12-month insurance policy starting on February 1. |
| 30 | Paid assistant's semimonthly salary, \$1,130. |
| 31 | Paid monthly rent expense, \$1,000. |
| 31 | Paid cash dividends of \$2,100. |
-

Requirements

1. Record each transaction in the journal, using the following account titles: Cash; Accounts Receivable; Office Supplies; Prepaid Insurance; Land; Building; Furniture; Accounts Payable; Utilities Payable; Notes Payable; Common Stock; Dividends; Service Revenue; Salaries Expense; Rent Expense; and Utilities Expense. Explanations are not required.
2. The following four-column accounts have been opened: Cash, 101; Accounts Receivable, 111; Office Supplies, 121; Prepaid Insurance, 131; Land, 141; Building, 151; Furniture, 161; Accounts Payable, 201; Utilities Payable, 211; Notes Payable, 221; Common Stock, 301; Dividends, 311; Service Revenue, 411; Salaries Expense, 511; Rent Expense, 521; and Utilities Expense, 531. Post the journal entries to four-column accounts in the ledger, using dates, account numbers, journal references, and posting references. Assume the journal entries were recorded on page 1 of the journal.
3. Prepare the trial balance of Theodore McMahon, Attorney, at January 31, 2018.

Learning Objectives 3, 4

3. Cash Balance \$50,160

Learning Objectives 3, 4

3. Cash Balance \$12,500

P2-32A Journalizing transactions, posting journal entries to four-column accounts, and preparing a trial balance

The trial balance of Shawn Merry, CPA, is dated March 31, 2018:

SHAWN MERRY, CPA		
Trial Balance		
March 31, 2018		
	Balance	
Account Title	Debit	Credit
Cash	\$ 11,000	
Accounts Receivable	16,500	
Office Supplies	400	
Land	30,000	
Furniture	0	
Automobile	0	
Accounts Payable		\$ 3,800
Unearned Revenue		0
Common Stock		52,300
Dividends	0	
Service Revenue		8,200
Salaries Expense	5,600	
Rent Expense	800	
Total	<u><u>\$ 64,300</u></u>	<u><u>\$ 64,300</u></u>

During April, the business completed the following transactions:

-
- Apr. 4 Collected \$2,500 cash from a client on account.
- 8 Performed tax services for a client on account, \$5,400.
- 13 Paid \$3,000 on account.
- 14 Purchased furniture on account, \$3,600.
- 15 Merry contributed his personal automobile to the business in exchange for common stock. The automobile had a market value of \$9,500.
- 18 Purchased office supplies on account, \$900.
- 19 Received \$2,700 for tax services performed on April 8.
- 20 Paid cash dividends of \$6,500.
- 21 Received \$5,700 cash for consulting work completed.
- 24 Received \$2,400 cash for accounting services to be completed next month.
- 27 Paid office rent, \$600.
- 28 Paid employee salary, \$1,700.
-

Requirements

1. Record the April transactions in the journal. Use the following accounts: Cash; Accounts Receivable; Office Supplies; Land; Furniture; Automobile; Accounts Payable; Unearned Revenue; Common Stock; Dividends; Service Revenue; Salaries Expense; and Rent Expense. Include an explanation for each entry.
2. Open the four-column ledger accounts listed in the trial balance, together with their balances as of March 31. Use the following account numbers: Cash, 11; Accounts Receivable, 12; Office Supplies, 13; Land, 14; Furniture, 15; Automobile, 16; Accounts Payable, 21; Unearned Revenue, 22; Common Stock, 31; Dividends, 33; Service Revenue, 41; Salaries Expense, 51; and Rent Expense, 52.
3. Post the journal entries to four-column accounts in the ledger, using dates, account numbers, journal references, and posting references. Assume the journal entries were recorded on page 5 of the journal.
4. Prepare the trial balance of Shawn Merry, CPA, at April 30, 2018.

P2-33A Correcting errors in a trial balance

The trial balance of Beautiful Tots Child Care does not balance.

Learning Objective 4

Total Debits \$123,250

BEAUTIFUL TOTS CHILD CARE		
Trial Balance		
August 31, 2018		
	Balance	
Account Title	Debit	Credit
Cash	\$ 7,900	
Accounts Receivable	6,700	
Office Supplies	1,000	
Prepaid Insurance	300	
Equipment	91,500	
Accounts Payable		\$ 3,400
Notes Payable		45,000
Common Stock		57,000
Dividends	5,000	
Service Revenue		12,350
Salaries Expense	4,400	
Rent Expense	750	
Total	\$ 117,550	\$ 117,750

The following errors are detected:

- a. Cash is understated by \$1,500.
- b. A \$4,100 debit to Accounts Receivable was posted as a credit.
- c. A \$1,400 purchase of office supplies on account was neither journalized nor posted.
- d. Equipment was incorrectly transferred from the ledger as \$91,500. It should have been transferred as \$83,000.

- e. Salaries Expense is overstated by \$700.
- f. A \$300 cash payment for advertising expense was neither journalized nor posted.
- g. A \$200 cash dividend was incorrectly journalized as \$2,000.
- h. Service Revenue was understated by \$4,100.
- i. A 12-month insurance policy was posted as a \$1,900 credit to Prepaid Insurance. Cash was posted correctly.

Prepare the corrected trial balance as of August 31, 2018. Journal entries are not required.

Learning Objectives 4, 5

2. Ending Retained Earnings \$11,788

P2-34A Preparing financial statements from the trial balance and calculating the debt ratio

The trial balance as of July 31, 2018, for Sara Simon, Registered Dietician, is presented below:

SARA SIMON, REGISTERED DIETICIAN		
Trial Balance		
July 31, 2018		
	Balance	
Account Title	Debit	Credit
Cash	\$ 38,000	
Accounts Receivable	9,000	
Office Supplies	2,300	
Prepaid Insurance	2,400	
Equipment	16,000	
Accounts Payable		\$ 3,000
Unearned Revenue		3,912
Notes Payable		31,000
Common Stock		18,000
Dividends	2,800	
Service Revenue		17,888
Salaries Expense	1,700	
Rent Expense	1,100	
Utilities Expense	500	
Total	<u><u>\$ 73,800</u></u>	<u><u>\$ 73,800</u></u>

Requirements

1. Prepare the income statement for the month ended July 31, 2018.
2. Prepare the statement of retained earnings for the month ended July 31, 2018. The beginning balance of retained earnings was \$0.
3. Prepare the balance sheet as of July 31, 2018.
4. Calculate the debt ratio as of July 31, 2018.

> Problems Group B

P2-35B Journalizing transactions, posting journal entries to T-accounts, and preparing a trial balance

Vick Yardley practices medicine under the business title Vick Yardley, M.D. During July, the medical practice completed the following transactions:

-
- | | |
|--------|---|
| Mar. 1 | Yardley contributed \$68,000 cash to the business in exchange for common stock. |
| 5 | Paid monthly rent on medical equipment, \$570. |
| 9 | Paid \$20,000 cash to purchase land to be used in operations. |
| 10 | Purchased office supplies on account, \$1,000. |
| 19 | Borrowed \$20,000 from the bank for business use. |
| 22 | Paid \$800 on account. |
| 28 | The business received a bill for advertising in the daily newspaper to be paid in April, \$290. |
| 31 | Revenues earned during the month included \$6,700 cash and \$6,500 on account. |
| 31 | Paid employees' salaries \$2,800, office rent \$1,300, and utilities \$650. Record as a compound entry. |
| 31 | The business received \$1,450 for medical screening services to be performed next month. |
| 31 | Paid cash dividends of \$7,600. |
-

Learning Objectives 3, 4

2. Cash Balance \$69,680

Learning Objectives 3, 4

4. Total Debits \$51,430

P2-36B Journalizing transactions, posting journal entries to T-accounts, and preparing a trial balance

Beth Stewart started her practice as a design consultant on November 1, 2018. During the first month of operations, the business completed the following transactions:

-
- | | |
|--------|---|
| Nov. 1 | Received \$41,000 cash and issued common stock to Stewart. |
| 4 | Purchased office supplies, \$1,200, and furniture, \$2,300, on account. |
| 6 | Performed services for a law firm and received \$2,100 cash. |
| 7 | Paid \$27,000 cash to acquire land to be used in operations. |
| 10 | Performed services for a hotel and received its promise to pay the \$800 within one week. |
| 14 | Paid for the furniture purchased on November 4 on account. |
| 15 | Paid assistant's semimonthly salary, \$1,470. |
| 17 | Received cash on account, \$500. |
| 20 | Prepared a design for a school on account, \$680. |
| 25 | Received \$1,900 cash for design services to be performed in December. |
| 28 | Received \$3,100 cash for consulting with Plummer & Gordon. |
| 29 | Paid \$840 cash for a 12-month insurance policy starting on December 1. |
| 30 | Paid assistant's semimonthly salary, \$1,470. |
| 30 | Paid monthly rent expense, \$650. |
| 30 | Received a bill for utilities, \$650. The bill will be paid next month. |
| 30 | Paid cash dividends of \$2,800. |
-

Requirements

1. Record each transaction in the journal using the following account titles: Cash; Accounts Receivable; Office Supplies; Prepaid Insurance; Land; Furniture; Accounts Payable; Utilities Payable; Unearned Revenue; Common Stock; Dividends; Service Revenue; Salaries Expense; Rent Expense; and Utilities Expense. Explanations are not required.
2. Open a T-account for each of the accounts.
3. Post the journal entries to the T-accounts, using transaction dates as posting references in the ledger accounts. Label the balance of each account *Bal.*
4. Prepare the trial balance of Beth Stewart, Designer, as of November 30, 2018.

P2-37B Journalizing transactions, posting journal entries to four-column accounts, and preparing a trial balance

Theodore McMahon opened a law office on April 1, 2018. During the first month of operations, the business completed the following transactions:

-
- | | |
|--------|--|
| Apr. 1 | McMahon contributed \$70,000 cash to the business, Theodore McMahon, Attorney. The business issued common stock to McMahon. |
| 3 | Purchased office supplies, \$1,100, and furniture, \$1,300, on account. |
| 4 | Performed legal services for a client and received \$2,000 cash. |
| 7 | Purchased a building with a market value of \$150,000, and land with a market value of \$30,000. The business paid \$40,000 cash and signed a note payable to the bank for the remaining amount. |
| 11 | Prepared legal documents for a client on account, \$400. |
| 15 | Paid assistant's semimonthly salary, \$1,200. |
| 16 | Paid for the office supplies purchased on April 3 on account. |
| 18 | Received \$2,700 cash for helping a client sell real estate. |
| 19 | Defended a client in court and billed the client for \$1,700. |
| 25 | Received a bill for utilities, \$650. The bill will be paid next month. |
| 28 | Received cash on account, \$1,100. |
| 29 | Paid \$3,600 cash for a 12-month insurance policy starting on May 1. |
| 29 | Paid assistant's semimonthly salary, \$1,200. |
| 30 | Paid monthly rent expense, \$2,100. |
| 30 | Paid cash dividends of \$3,200. |
-

Requirements

1. Record each transaction in the journal, using the following account titles: Cash; Accounts Receivable; Office Supplies; Prepaid Insurance; Land; Building; Furniture; Accounts Payable; Utilities Payable; Notes Payable; Common Stock; Dividends; Service Revenue; Salaries Expense; Rent Expense; and Utilities Expense. Explanations are not required.
2. Open the following four-column accounts including account numbers: Cash, 101; Accounts Receivable, 111; Office Supplies, 121; Prepaid Insurance, 131; Land, 141; Building, 151; Furniture, 161; Accounts Payable, 201; Utilities Payable, 211; Notes Payable, 221; Common Stock, 301; Dividends, 311; Service Revenue, 411; Salaries Expense, 511; Rent Expense, 521; and Utilities Expense, 531.
3. Post the journal entries to four-column accounts in the ledger, using dates, account numbers, journal references, and posting references. Assume the journal entries were recorded on page 1 of the journal.
4. Prepare the trial balance of Theodore McMahon, Attorney, at April 30, 2018.

Learning Objectives 3, 4

3. Service Revenue Balance \$6,800

Learning Objectives 3, 4

3. Cash Balance \$20,250

P2-38B Journalizing transactions, posting journal entries to four-column accounts, and preparing a trial balance

The trial balance of Seth Mildred, CPA, is dated March 31, 2018:

SETH MILDRED, CPA Trial Balance March 31, 2018		
	Balance	
Account Title	Debit	Credit
Cash	\$ 8,000	
Accounts Receivable	6,500	
Office Supplies	800	
Land	28,000	
Furniture	0	
Automobile	0	
Accounts Payable		\$ 6,300
Unearned Revenue		0
Common Stock		33,700
Dividends	0	
Service Revenue		11,500
Salaries Expense	7,000	
Rent Expense	1,200	
Total	<u><u>\$ 51,500</u></u>	<u><u>\$ 51,500</u></u>

During April, the business completed the following transactions:

-
- Apr. 4 Collected \$1,500 cash from a client on account.
- 8 Performed tax services for a client on account, \$3,300.
- 13 Paid \$3,400 on account.
- 14 Purchased furniture on account, \$3,000.
- 15 Mildred contributed his personal automobile to the business in exchange for common stock. The automobile had a market value of \$13,000.
- 18 Purchased office supplies on account, \$1,100.
- 19 Received \$1,650 for tax services performed on April 8.
- 20 Paid cash dividends of \$3,500.
- 21 Received \$3,800 cash for consulting work completed.
- 24 Received \$1,900 cash for accounting services to be completed next month.
- 27 Paid office rent, \$900.
- 28 Paid employee salary, \$1,800.
-

Requirements

1. Record the April transactions in the journal using the following accounts: Cash; Accounts Receivable; Office Supplies; Land; Furniture; Automobile; Accounts Payable; Unearned Revenue; Common Stock; Dividends; Service Revenue; Salaries Expense; and Rent Expense. Include an explanation for each entry.
2. The four-column ledger accounts listed in the trial balance, together with their balances as of March 31, have been opened for you and utilize the following account numbers: Cash, 11; Accounts Receivable, 12; Office Supplies, 13; Land, 14; Furniture, 15; Automobile, 16; Accounts Payable, 21; Unearned Revenue, 22; Common Stock, 31; Dividends, 33; Service Revenue, 41; Salaries Expense, 51; and Rent Expense, 52. Post the journal entries to four-column accounts in the ledger, using dates, account numbers, journal references, and posting references. Assume the journal entries were recorded on page 5 of the journal.
3. Prepare the trial balance of Seth Mildred, CPA, at April 30, 2018.

P2-39B Correcting errors in a trial balance

The trial balance of Love to Learn Child Care does not balance.

Learning Objective 4

Total Debits \$123,300

LOVE TO LEARN CHILD CARE		
Trial Balance		
May 31, 2018		
Balance		
Account Title	Debit	Credit
Cash	\$ 8,060	
Accounts Receivable	8,700	
Office Supplies	1,000	
Prepaid Insurance	1,700	
Equipment	90,400	
Accounts Payable		\$ 3,000
Notes Payable		45,000
Common Stock		54,000
Dividends	3,740	
Service Revenue		16,300
Salaries Expense	4,350	
Rent Expense	400	
Total	<u><u>\$ 118,350</u></u>	<u><u>\$ 118,300</u></u>

The following errors are detected:

- a. Cash is understated by \$1,800.
- b. A \$3,800 debit to Accounts Receivable was posted as a credit.
- c. A \$1,000 purchase of office supplies on account was neither journalized nor posted.
- d. Equipment was incorrectly transferred from the ledger as \$90,400. It should have been transferred as \$82,500.

- e. Salaries Expense is overstated by \$350.
- f. A \$300 cash payment for advertising expense was neither journalized nor posted.
- g. A \$160 cash dividend was incorrectly journalized as \$1,600.
- h. Service Revenue was understated by \$4,000.
- i. A 12-month insurance policy was posted as a \$1,400 credit to Prepaid Insurance. Cash was posted correctly.

Prepare the corrected trial balance as of May 31, 2018. Journal entries are not required.

Learning Objectives 4, 5

1. Net Income \$13,404

P2-40B Preparing financial statements from the trial balance and calculating the debt ratio

The trial balance as of July 31, 2018, for Sandra Sousa, Registered Dietician, is presented below:

SANDRA SOUSA, REGISTERED DIETICIAN		
Trial Balance		
July 31, 2018		
	Balance	
Account Title	Debit	Credit
Cash	\$ 36,000	
Accounts Receivable	8,500	
Office Supplies	1,300	
Prepaid Insurance	2,100	
Equipment	22,000	
Accounts Payable		\$ 3,600
Unearned Revenue		8,447
Notes Payable		25,000
Common Stock		20,000
Dividends	2,300	
Service Revenue		17,953
Salaries Expense	2,100	
Rent Expense	600	
Utilities Expense	100	
Total	\$ 75,000	\$ 75,000

Requirements

1. Prepare the income statement for the month ended July 31, 2018.
2. Prepare the statement of retained earnings for the month ended July 31, 2018. The beginning balance of retained earnings was \$0.
3. Prepare the balance sheet as of July 31, 2018.
4. Calculate the debt ratio as of July 31, 2018.

CRITICAL THINKING

> Using Excel

P2-41 Using Excel to journalize and post transactions, and to create financial statements

Download an Excel template for this problem online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

Redmond Corporation started operations on April 1, 2018. Seventeen transactions occurred during April. Financial statements are prepared at the end of the month.

Requirements

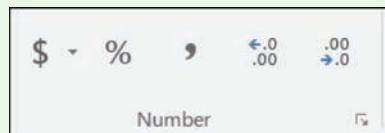
1. Use Excel to record the transactions for April. Use the blue shaded areas for inputs.
 - a. To record the account name in the journal, click in the Account and Explanation column. A drop down arrow will appear to the right. Click the arrow and select an account from the chart of accounts. Use the explanation to help you with the entry.

Date	Account and Explanation	DR	CR
Jul 31			
	Cash		
	Accounts Receivable		
	Office Supplies		
	Prepaid Rent		
	Land		
	Building		
	Furniture		
31	Accounts Payable		

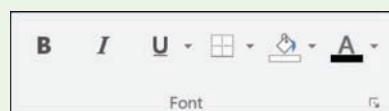
- b. Indent the account name of the account to be credited using the indent button on the Home tab. Click the Increase Indent button twice.



2. Post the transactions to T-Accounts. Use the blue shaded areas for inputs.
 - a. For each transaction, post the amount on the correct side of the T-Account. The T-account totals will be calculated automatically.
 - b. Total debits should equal total credits. The debit-credit balance check appears in the top right-hand corner of the T-Account worksheet.
3. Prepare the income statement, statement of retained earnings, and balance sheet for the company using the trial balance. Each financial statement appears on a separate worksheet tab.
 - a. Fill in the blue shaded areas using a formula that references the account balances in the trial balance at the end of the month.
 - b. Format the cells requiring dollar signs. Number formatting is located on the Home tab.



- c. Format the cells requiring a single underline and cells requiring double underlines. The borders tool is found on the Home tab. It looks like a window pane. Click the down arrow for different border selections.



> Continuing Problem

P2-42 Journalizing transactions, posting to T-accounts, and preparing a trial balance

Problem P2-42 continues with the company introduced in Chapter 1, Let's Bike Company. Here you will account for Let's Bike Company's transactions as it is actually done in practice. Begin by reviewing the transactions from Chapter 1. The transactions have been reprinted below.

-
- Nov. 1 Received \$23,000 cash to begin the company and issued common stock to Cho and Lee.
- 2 Purchased bikes for \$5,400 on account.
- 3 Purchased office supplies on account, \$980.
- 8 Earned \$2,300 cash for rental of bikes to individual customers.
- 12 Paid \$3,400 and \$950 related to the purchases on November 2 and 3, 2018, respectively.
- 15 Paid \$1,700 cash for wages.
- 18 Earned \$3,500 for rental of bikes to Alpha Corporation for a corporate event on account.
- 20 Paid \$200 dividends to stockholders.
- 24 Received \$2,000 cash from Alpha Corporation for bike rental on November 18, 2018.
- 25 Received a bill for \$180 for utilities. (Use separate payable account.)
- 26 Received a bill for \$200 for cell phone expenses. (Use separate payable account.)
- 29 Paid \$400 dividends to stockholders.
- 30 Paid \$2,200 for the first month's rent.
-

In addition, Let's Bike Company completed the following transactions for December.

- Dec. 1 Prepaid \$4,400 for the next two months' rent.
- 1 Purchased additional bikes for \$6,120 signing a note.
- 1 Purchased land (worth \$94,000) and a small building from Cho and Lee to use as a rental office (worth \$40,000) in exchange for common stock.
- 2 Paid the utilities and telephone bills of November 2018.
- 5 Earned \$3,900 cash for rental of bikes to individual customers.
- 9 Earned \$4,200 for rental of bikes to corporate customers on account.
- 12 Received a \$900 deposit from a bike rental group that will use the bikes in the coming 4 weeks.
- 16 Paid \$3,400 cash for wages.
- 23 Paid the remaining balance on account related to the November 2 and 3 purchases.
- 28 Received a bill for \$230 for utilities and \$370 for telephone.
- 29 Purchased office supplies on account, \$420.
- 30 Paid \$700 dividends to stockholders.
-

Requirements

1. Journalize the transactions for both November and December, using the following accounts: Cash; Accounts Receivable; Office Supplies; Prepaid Rent; Land; Building; Bikes; Accounts Payable; Utilities Payable; Telephone Payable;

Unearned Revenue; Notes Payable; Common Stock; Dividends; Bike Rental Revenue; Rent Expense; Utilities Expense; Wages Expense; and Telephone Expense. Explanations are not required. (Hint: For November transactions, refer to your answer for Chapter 1.)

2. Open a T-account for each of the accounts.
3. Post the journal entries to the T-accounts, and calculate account balances. Formal posting references are not required.
4. Prepare a trial balance as of December 31, 2018.
5. Prepare the income statement of Let's Bike Company for the two months ended December 31, 2018.
6. Prepare the statement of retained earnings for the two months ended December 31, 2018.
7. Prepare the balance sheet as of December 31, 2018.
8. Calculate the debt ratio for Let's Bike Company at December 31, 2018.

> Tying It All Together Case 2-1

Before you begin this assignment, review the *Tying It All Together* feature in the chapter.

Part of the **Fry's Electronics, Inc.**'s experience involves providing technical support to its customers. This includes in-home installations of electronics and also computer support at their retail store locations.

Requirements

1. Suppose Fry's Electronics, Inc. provides \$10,500 of computer support at the Dallas-Fort Worth store during the month of November. How would Fry's Electronics record this transaction? Assume all customers paid in cash. What financial statement(s) would this transaction affect?
2. Assume Fry's Electronics, Inc.'s Modesto, California, location received \$24,000 for an annual contract to provide computer support to the local city government. How would Fry's Electronics record this transaction? What financial statement(s) would this transaction affect?
3. What is the difference in how revenue is recorded in requirements 1 and 2? Clearly state when revenue is recorded in each requirement.

> Decision Case 2-1

Your friend, Dean McChesney, requested that you advise him on the effects that certain transactions will have on his business, A-Plus Travel Planners. Time is short, so you cannot journalize the transactions. Instead, you must analyze the transactions without a journal. McChesney will continue the business only if he can expect to earn a monthly net income of \$6,000. The business completed the following transactions during June:

- a. McChesney deposited \$10,000 cash in a business bank account to start the company.
The company issued common stock to McChesney.
- b. Paid \$300 cash for office supplies.
- c. Incurred advertising expense on account, \$700.
- d. Paid the following cash expenses: administrative assistant's salary, \$1,400; office rent, \$1,000.
- e. Earned service revenue on account, \$8,800.
- f. Collected cash from customers on account, \$1,200.

Requirements

1. Open the following T-accounts: Cash; Accounts Receivable; Office Supplies; Accounts Payable; Common Stock; Service Revenue; Salaries Expense; Rent Expense; and Advertising Expense.
2. Post the transactions directly to the accounts without using a journal. Record each transaction by letter. Calculate account balances.
3. Prepare a trial balance at June 30, 2018.
4. Compute the amount of net income or net loss for this first month of operations. Would you recommend that McChesney continue in business?

> Ethical Issue 2-1

Better Days Ahead, a charitable organization, has a standing agreement with First National Bank. The agreement allows Better Days Ahead to overdraw its cash balance at the bank when donations are running low. In the past, Better Days Ahead managed funds wisely and rarely used this privilege. Jacob Henson has recently become the president of Better Days Ahead. To expand operations, Henson acquired office equipment and spent large amounts on fundraising. During Henson's presidency, Better Days Ahead has maintained a negative bank balance of approximately \$10,000.

What is the ethical issue in this situation, if any? State why you approve or disapprove of Henson's management of Better Days Ahead's funds.

> Fraud Case 2-1

Roy Akins was the accounting manager at Zelco, a tire manufacturer, and he played golf with Hugh Stallings, the CEO, who was something of a celebrity in the community. The CEO stood to earn a substantial bonus if Zelco increased net income by year-end. Atkins was eager to get into Stallings' elite social circle; he boasted to Stallings that he knew some accounting tricks that could increase company income by simply revising a few journal entries for rental payments on storage units. At the end of the year, Atkins changed the debits from "rent expense" to "prepaid rent" on several entries. Later, Stallings got his bonus, and the deviations were never discovered.

Requirements

1. How did the change in the journal entries affect the net income of the company at year-end?
2. Who gained and who lost as a result of these actions?

> Financial Statement Case 2-1

Refer to <http://www.pearsonglobaleditions.com/Sitemap/Horngren/> to view a link to **Target Corporation's** Fiscal 2015 Annual Report.

Requirements

1. Calculate the debt ratio for Target Corporation as of January 30, 2016.
2. How did the debt ratio for Target Corporation compare to the debt ratio for **Kohl's Corporation**? Discuss.

> Communication Activity 2-1

In 35 words or fewer, explain the difference between a debit and a credit, and explain what the normal balance of the six account types is.

Pearson MyLab Accounting

For a wealth of online resources, including exercises, problems, media, and immediate tutorial help, please visit www.myaccountinglab.com.

> Quick Check Answers

1. a 2. c 3. d 4. d 5. b 6. b 7. d 8. b 9. a 10. a

The Adjusting Process



Where's My Bonus?

Liam Mills was surprised when he opened his mail. He had just received his most recent quarterly bonus check from his employer, Custom Marketing, and the check was smaller than he expected. Liam worked as a sales manager and was responsible for product marketing and implementation in the southwest region of the United States. He was paid a monthly salary but also received a 3% bonus for all revenue generated from advertising services provided to customers in his geographical area. He was counting on his fourth quarter (October–December) bonus check to be large enough to pay off the credit card debt

he had accumulated over the holiday break. It had been a great year-end for Liam. He had closed several open accounts, successfully signing several annual advertising contracts. In addition, because of his negotiating skills, he was able

to collect half of the payments for services up front instead of waiting for his customers to pay every month. Liam expected that his bonus check would be huge because of this new business, but it wasn't.

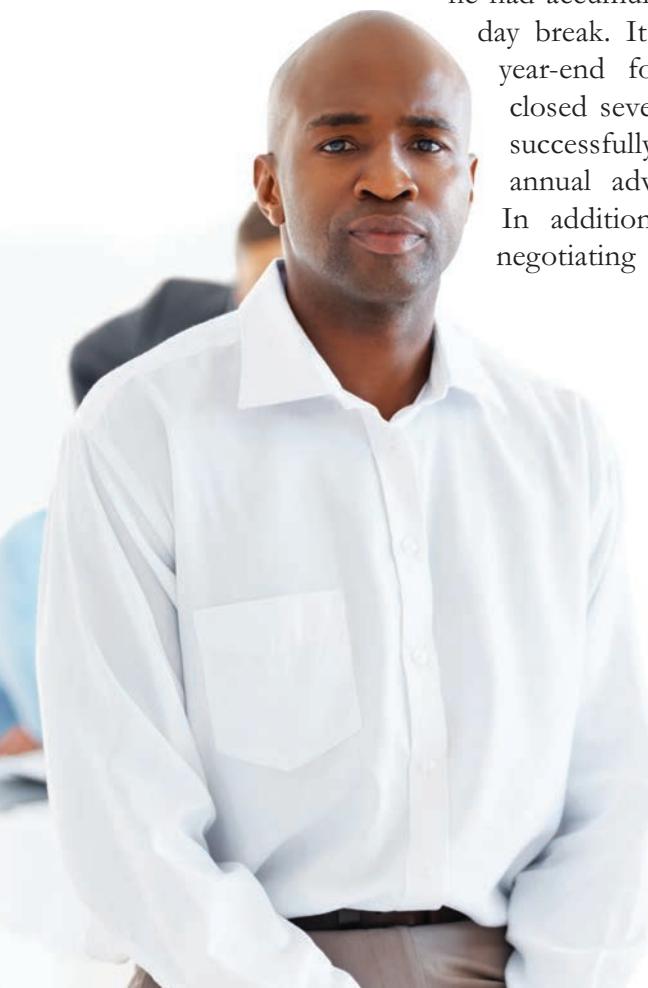
The next day, Liam stopped by the accounting office to discuss his bonus check. He was surprised to learn that his bonus was calculated by the revenue earned by his company through December 31. Although Liam had negotiated to receive half of the payments up front, the business had not yet earned the revenue from those payments. Custom Marketing will not record revenue earned until the advertising services have been performed. Eventually Liam will see the new business reflected in his bonus check, but he'll have to wait until the revenue has been earned.



How Was Revenue Earned Calculated?

At the end of a time period (often December 31), companies are required to accurately report revenues earned and expenses incurred during that time period. In order to do this, the company reviews the account balances as of the end of the time period and determines whether any adjustments are needed.

For example, **iHeartMedia, Inc.**, a company that has three distinct business segments: iHeartMedia, Americas Outdoor Advertising, and International Outdoor Advertising, must determine the amount of revenue earned from open advertising contracts. These contracts can cover only a few weeks or as long as several years. Only the amount earned in the current time period is reported as revenue on the income statement. *Adjusting the books* is the process of reviewing and adjusting the account balances so that amounts on the financial statements are reported accurately. This is what we will learn in this chapter.





Chapter 3 Learning Objectives



- | | |
|---|---|
| <p>1 Differentiate between cash basis accounting and accrual basis accounting</p> <p>2 Define and apply the time period concept, revenue recognition, and matching principles</p> <p>3 Explain the purpose of and journalize and post adjusting entries</p> <p>4 Explain the purpose of and prepare an adjusted trial balance</p> | <p>5 Identify the impact of adjusting entries on the financial statements</p> <p>6 Explain the purpose of a worksheet and use it to prepare adjusting entries and the adjusted trial balance</p> <p>7 Understand the alternative treatments of recording deferred expenses and deferred revenues (Appendix 3A)</p> |
|---|---|

In Chapter 1, we introduced you to the accounting equation and the financial statements. In Chapter 2, you learned about T-accounts, debits, credits, and the trial balance. But have you captured all the transactions for a particular period? Not yet.

In this chapter, we continue our exploration of the accounting cycle by learning how to update the accounts at the end of the period. This process is called adjusting the books, and it requires special journal entries called *adjusting entries*. For example, you learn how, at the end of a particular period, you must determine how many office supplies you have used and how much you owe your employees—and make adjusting entries to account for these amounts. These are just some of the adjusting entries you need to make before you can see the complete picture of how well your company performed during a period of time.

Learning Objective 1

Differentiate between cash basis accounting and accrual basis accounting

Cash Basis Accounting

Accounting method that records revenues only when cash is received and expenses only when cash is paid.

Accrual Basis Accounting

Accounting method that records revenues when earned and expenses when incurred.

If cash basis accounting is not allowed by GAAP, why would a business choose to use this method?

WHAT IS THE DIFFERENCE BETWEEN CASH BASIS ACCOUNTING AND ACCRUAL BASIS ACCOUNTING?

There are two ways to record transactions—cash basis accounting or accrual basis accounting.

- **Cash basis accounting** records only transactions with cash: cash receipts and cash payments. When cash is received, revenues are recorded. When cash is paid, expenses are recorded. As a result, revenues are recorded only when cash is received and expenses are recorded only when cash is paid. The cash basis of accounting is not allowed under Generally Accepted Accounting Principles (GAAP); however, small businesses will sometimes use this method. **The cash method is an easier accounting method to follow because it generally requires less knowledge of accounting concepts and principles. The cash basis accounting method also does a good job of tracking a business's cash flows.**

- **Accrual basis accounting** records the effect of each transaction as it occurs—that is, revenues are recorded when earned and expenses are recorded when incurred. Revenues are considered to be earned when the services or goods are provided to the customers. Most businesses use the accrual basis as covered in this book. The accrual basis of accounting provides a better picture of a business's revenues and expenses. It records revenue only when it has been earned and expenses only when they have been incurred. Under accrual basis accounting, it is irrelevant when cash is received or paid.





Example: Suppose on May 1, Smart Touch Learning paid \$1,200 for insurance for the next six months (\$200 per month). This prepayment represents insurance coverage for May through October. Under the cash basis method, Smart Touch Learning would record Insurance Expense of \$1,200 on May 1. This is because the cash basis method records an expense when cash is paid. Alternatively, accrual basis accounting requires the company to prorate the expense. Smart Touch Learning would record a \$200 expense every month from May through October. This is illustrated as follows:

	Cash basis	Accrual basis	
Cash Payment Made	May 1: \$ 1,200	May 1: \$ 1,200	
Expense Recorded	May 1: \$ 1,200	May 31: \$ 200 June 30: 200 July 31: 200 August 31: 200 September 30: 200 October 31: 200	
Total Expense Recorded	<u><u>\$ 1,200</u></u>	<u><u>\$ 1,200</u></u>	

Now let's see how the cash basis and the accrual basis methods account for revenues.

Example: Suppose on April 30, Smart Touch Learning received \$600 for services to be performed for the next six months (May through October). Under the cash basis method, Smart Touch Learning would record \$600 of revenue when the cash is received on April 30. The accrual basis method, though, requires the revenue to be recorded only when it is earned. Smart Touch Learning would record \$100 of revenue each month for the next six months beginning in May.

	Cash basis	Accrual basis	
Cash Received	April 30: \$ 600	April 30: \$ 600	
Revenue Recorded	April 30: \$ 600	May 31: \$ 100 June 30: 100 July 31: 100 August 31: 100 September 30: 100 October 31: 100	
Total Revenue Recorded	<u><u>\$ 600</u></u>	<u><u>\$ 600</u></u>	

Notice that under both methods, cash basis and accrual basis, the total amount of revenues and expenses recorded by October 31 was the same. The major difference between a cash basis accounting system and an accrual basis accounting system is the timing of recording the revenue or expense.



Try It!

Total Pool Services earned \$130,000 of service revenue during 2018. Of the \$130,000 earned, the business received \$105,000 in cash. The remaining amount, \$25,000, was still owed by customers as of December 31. In addition, Total Pool Services incurred \$85,000 of expenses during the year. As of December 31, \$10,000 of the expenses still needed to be paid. In addition, Total Pool Services prepaid \$5,000 cash in December 2018 for expenses incurred during the next year.

1. Determine the amount of service revenue and expenses for 2018 using a cash basis accounting system.
2. Determine the amount of service revenue and expenses for 2018 using an accrual basis accounting system.

Check your answers online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercises S3-1 and S3-2. [Pearson MyLab Accounting](#)

WHAT CONCEPTS AND PRINCIPLES APPLY TO ACCRUAL BASIS ACCOUNTING?

Learning Objective 2

Define and apply the time period concept, revenue recognition, and matching principles

Time Period Concept

Assumes that a business's activities can be sliced into small time segments and that financial statements can be prepared for specific periods, such as a month, quarter, or year.

Fiscal Year

An accounting year of any 12 consecutive months that may or may not coincide with the calendar year.

Revenue Recognition Principle

Requires companies to record revenue when (or as) the entity satisfies each performance obligation.

As we have seen, the timing and recognition of revenues and expenses are the key differences between the cash basis and accrual basis methods of accounting. These differences can be explained by understanding the time period concept and the revenue recognition and matching principles.

The Time Period Concept

Smart Touch Learning will know with 100% certainty how well it has operated only if the company sells all of its assets, pays all of its liabilities, and gives any leftover cash to its stockholders. For obvious reasons, it is not practical to measure income this way. Because businesses need periodic reports on their affairs, the **time period concept** assumes that a business's activities can be sliced into small time segments and that financial statements can be prepared for specific periods, such as a month, quarter, or year.

The basic accounting period is one year, and most businesses prepare annual financial statements. The 12-month accounting period used for the annual financial statements is called a **fiscal year**. For most companies, the annual accounting period is the calendar year, from January 1 through December 31. Other companies use a fiscal year that ends on a date other than December 31. The year-end date is usually the low point in business activity for the year. Retailers are a notable example. For instance, Wal-Mart Stores, Inc., and J. C. Penney Company, Inc., use a fiscal year that ends around January 31 because the low point of their business activity comes about a month after the holidays.

The Revenue Recognition Principle

The **revenue recognition principle**¹ tells accountants when to record revenue and requires companies follow a five step process:

Step 1: Identify the contract with the customer. A contract is an agreement between two or more parties that creates enforceable rights and obligations.

Step 2: Identify the performance obligations in the contract. A performance obligation is a contractual promise with a customer to transfer a distinct good or service.

¹ On May 28, 2014, the FASB and IASB issued new guidance on accounting for revenue recognition, *Revenue from Contracts with Customers (Topic 606)*. This new standard will become effective for public business entities with annual reporting periods beginning after December 15, 2017.



A contract might have multiple performance obligations.² For example, AT&T, Inc. often provides a new phone to customers who sign a two-year cellular service agreement. This represents two distinct performance obligations: the cellular service agreement and the new phone.

Step 3: Determine the transaction price. The transaction price is the amount that the entity expects to be entitled to as a result of transferring goods or services to the customer.

Step 4: Allocate the transaction price to the performance obligations in the contract. If the transaction has multiple performance obligations, the transaction price will need to be allocated among the different performance obligations.

Step 5: Recognize revenue when (or as) the entity satisfies each performance obligation. The business will recognize revenue when (or as) it satisfies each performance obligation by transferring a good or service to a customer. A good or service is considered transferred when the customer obtains control of the good or service. The amount of revenue recognized is the amount allocated to the satisfied performance obligation.

The Matching Principle

The **matching principle** (sometimes called the *expense recognition principle*) guides accounting for expenses and ensures the following:

- All expenses are recorded when they are incurred during the period.
- Expenses are matched against the revenues of the period.

To match expenses against revenues means to subtract expenses incurred during one month from revenues earned during that same month. The goal is to compute an accurate net income or net loss for the time period.

There is a natural link between some expenses and revenues. For example, Smart Touch Learning pays a commission to the employee who sells the e-learning company's services. The commission expense is directly related to the e-learning company's revenue earned. Other expenses are not so easy to link to revenues. For example, Smart Touch Learning's monthly rent expense occurs regardless of the revenues earned that month. The matching principle tells us to identify those expenses with a particular period, such as a month or a year, when the related revenue occurred. The business will record rent expense each month based on the rental agreement.

Matching Principle

Guides accounting for expenses, ensures that all expenses are recorded when they are incurred during the period, and matches those expenses against the revenues of the period.

Try It!

Match the accounting terminology to the definitions.

- | | |
|----------------------------------|--|
| 3. Time period concept | a. Requires companies to record revenue when it satisfies each performance obligation. |
| 4. Revenue recognition principle | b. Assumes that a business's activities can be sliced into small time segments and that financial statements can be prepared for specific periods. |
| 5. Matching principle | c. Guides accounting for expenses, ensures that all expenses are recorded when they are incurred during the period, and matches those expenses against the revenues of the period. |

Check your answers online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercises S3-3 and S3-4. **Pearson MyLab Accounting**

² Revenue recognition for multiple performance obligations will be discussed in Chapter 5, Appendix 5B.



WHAT ARE ADJUSTING ENTRIES, AND HOW DO WE RECORD THEM?

Learning Objective 3

Explain the purpose of and journalize and post adjusting entries

Exhibit 3-1 | Unadjusted Trial Balance

SMART TOUCH LEARNING Unadjusted Trial Balance December 31, 2018		
Account Title	Balance	
	Debit	Credit
Cash	\$ 12,200	
Accounts Receivable	1,000	
Office Supplies	500	
Prepaid Rent	3,000	
Land	20,000	
Building	60,000	
Furniture	18,000	
Accounts Payable		\$ 200
Utilities Payable		100
Unearned Revenue		600
Notes Payable		60,000
Common Stock		48,000
Dividends	5,000	
Service Revenue		16,500
Rent Expense	2,000	
Salaries Expense	3,600	
Utilities Expense	100	
Total	<u><u>\$ 125,400</u></u>	<u><u>\$ 125,400</u></u>

This *unadjusted trial balance* lists the revenues and expenses of the e-learning company for November and December. But these amounts are incomplete because they omit various revenue and expense transactions. Accrual basis accounting requires the business to review the unadjusted trial balance and determine whether any additional revenues and expenses need to be recorded. Are there revenues that Smart Touch Learning has earned that haven't been recorded yet? Are there expenses that have occurred that haven't been journalized?

For example, consider the Office Supplies account in Exhibit 3-1. Smart Touch Learning uses office supplies during the two months. This reduces the office supplies on hand (an asset) and creates an expense (Supplies Expense). It is a waste of time to record Supplies Expense every time office supplies are used. But by December 31, enough of the \$500 of Office Supplies on the unadjusted trial balance (Exhibit 3-1) have probably been used that we need to adjust the Office Supplies account. This is an example of why we need to adjust some accounts at the end of the accounting period.



An **adjusting entry** is completed at the end of the accounting period and records revenues to the period in which they are earned and expenses to the period in which they occur. Adjusting entries also update the asset and liability accounts. Adjustments are needed to properly measure several items such as:

1. Net income (loss) on the income statement
2. Assets and liabilities on the balance sheet

There are two basic categories of adjusting entries: *deferrals* and *accruals*. In a deferral adjustment, the cash payment occurs before an expense is incurred or the cash receipt occurs before the revenue is earned. Deferrals defer the recognition of revenue or expense to a date after the cash is received or paid. Accrual adjustments are the opposite. An accrual records an expense before the cash is paid, or it records the revenue before the cash is received.

The two basic categories of adjusting entries can be further separated into four types:

1. Deferred expenses (deferral)
2. Deferred revenues (deferral)
3. Accrued expenses (accrual)
4. Accrued revenues (accrual)

The focus of this chapter is on learning how to account for these four types of adjusting entries.

Deferred Expenses

Deferred expenses, also called prepaid expenses, are advance payments of future expenses. They are deferrals because the expense is not recognized at the time of payment but deferred until they are used up. Such payments are considered assets rather than expenses until they are used up. When the prepayment is used up, the used portion of the asset becomes an expense via an adjusting entry.

Prepaid Rent

Remember Transaction 10 in Chapter 2? Smart Touch Learning prepaid three months' office rent of \$3,000 (\$1,000 per month × 3 months) on December 1, 2018. The entry to record the payment was as follows:

Date	Accounts and Explanation	Debit	Credit
Dec. 1	Prepaid Rent	3,000	
	Cash		3,000
<i>Paid rent in advance.</i>			

Adjusting Entry

An entry made at the end of the accounting period that is used to record revenues to the period in which they are earned and expenses to the period in which they occur.

Deferred Expense

An asset created when a business makes advance payments of future expenses.

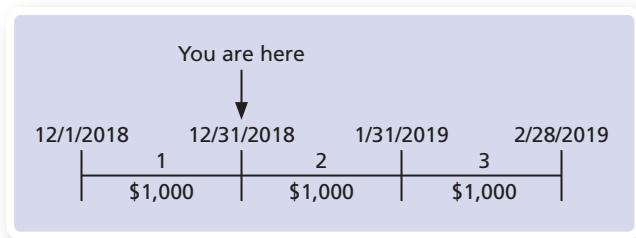
$$\begin{array}{c} \text{A} \uparrow \\ \text{Prepaid} \\ \text{Rent} \uparrow \\ \text{Cash} \downarrow \end{array} = \left\{ \begin{array}{c} \text{L} \\ + \\ \text{E} \end{array} \right\}$$

After posting, Prepaid Rent has a \$3,000 debit balance.

Prepaid Rent	
Dec. 1	3,000



Throughout December, Prepaid Rent maintains this balance. But \$3,000 is *not* the amount of Prepaid Rent for the balance sheet at December 31. Why?



As of December 31, Prepaid Rent should be decreased for the amount that has been used up. The used-up portion is one month of the three months prepaid, or one-third of the prepayment. Recall that an asset that has expired is an *expense*. The adjusting entry transfers \$1,000 ($\$3,000 \times 1/3$) from Prepaid Rent to Rent Expense. The adjusting entry is as follows:

$$\begin{array}{c} A \downarrow \\ \text{Prepaid} \\ \text{Rent} \downarrow \end{array} = \left\{ \begin{array}{l} L \quad + \quad E \downarrow \\ \text{Rent} \\ \text{Expense} \uparrow \end{array} \right.$$

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Rent Expense	1,000	
	Prepaid Rent		1,000
<i>To record rent expense.</i>			

After posting, Prepaid Rent and Rent Expense show correct ending balances:

Prepaid Rent			Rent Expense		
Dec. 1	3,000	1,000	Dec. 31	Nov. 15	2,000
Bal.	2,000			Dec. 31	1,000

Prepaid Rent is an example of an asset that was overstated prior to journalizing and posting the adjusting entry. Notice that the ending balance in Prepaid Rent is now \$2,000. Because Prepaid Rent is an asset account for Smart Touch Learning, it should contain only two more months of rent on December 31 (for January and February). So we have \$1,000 rent per month times two months equals the \$2,000 Prepaid Rent balance.

If Smart Touch Learning had prepaid insurance, the same type of analysis would apply to the prepayment of three months of insurance. The only difference is in the account titles. Prepaid Insurance would be used instead of Prepaid Rent, and Insurance Expense would be used instead of Rent Expense.

Office Supplies

Office supplies are also accounted for as prepaid expenses. Let's look at another example. On November 3, Smart Touch Learning purchased \$500 of office supplies on account.

The December 31 unadjusted trial balance, therefore, still lists Office Supplies with a \$500 debit balance. But Smart Touch Learning's December 31 balance sheet should *not* report office supplies of \$500. Why not?

During November and December, the e-learning company used office supplies to conduct business. The cost of the supplies used becomes *Supplies Expense*. To measure Supplies Expense, the business first counts the office supplies on hand at the end of December. This



is the amount of the asset still owned by the business. Assume that office supplies costing \$100 remain on December 31. Then the business uses the Office Supplies T-account to determine the value of the supplies that were used:

Office Supplies		
	Nov. 3	500
Bal.		?
	Bal.	100

Amount of office supplies remaining

Amount of office supplies used = Supplies Expense

So, we can solve for the office supplies used as follows:

$$\begin{aligned} \text{Office Supplies balance before adjustment} - \text{Office supplies used} &= \text{Office supplies on hand} \\ \$500 - \text{Office supplies used} &= \$100 \\ \text{Office supplies used} &= \$400 \end{aligned}$$

The December 31 adjusting entry updates Office Supplies and records Supplies Expense for November and December as follows:

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Supplies Expense	400	
	Office Supplies		400
<i>To record office supplies used.</i>			

$$\left. \begin{array}{l} A \downarrow \\ \text{Office Supplies} \downarrow \end{array} \right\} = \left\{ \begin{array}{l} L \downarrow \\ + E \downarrow \\ \text{Supplies Expense} \uparrow \end{array} \right\}$$

After posting the adjusting entry, the December 31 balance of Office Supplies is correctly reflected as \$100 and the Supplies Expense is correctly reflected as \$400.

Office Supplies			Supplies Expense	
Nov. 3	500	400	Dec. 31	400
Bal.	100		Bal.	400

The Office Supplies account then enters January with a \$100 balance. If the adjusting entry for Office Supplies had not been recorded, the asset would have been overstated and Supplies Expense would have been understated. In making the adjusting entry, the correct balance of Office Supplies, \$100, is now reported on the balance sheet as of December 31 and the income statement is correctly reporting an expense of \$400.

Depreciation

Property, plant, and equipment (also called *plant assets*) are long-lived, tangible assets used in the operation of a business. Examples include land, buildings, equipment, furniture, and automobiles. As a business uses these assets, their value and usefulness decline. The decline in usefulness of a plant asset is an expense, and accountants systematically spread the asset's cost over its useful life. The allocation of a plant asset's cost over its useful life is called **depreciation**. For example, a business might pay cash for an automobile when purchased, but the automobile will last for years, so depreciation allocates the cost spent on the car over the time the business uses the car. All plant assets are depreciated, with the exception of land. We record no depreciation for land because, unlike buildings and equipment, it does not have a definitive or clearly estimable useful life, so it is difficult to allocate the cost of land.

Property, Plant, and Equipment
Long-lived, tangible assets, such as land, buildings, and equipment, used in the operation of a business.

Depreciation

The process by which businesses spread the allocation of a plant asset's cost over its useful life.



Similarity to Prepaid Expenses The concept of accounting for plant assets is similar to that of prepaid expenses. The major difference is the length of time it takes for the asset to be used up. Prepaid expenses usually expire within a year, but plant assets remain useful for several years. As a business uses its plant assets, an adjusting entry is required to allocate the assets' costs. The adjusting entry records the cost allocation to an expense account called Depreciation Expense.

Let's review an example for Smart Touch Learning. On December 2, the business received a contribution of furniture with a market value of \$18,000 from Sheena Bright. In exchange, Smart Touch Learning issued shares of stock to Bright and made the following journal entry:

$$\begin{array}{c} A \uparrow \\ \text{Furniture} \uparrow \end{array} = \left\{ \begin{array}{l} L + E \uparrow \\ \text{Common Stock} \uparrow \end{array} \right.$$

Date	Accounts and Explanation	Debit	Credit
Dec. 2	Furniture	18,000	
	Common Stock		18,000
<i>Contribution of furniture in exchange for common stock.</i>			

After posting, the Furniture account has an \$18,000 balance:

Furniture	
Dec. 2	18,000

Smart Touch Learning believes the furniture will remain useful for five years, and at the end of five years, Smart Touch Learning believes the furniture will be worthless. The expected value of a depreciable asset at the end of its useful life is called the **residual value**. Smart Touch Learning will use the straight-line method to compute the amount of depreciation. The **straight-line method** allocates an equal amount of depreciation each year and is calculated as:

$$\text{Straight-line depreciation} = (\text{Cost} - \text{Residual value}) / \text{Useful life}$$

Smart Touch Learning will calculate the depreciation of the furniture for the month of December as:

$$\begin{aligned} \text{Straight-line depreciation} &= (\text{Cost} - \text{Residual value}) / \text{Useful life} \\ &= (\$18,000 - \$0) / 5 \text{ years} \\ &= \$3,600 \text{ per year} / 12 \text{ months} \\ &= \$300 \text{ per month} \end{aligned}$$

Depreciation expense for December is recorded by the following adjusting entry:

$$\begin{array}{c} A \downarrow \\ \text{Accumulated} \\ \text{Depreciation} \\ \text{Furniture} \uparrow \end{array} = \left\{ \begin{array}{l} L + E \downarrow \\ \text{Depreciation} \\ \text{Expense} \\ \text{Furniture} \uparrow \end{array} \right.$$

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Depreciation Expense—Furniture	300	
	Accumulated Depreciation—Furniture		300
<i>To record depreciation on furniture.</i>			

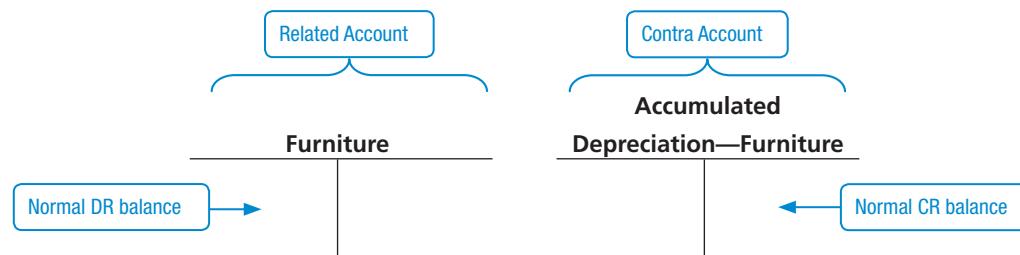


The Accumulated Depreciation Account Notice that in the preceding adjusting entry for depreciation, we credited Accumulated Depreciation—Furniture and not the asset account Furniture. Why? **We need to keep the original cost of the furniture separate from the accumulated depreciation because of the cost principle. Managers can then refer to the Furniture account to see how much the asset originally cost.** This information may help decide how much to sell the asset for in the future or how much to pay for new furniture. The **Accumulated Depreciation** account is the sum of all depreciation expense recorded for the depreciable asset to date. Accumulated Depreciation will increase (accumulate) over time.

Accumulated Depreciation is a contra asset, which means that it is an asset account with a normal credit balance. Contra means opposite. A **contra account** has two main characteristics:

- A contra account is paired with and is listed immediately after its related account in the chart of accounts and associated financial statement.
- A contra account's normal balance (debit or credit) is the opposite of the normal balance of the related account.

For example, Accumulated Depreciation—Furniture is the contra account that follows the Furniture account on the balance sheet. The Furniture account has a normal debit balance, so Accumulated Depreciation—Furniture, a contra asset, has a normal credit balance.



A business may have a separate Accumulated Depreciation account for each depreciable asset. Because Smart Touch Learning has both a Building and a Furniture account, it also has these two accounts: Accumulated Depreciation—Building, and Accumulated Depreciation—Furniture. However, small companies often have only one Accumulated Depreciation account for all of their depreciable assets.

After posting the depreciation, the accounts appear as follows:

Furniture	Accumulated Depreciation—Furniture	Depreciation Expense—Furniture
Dec. 2 18,000	300	Dec. 31 300

The Accumulated Depreciation account accumulates the depreciation expense. This means that next month an additional \$300 will be added to the Accumulated Depreciation—Furniture account creating a balance of \$600, representing two months of depreciation. At the end of three months, the Accumulated Depreciation—Furniture account will have a balance of \$900 (\$300 per month x 3 months).

When recording depreciation, why don't we record a credit to the Furniture account?



Accumulated Depreciation

The sum of all the depreciation expense recorded to date for a depreciable asset.

Contra Account

An account that is paired with, and is listed immediately after, its related account in the chart of accounts and associated financial statement and whose normal balance is the opposite of the normal balance of the related account.

**Book Value**

A depreciable asset's cost minus accumulated depreciation.

Book Value The balance sheet reports both Furniture and Accumulated Depreciation—Furniture. Because it is a contra account, Accumulated Depreciation—Furniture is subtracted from Furniture. The resulting net amount (cost minus accumulated depreciation) of a plant asset is called its **book value**. The book value represents the cost invested in the asset that the business has not yet expensed. For Smart Touch Learning's furniture, the book value on December 31 is as follows:

Book value of furniture:	
Furniture	\$ 18,000
Less: Accumulated Depreciation—Furniture	(300)
Book value of furniture	\$ 17,700

Depreciation on the building purchased on December 1 would be recorded in a similar manner. Suppose that the monthly depreciation is \$250. The following adjusting entry would record depreciation for December:

$$\begin{array}{c} A \downarrow \\ \text{Accumulated} \\ \text{Depreciation} \\ \text{Building} \uparrow \end{array} = \left\{ \begin{array}{l} L \quad + \quad E \downarrow \\ \text{Depreciation} \\ \text{Expense} \\ \text{Building} \uparrow \end{array} \right.$$

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Depreciation Expense—Building Accumulated Depreciation—Building <i>To record depreciation on building.</i>	250	250

Remember, an increase in a contra asset, such as Accumulated Depreciation, decreases total assets. This is because a contra asset has a credit balance and credits decrease assets.

Had Smart Touch Learning not recorded the adjusting entries for depreciation on the furniture and building, plant assets would have been overstated and expenses would have been understated. After recording the adjusting entries, property, plant, and equipment (plant assets) are reported at the correct net amount, as shown on the December 31 partial balance sheet in Exhibit 3-2.



Exhibit 3-2 | Property, Plant, and Equipment on the Balance Sheet of Smart Touch Learning

SMART TOUCH LEARNING Balance Sheet (Partial) December 31, 2018		
Property, Plant, and Equipment		
Land		\$ 20,000
Building	\$ 60,000	
Less: Accumulated Depreciation—Building	(250)	59,750
Furniture	18,000	
Less: Accumulated Depreciation—Furniture	(300)	17,700
Property, Plant, and Equipment, Net		\$ 97,450

Deferred Revenues

Remember, deferred (or unearned) revenues occur when the company receives cash before it does the work or delivers a product to earn that cash. The company owes a product or a service to the customer, or it owes the customer his or her money back. Only after completing the job or delivering the product does the business *earn* the revenue. Because of this delay, unearned revenue is a liability and is also called **deferred revenue**. The revenue associated with the work or product is not recognized when the cash is received but is instead deferred until it is earned.

Suppose, for example, a law firm engages Smart Touch Learning to provide e-learning services for the next 30 days, agreeing to pay \$600 in advance. Smart Touch Learning collected the amount on December 21 and recorded the following entry:

Date	Accounts and Explanation	Debit	Credit
Dec. 21	Cash	600	
	Unearned Revenue		600
	<i>Collected cash for future services.</i>		

Deferred Revenue

A liability created when a business collects cash from customers in advance of completing a service or delivering a product.

$$\frac{A \uparrow}{\text{Cash} \uparrow} = \left\{ \begin{array}{l} \frac{L \uparrow}{\text{Unearned} \uparrow} \\ + \end{array} \right. \frac{E}{\text{Revenue} \uparrow}$$

The liability account, Unearned Revenue, now shows that Smart Touch Learning owes \$600 in services.

Unearned Revenue		
600		Dec. 21



During the last 10 days of the month—December 22 through December 31—Smart Touch Learning will *earn* approximately one-third (10 days divided by 30 days) of the \$600, or \$200. Therefore, Smart Touch Learning makes the following adjusting entry to record earning \$200 of revenue:

$$\underline{\text{A}} \quad \left\{ = \begin{array}{c} \text{L} \downarrow \\ \text{Unearned} \\ \text{Revenue} \downarrow \end{array} + \begin{array}{c} \text{E} \uparrow \\ \text{Service} \\ \text{Revenue} \uparrow \end{array} \right.$$

Date	Accounts and Explanation		Debit	Credit
Dec. 31	Unearned Revenue		200	
	Service Revenue			200
<i>To record service revenue earned that was collected in advance.</i>				

This adjusting entry shifts \$200 from the liability account to the revenue account. Service Revenue increases by \$200, and Unearned Revenue decreases by \$200. Now both accounts are up to date at December 31:

Unearned Revenue			Service Revenue		
Dec. 31	200	600 Dec. 21		5,500 Nov. 8	
		400 Bal.		3,000 Nov. 10	
				8,000 Dec. 28	
				200 Dec. 31	◀
				16,700	Bal.

Had the adjusting entry not been made, the liability, Unearned Revenue, would be overstated and Service Revenue would be understated.

Accrued Expenses

Accrued Expense

An expense that the business has incurred but has not yet paid.

Businesses often incur expenses before paying for them. The term **accrued expense** refers to an expense of this type. An accrued expense hasn't been paid for yet. Consider an employee's salary. Salaries Expense grows as the employee works, so the expense is said to *accrue*. Another accrued expense is interest expense on a note payable. Interest accrues as time passes on the note. An accrued expense always creates an accrued liability.

Corporations do not make daily or weekly journal entries to accrue expenses. Instead, they wait until the end of the accounting period. They make an adjusting entry to bring each expense (and the related liability) up to date for the financial statements.

Accrued Salaries Expense

Smart Touch Learning pays its employee a monthly salary of \$2,400—half on the 15th and half on the first day of the next month. On the next page is a calendar for December and the first week in January with the two pay days circled.



December 2018						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					Dec 1	
2	3	4	5	6	7	8
9	10	11	12	13	14	15 Pay Day
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31	Jan 1 Pay Day	2	3	4	5

During December, the company paid the first half-month salary on Saturday, December 15, and made this entry:

Date	Accounts and Explanation	Debit	Credit
Dec. 15	Salaries Expense	1,200	
	Cash		1,200
<i>Paid salaries.</i>			

$$\left. \begin{array}{l} A \downarrow \\ Cash \downarrow \end{array} \right\} = \left\{ \begin{array}{l} L \\ \hline Salaries \\ Expense \uparrow \end{array} \right. + \left. \begin{array}{l} E \downarrow \\ Salaries \\ Expense \uparrow \end{array} \right\}$$

The December 15 entry records only the first half of December's salaries expense. The second payment of \$1,200 will occur on January 1; however, the expense was incurred in December, so the expense must be recorded in December. On December 31, Smart Touch Learning makes the following adjusting entry:

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Salaries Expense	1,200	
	Salaries Payable		1,200
<i>To accrue salaries expense.</i>			

$$\left. \begin{array}{l} A \\ \hline \end{array} \right\} = \left\{ \begin{array}{l} L \uparrow \\ Salaries \\ Payable \uparrow \end{array} \right. + \left. \begin{array}{l} E \downarrow \\ Salaries \\ Expense \uparrow \end{array} \right\}$$

After posting, both Salaries Expense and Salaries Payable are up to date:

Salaries Payable		Salaries Expense	
1,200	Dec. 31	Nov. 15	1,200
		Dec. 1	1,200
		Dec. 15	1,200
		Dec. 31	1,200
		Bal.	4,800



Salaries Expense shows a full two months' salary, and Salaries Payable shows the liability owed at December 31. This is an example of a liability that was understated before the adjusting entry was made. It also is an example of the matching principle: We are recording December's Salaries Expense in December so it will be reported on the same income statement as December's revenues.

Future Payment of Accrued Salaries Expense The adjusting entry at December 31 creates a liability that will eventually be paid. In this case, Smart Touch Learning will pay its employee the second half of December's wages on January 1. Because the expense has already been recorded, Smart Touch Learning will not record the expense again. To do so would record the expense twice, thus overstating the expense account. Instead, the business will decrease the amount of the liability, Salaries Payable, with a debit and record the cash payment. On January 1, Smart Touch Learning would record the following journal entry:

$$\frac{A \downarrow}{\text{Cash} \downarrow} = \left\{ \begin{array}{c} \frac{L \downarrow}{\text{Salaries}} + \frac{E}{\text{Payable} \downarrow} \end{array} \right\}$$

Date	Accounts and Explanation	Debit	Credit
Jan. 1	Salaries Payable	1,200	
	Cash		1,200

To record payment of accrued expense.

Don't confuse this entry with an adjusting entry. Adjusting entries are recorded only at the end of the accounting period and are used to record either revenue earned or expenses incurred. This entry is a journal entry. It is simply recording an everyday business transaction—the payment of salaries previously accrued. In this example, the amount paid for salaries was equal to the amount of the liability in the adjusting entry. Sometimes, however, the amount paid might be different than the liability in the adjusting entry. For example, assume that instead of making a payment for salaries on January 1, Smart Touch Learning doesn't make the payment until January 15 and pays a full month's salary. By delaying the payment, Smart Touch Learning incurs additional days of salaries expense. The journal entry to record the payment on January 15 will not only decrease the payable recorded in the adjusting entry but will also record any additional expense incurred.

Accrued Interest Expense

Borrowing money creates an additional liability for a Note Payable. Remember the purchase of the building on December 1, 2018? Smart Touch Learning purchased a \$60,000 building in exchange for a loan. Smart Touch Learning signed a one-year loan and recorded the following entry using the Notes Payable account:

$$\frac{A \uparrow}{\text{Building} \uparrow} = \left\{ \begin{array}{c} \frac{L \uparrow}{\text{Notes}} + \frac{E}{\text{Payable} \uparrow} \end{array} \right\}$$

Date	Accounts and Explanation	Debit	Credit
Dec. 1	Building	60,000	
	Notes Payable		60,000

Purchase of building with note.



ETHICS

When should accrued expenses be recorded?

Evan is in the process of recording the adjusting entries for Green Landscaping Services. Bob Green, owner and manager, has asked Evan to record all of the adjusting entries except for accrued expenses. Bob has a meeting with the banker on Monday to apply for a business loan. Bob knows that the banker will review his balance sheet and income statement. Bob is concerned that by recording the accrued expenses, the business's liabilities will be significantly higher on the balance sheet and a net loss will be reported on the income statement (due to higher expenses). Bob has instructed Evan to delay recording the accrued expenses until after his meeting with the banker. What should Evan do?

Solution

Failing to record the adjusting entries for accrued expenses violates the matching principle. Recording the expenses now (before Monday) accurately matches the occurrence of the expenses with the revenues that were created during that period. If Evan does not record the adjusting entries, the financial statements will not accurately represent the financial position or operating performance of the business. The banker could be tricked into lending the company money. Then, if the business could not repay the loan, the bank would lose—all because the banker relied on incorrect accounting information supplied by the company.

Interest on this note is payable one year later, on December 1, 2019. Although the company won't make the interest payment for a year, the company must record the amount of interest expense that has been incurred by December 31, 2018. The company will make an adjusting entry to record interest expense for one month (December 1–December 31).

The formula for computing the interest is as follows:

$$\text{Amount of interest} = \text{Principal} \times \text{Interest rate} \times \text{Time}$$

In the formula, time (period) represents the portion of a year that interest has accrued on the note. It may be expressed as a fraction of a year in months (number of months/12) or a fraction of a year in days (number of days/365). Smart Touch Learning's note payable has an interest rate of 2% per year and computes interest expense for the month as follows:

$$\begin{aligned}\text{Amount of interest} &= \text{Principal} \times \text{Interest rate} \times \text{Time} \\ &= \$60,000 \times 0.02 \times 1/12 \\ &= \$100\end{aligned}$$

The December 31 adjusting entry to accrue interest expense is as follows:

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Interest Expense	100	
	Interest Payable		100
	<i>To accrue interest expense.</i>		

$$A = \left\{ \begin{array}{l} \frac{L \uparrow}{\text{Interest Payable} \uparrow} + \frac{E \downarrow}{\text{Interest Expense} \uparrow} \end{array} \right\}$$

Notice that the adjusting entry records a credit to the liability, Interest Payable. This is because the interest payment will not be made until next year; therefore, Smart Touch Learning owes interest to the bank. Had the adjusting entry not been recorded, liabilities and expenses would have been understated. After posting, Interest Expense and Interest Payable now have the following correct balances:

Interest Payable		Interest Expense	
100	Dec. 31	Dec. 31	100
100	Bal.	Bal.	100



Accrued Revenues

Accrued Revenue

A revenue that has been earned but for which the cash has not yet been collected.

As we have just seen, expenses can occur before a company makes a cash payment for them, which creates an accrued expense. Similarly, businesses can earn revenue before they receive the cash. This creates an **accrued revenue**, which is a revenue that has been earned but for which the cash has not yet been collected.

Assume that Smart Touch Learning is hired on December 15 to perform e-learning services, beginning on December 16. Under this agreement, the business will earn \$1,600 monthly and receive payment on January 15. At the date of hiring, Smart Touch Learning does not record a journal entry because revenue has not yet been earned. During December, it will earn half a month's fee, \$800, for work December 16 through December 31. On December 31, Smart Touch Learning makes the following adjusting entry to record the revenue earned December 16 through December 31:

$$\begin{array}{c} A \uparrow \\ \hline \text{Accounts} \\ \text{Receivable} \uparrow \end{array} = \left\{ \begin{array}{c} L \quad + \quad E \uparrow \\ \hline \text{Service} \\ \text{Revenue} \uparrow \end{array} \right.$$

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Accounts Receivable	800	
	Service Revenue		800
<i>To accrue service revenue.</i>			

The adjusting entry records the earned revenue and brings the balance of the Service Revenue account to \$17,500. In addition, the adjusting entry records an additional \$800 account receivable. Smart Touch Learning did not record cash because the business has not yet received payment on the services provided. The cash will not be received until January 15. Smart Touch Learning's account balances after posting the adjusting entry are:

Accounts Receivable		Service Revenue	
Nov. 10	3,000	2,000	Nov. 22
→ Dec. 31	800		5,500 Nov. 8
Bal.	1,800		3,000 Nov. 10
			8,000 Dec. 28
			200 Dec. 31
			800 Dec. 31 ←
			17,500 Bal.

Without the adjustment, Smart Touch Learning's financial statements would understate both an asset, Accounts Receivable, and a revenue, Service Revenue.

Future Receipt of Accrued Revenues The adjusting entry on December 31 records revenue earned for half a month and also creates an accounts receivable. When Smart Touch Learning receives the payment on January 15, the business will record the following entry:

$$\begin{array}{c} A \uparrow \\ \hline \text{Cash} \uparrow \\ \text{Accounts} \\ \text{Receivable} \downarrow \end{array} = \left\{ \begin{array}{c} L \quad + \quad E \uparrow \\ \hline \text{Service} \\ \text{Revenue} \uparrow \end{array} \right.$$

Date	Accounts and Explanation	Debit	Credit
Jan. 15	Cash	1,600	
	Service Revenue		800 →
	Accounts Receivable		800 →
<i>Performed services and received cash.</i>			
Revenue for Jan. 1–Jan. 15			
Accounts Receivable created from the adjusting entry.			



Notice that on January 15, Smart Touch Learning records revenue only for the remaining half of the month (January 1–January 15). Smart Touch Learning recognizes that \$800 of revenue was already recorded in December. The entry on January 15 removes the accounts receivable and records the remaining revenue. If the business had incorrectly recorded \$1,600 of Service Revenue on January 15, the revenue would have been overstated in January.

Exhibit 3-3 summarizes the adjusting entries for deferrals and accruals.

Exhibit 3-3 | Deferral and Accrual Adjustments

		ORIGINAL ENTRY		ADJUSTING ENTRY	
DEFERRALS—Cash receipt or Cash payment occurs first.					
Prepaid Expenses		Prepaid Rent Cash	XXX	Rent Expense Prepaid Rent	XXX
<i>Pay for rent in advance and record an asset first.</i>					
Depreciation		Furniture Cash	XXX	Depreciation Expense—Furniture Accumulated Depreciation—Furniture	XXX
<i>Pay for furniture in advance and record an asset first.</i>					
Unearned Revenues		Cash Unearned Revenue	XXX	Unearned Revenue Service Revenue	XXX
<i>Receive cash in advance and record a liability first.</i>					
ACCRUALS—Cash receipt or Cash payment occurs later.					
Two rules to remember about adjusting entries: 1. Adjusting entries <u>never</u> involve the Cash account. 2. Adjusting entries either a. Increase a revenue account (credit revenue) or b. Increase an expense account (debit expense).			Accrued Expenses	Salaries Expense Salaries Payable	XXX
			<i>Accrual for expense incurred first.</i>		XXX
			Accrued Revenues	Accounts Receivable Service Revenue	XXX
			<i>Accrual for revenue earned first.</i>		XXX



The adjusting entries and account balances after posting for Smart Touch Learning at December 31 are shown in Exhibit 3-4.

- Panel A gives the data for each adjustment.
- Panel B shows the adjusting entries.
- Panel C shows the T-accounts and balances after posting.

Exhibit 3-4 | Journalizing and Posting the Adjusting Entries of Smart Touch Learning

Panel A: Information for Adjustments

- | | |
|---|---|
| <p>a. Prepaid rent expired, \$1,000.
b. Supplies used, \$400.
c. Depreciation on furniture, \$300.
d. Depreciation on building, \$250.
e. Service revenue that was collected in advance and now has been earned, \$200.</p> | <p>f. Accrued salaries expense, \$1,200.
g. Accrued interest on note, \$100.
h. Accrued service revenue, \$800.</p> |
|---|---|

Panel B: Adjusting Entries

Date	Accounts and Explanation	Debit	Credit
(a) Dec. 31	Rent Expense Prepaid Rent <i>To record rent expense.</i>	1,000	1,000
(b) 31	Supplies Expense Office Supplies <i>To record office supplies used.</i>	400	400
(c) 31	Depreciation Expense—Furniture Accumulated Depreciation—Furniture <i>To record depreciation on furniture.</i>	300	300
(d) 31	Depreciation Expense—Building Accumulated Depreciation—Building <i>To record depreciation on building.</i>	250	250
(e) 31	Unearned Revenue Service Revenue <i>To record service revenue earned that was collected in advance.</i>	200	200
(f) 31	Salaries Expense Salaries Payable <i>To accrue salaries expense.</i>	1,200	1,200
(g) 31	Interest Expense Interest Payable <i>To accrue interest expense.</i>	100	100
(h) 31	Accounts Receivable Service Revenue <i>To accrue service revenue.</i>	800	800

Panel C: Account Balances After Posting





Try It!

Startech Surveillance Services had the following adjustments as of the end of the year:

- a. Equipment depreciation was \$1,500.
 - b. \$700 of advertising expense was incurred but not paid. (Use Advertising Payable.)
 - c. Office Supplies on hand at the end of the year totaled \$250. The beginning balance of Office Supplies was \$600.
 - d. \$1,200 of rent revenue was earned but not recorded or received.
 - e. Unearned revenue of \$3,000 had been earned.
6. For each situation, indicate which category of adjustment (deferral or accrual) is described.
 7. Journalize the adjusting entry needed.

Check your answers online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercises S3-5 through S3-12. [Pearson MyLab Accounting](#)

WHAT IS THE PURPOSE OF THE ADJUSTED TRIAL BALANCE, AND HOW DO WE PREPARE IT?

Learning Objective 4

Explain the purpose of and prepare an adjusted trial balance

Adjusted Trial Balance

A list of all the accounts with their adjusted balances.

This chapter began with the *unadjusted* trial balance. After the adjustments have been journalized and posted, the account balances are updated and an **adjusted trial balance** can be prepared by listing all the accounts with their adjusted balances. Remember, the purpose of a trial balance is to ensure that total debits equal total credits. Even if the trial balance balances, it does not guarantee that a mistake has not been made. For example, an adjusting entry could have been recorded for the incorrect amount or could have been omitted entirely. The equality of the trial balance ensures only that each posted transaction had an equal debit and credit amount.

The adjusted trial balance for Smart Touch Learning is shown in Exhibit 3-5.


Exhibit 3-5 | Adjusted Trial Balance

SMART TOUCH LEARNING		
Adjusted Trial Balance		
December 31, 2018		
Account Title	Balance	
	Debit	Credit
Cash	\$ 12,200	
Accounts Receivable	1,800	
Office Supplies	100	
Prepaid Rent	2,000	
Land	20,000	
Building	60,000	
Accumulated Depreciation—Building	\$ 250	
Furniture	18,000	
Accumulated Depreciation—Furniture	300	
Accounts Payable	200	
Utilities Payable	100	
Salaries Payable	1,200	
Interest Payable	100	
Unearned Revenue	400	
Notes Payable	60,000	
Common Stock	48,000	
Dividends	5,000	
Service Revenue		17,500
Rent Expense	3,000	
Salaries Expense	4,800	
Supplies Expense	400	
Utilities Expense	100	
Depreciation Expense—Building	250	
Depreciation Expense—Furniture	300	
Interest Expense	100	
Total	<u><u>\$ 128,050</u></u>	<u><u>\$ 128,050</u></u>



Try It!

8. Hooten Carpentry had the following accounts and account balances after adjusting entries. Assume all accounts have normal balances. Prepare the adjusted trial balance for Hooten Carpentry as of December 31, 2018.

Cash	\$ 4,025	Common Stock	\$?
Land	5,000	Accounts Receivable	660
Utilities Expense	400	Office Supplies	120
Accounts Payable	225	Utilities Payable	210
Accumulated Depreciation—Equipment	1,000	Service Revenue	12,000
Salaries Expense	550	Unearned Revenue	300
Supplies Expense	80	Depreciation Expense—Equipment	800
Equipment	10,000	Dividends	500

Check your answers online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercise S3-13. [Pearson MyLab Accounting](#)

WHAT IS THE IMPACT OF ADJUSTING ENTRIES ON THE FINANCIAL STATEMENTS?

Learning Objective 5

Identify the impact of adjusting entries on the financial statements

The adjusted trial balance is used to prepare the financial statements. If adjusting entries are not recorded, the ledger accounts will not reflect the correct balances and the adjusted trial balance will be incorrect. Remember, adjusting entries are completed to ensure that all revenues and expenses for the accounting period examined have been recorded. In addition, adjusting entries update the balance sheet accounts so that all accounts are properly valued. Exhibit 3-6 summarizes the impact on the financial statements had the adjusting entries not been recorded.


Exhibit 3-6 | Impact of Adjusting Entries on Financial Statements

Type of Adjusting Entry	Description	Adjusting Entry		Impact on Financial Statements if Adjusting Entries Are Not Made	
Deferred Expenses	Advance cash payments of future expenses.	Expense Asset*	DR CR	Income Statement: expenses understated net income overstated Balance Sheet: assets overstated equity overstated	
Deferred Revenues	Advance cash receipts of future revenues.	Liability Revenue	DR CR	Income Statement: revenues understated net income understated Balance Sheet: liabilities overstated equity understated	
Accrued Expenses	An expense that has been incurred but not paid.	Expense Liability	DR CR	Income Statement: expenses understated net income overstated Balance Sheet: liabilities understated equity overstated	
Accrued Revenues	A revenue that has been earned but cash has not yet been collected.	Asset Revenue	DR CR	Income Statement: revenues understated net income understated Balance Sheet: assets understated equity understated	

*If recording depreciation: the contra asset, Accumulated Depreciation, is credited.

Remember: Net income increases Retained Earnings, an equity account. Therefore, if net income is overstated, then equity will also be overstated. And if net income is understated, then equity will also be understated.

TYING IT ALL TOGETHER

iHeartMedia, Inc. is a company that has three distinct business segments: iHeartMedia (media and entertainment company), Americas Outdoor Advertising, and International Outdoor Advertising. iHeartMedia, Inc. currently operates more than 840 radio stations and reaches more than 110 million listeners every week. It operates both traditional radio broadcasting and online and mobile radio stations. In addition, the company also produces nationally recognized events for their listeners such as the iHeartRadio Music Festival. The primary source of revenue for iHeartMedia, Inc. is the sale of commercials on its radio stations.

Suppose on March 1, iHeartMedia, Inc. signs an advertising contract with a local restaurant, Margaritas, to provide 12 months of commercials for \$9,000. How would iHeartMedia report the advanced payment from Margaritas?

The receipt of cash from Margaritas would represent unearned revenue because iHeartMedia has not satisfied the performance obligation to provide the commercials. iHeartMedia would record a journal entry as follows:

Cash	9,000	
Unearned Revenue		9,000

On December 31, would iHeartMedia, Inc. need to record an adjusting entry related to the advertising contract? If so, what would the adjusting entry be?

At the end of the year, iHeartMedia has provided 10 months (March through December) of advertising or \$7,500 ($\$9,000 / 12 \text{ months} = \$750 \text{ per month} \times 10 \text{ months} = \$7,500$) for Margaritas. iHeartMedia would need to record an adjusting entry showing that the Unearned Revenue has now been earned as follows:

Unearned Revenue	7,500	
Advertising Revenue		7,500

Suppose iHeartMedia, Inc. fails to record the adjusting entry related to the advertising contract, what would be the impact on the financial statements? Why is it important for companies to record adjusting entries?

Had iHeartMedia, Inc. failed to record the adjusting entry, its financial statements would be incorrect. The liability account, Unearned Revenue, would be overstated and Advertising Revenue would be understated. This would cause net income to be understated on the income statement. It is important for companies to record adjusting entries so that the correct balances of accounts are reported to users of the financial statements and an accurate picture of the company's financial health is represented.



Try It!

9. Identify the impact on the income statement and balance sheet if adjusting entries for the following situations were not recorded.
- Office Supplies used, \$800.
 - Accrued service revenue, \$4,000.
 - Depreciation on building, \$3,500.
 - Prepaid Insurance expired, \$650.
 - Accrued salaries expense, \$2,750.
 - Service revenue that was collected in advance has now been earned, \$130.

Check your answers online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercise S3-14. [Pearson MyLab Accounting](#)

HOW COULD A WORKSHEET HELP IN PREPARING ADJUSTING ENTRIES AND THE ADJUSTED TRIAL BALANCE?

Learning Objective 6

Explain the purpose of a worksheet and use it to prepare adjusting entries and the adjusted trial balance

Worksheet

An internal document that helps summarize data for the preparation of financial statements.

A useful step in preparing adjusting entries and the adjusted trial balance is to create a worksheet. A **worksheet** is an internal document that helps summarize data for the preparation of the financial statements. The worksheet is not a journal, a ledger, or a financial statement. It is merely a summary device that helps identify the accounts that need adjustments. Most worksheets are completed using Microsoft Excel.

Exhibit 3-7 shows the partially completed worksheet for Smart Touch Learning.


Exhibit 3-7 | Partially Completed Worksheet

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	SMART TOUCH LEARNING												
2	Worksheet												
3	December 31, 2018												
5	Account Names	Unadjusted Trial Balance		Adjustments		Adjusted Trial Balance		Income Statement		Balance Sheet			
		Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit		
7	Cash	\$ 12,200					\$ 12,200						
8	Accounts Receivable	1,000	(h)	\$ 800									
9	Office Supplies	500			\$ 400 (b)		100						
10	Prepaid Rent	3,000				1,000 (a)		2,000					
11	Land	20,000						20,000					
12	Building	60,000						60,000					
13	Accumulated Depreciation—Building				250 (d)				\$ 250				
14	Furniture	18,000						18,000					
15	Accumulated Depreciation—Furniture				300 (c)				300				
16	Accounts Payable		\$ 200						200				
17	Utilities Payable		100						100				
18	Salaries Payable				1,200 (f)				1,200				
19	Interest Payable				100 (g)				100				
20	Unearned Revenue		600 (e)	200					400				
21	Notes Payable		60,000						60,000				
22	Common Stock		48,000						48,000				
23	Dividends	5,000					5,000						
24	Service Revenue		16,500			1,000 (e,h)			17,500				
25	Rent Expense	2,000	(a)	1,000				3,000					
26	Salaries Expense	3,600	(f)	1,200				4,800					
27	Supplies Expense		(b)	400				400					
28	Utilities Expense	100						100					
29	Depreciation Expense—Building			(d)	250			250					
30	Depreciation Expense—Furniture			(c)	300			300					
31	Interest Expense			(g)	100			100					
32	Total	\$ 125,400	\$ 125,400		\$ 4,250	\$ 4,250		\$ 128,050	\$ 128,050				
33													

In this chapter, we complete a part of the worksheet. For now, we will concern ourselves with the first four sections.

Section 1: Account names. The account names are taken from and listed in the same order as the chart of accounts. (Cash first, Accounts Receivable second, and so on.)

Section 2: Unadjusted trial balance. The account balances are copied directly from the ledger before any adjustments. Total debits must equal total credits.

Section 3: Adjustments. Enter the adjusting journal entries that were made on December 31.

Section 4: Adjusted trial balance. Gives the account balances after adjustments. Each amount in these columns is computed by combining the unadjusted trial balance amounts plus or minus the adjustments. For example, Accounts Receivable starts with a debit balance of \$1,000. Adding the \$800 debit from the adjustment gives Accounts Receivable an adjusted balance of \$1,800. Service Revenue starts with a \$16,500 credit balance. Adding the \$1,000 credit from the adjustments gives Service Revenue an adjusted balance of \$17,500. As with the unadjusted trial balance, total debits must equal total credits.

The income statement and balance sheet sections of the worksheet remain to be completed. These will be covered in the next chapter.



Try It!

10. The partial worksheet for Sam's Delivery Service follows. Complete the adjusted trial balance columns.

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	SAM'S DELIVERY SERVICE												
2	Worksheet												
3	December 31, 2018												
5	Account Names	Unadjusted Trial Balance		Adjustments		Adjusted Trial Balance		Income Statement		Balance Sheet			
		Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit		
7	Cash	\$ 6,500											
8	Accounts Receivable	800		(g) \$ 225									
9	Office Supplies	250				\$ 80 (b)							
10	Prepaid Rent	1,000				800 (a)							
11	Delivery Van	23,000											
12	Accumulated Depreciation—Delivery Van					750 (c)							
13	Equipment	15,000				300 (d)							
14	Accumulated Depreciation—Equipment												
15	Accounts Payable		\$ 800										
16	Utilities Payable		230										
17	Salaries Payable					875 (f)							
18	Unearned Revenue		400 (e)	130									
19	Common Stock		37,800										
20	Dividends	8,000											
21	Delivery Revenue		23,000			355 (e,g)							
22	Rent Expense	3,000		(a) 800									
23	Salaries Expense	4,500		(f) 875									
24	Supplies Expense			(b) 80									
25	Utilities Expense	180											
26	Depreciation Expense—Delivery Van			(c) 750									
27	Depreciation Expense—Equipment			(d) 300									
28	Total	\$ 62,230	\$ 62,230		\$ 3,160	\$ 3,160							
29													

Check your answers online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercise S3-15. [Pearson MyLab Accounting](#)

APPENDIX 3A: Alternative Treatment of Recording Deferred Expenses and Deferred Revenues

Chapters 1–3 illustrate the most popular way to account for deferred expenses and deferred revenues. This appendix illustrates an alternative approach.

WHAT IS AN ALTERNATIVE TREATMENT OF RECORDING DEFERRED EXPENSES AND DEFERRED REVENUES?

Deferred Expenses

Recall that deferred expenses, also called prepaid expenses, are advance payments of future expenses such as insurance, rent, and advertising. Office supplies are also accounted for as deferred expenses.

Learning Objective 7

Understand the alternative treatment of recording deferred expenses and deferred revenues

When a business prepays an expense—rent, for example—it can debit an *asset* account (Prepaid Rent) and defer the recognition of the expense. For example, Smart Touch Learning prepaid three months of office rent totaling \$3,000 on December 1, 2018. The journal entry can be recorded as:

Date	Accounts and Explanation	Debit	Credit
Dec. 1	Prepaid Rent	3,000	
	Cash		3,000
<i>Paid rent in advance.</i>			

$$\left. \begin{array}{c} A \uparrow \\ \text{Prepaid} \\ \text{Rent} \\ \downarrow \\ \text{Cash} \end{array} \right\} = \left\{ \begin{array}{c} L + E \\ \downarrow \\ \end{array} \right.$$

Deferred Expense Recorded Initially as an Expense

Deferring an expense creates an asset. However, the asset may be so short lived that it will expire in the current accounting period—within one year or less. Thus, the accountant may decide to debit the prepayment to an expense account at the time of payment. The entry could, alternatively, be recorded as follows:

Date	Accounts and Explanation	Debit	Credit
Dec. 1	Rent Expense	3,000	
	Cash		3,000
<i>Paid rent in advance.</i>			

$$\left. \begin{array}{c} A \\ \downarrow \\ \text{Cash} \end{array} \right\} = \left\{ \begin{array}{c} L + E \\ \downarrow \\ \text{Rent} \\ \text{Expense} \uparrow \end{array} \right.$$

As of December 31, 2018, only one month's prepayment has expired, leaving two months of rent still prepaid. In this case, the accountant must transfer two-thirds of the original prepayment of \$3,000, or \$2,000, to the asset account Prepaid Rent. At December 31, 2018, the business still has the benefit of prepayment for January 1 through February 28, 2019. The adjusting entry at December 31 is as follows:

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Prepaid Rent	2,000	
	Rent Expense		2,000
<i>To record prepaid rent.</i>			

$$\left. \begin{array}{c} A \\ \uparrow \\ \text{Prepaid} \\ \text{Rent} \\ \uparrow \end{array} \right\} = \left\{ \begin{array}{c} L + E \\ \uparrow \\ \text{Rent} \\ \text{Expense} \downarrow \end{array} \right.$$

After posting, the two accounts appear as follows:

Prepaid Rent		Rent Expense		
Dec. 31	2,000	Dec. 1	3,000	2,000 Dec. 31
Bal.	2,000	Bal.		1,000

At December 31, the \$3,000 prepayment is correctly divided as \$2,000 of Prepaid Rent and \$1,000 of Rent Expense, regardless of whether the business initially debits the prepayment to an asset or to an expense account.

Deferred Revenues

Deferred revenues, also called unearned revenues, arise when a business collects cash before earning the revenue. Deferred revenues are liabilities because the business that receives the cash owes the customer goods or services to be delivered later.

When a business receives cash in advance of providing services, a *liability* can be created. As an example, a law firm engages Smart Touch Learning to provide monthly e-learning services, agreeing to pay \$600 in advance. Smart Touch Learning received the \$600 on December 21 for services to be provided in the next 30 days. Smart Touch Learning records the following entry, recognizing the liability and deferring the recognition of the revenue.

$$\begin{array}{c} \text{A} \uparrow \\ \text{Cash} \uparrow \end{array} = \left\{ \begin{array}{l} \text{L} \uparrow \\ \text{Unearned} \\ \text{Revenue} \uparrow \end{array} \right\} + \text{E}$$

Date	Accounts and Explanation	Debit	Credit
Dec. 21	Cash	600	
	Unearned Revenue		600
<i>Collected cash for future services.</i>			

Deferred Revenues Recorded Initially as a Revenue

Another way to account for the receipt of cash is to credit a *revenue* account when the business receives cash.

$$\begin{array}{c} \text{A} \uparrow \\ \text{Cash} \uparrow \end{array} = \left\{ \begin{array}{l} \text{L} \uparrow \\ \text{Service} \\ \text{Revenue} \uparrow \end{array} \right\} + \text{E} \uparrow$$

Date	Accounts and Explanation	Debit	Credit
Dec. 21	Cash	600	
	Service Revenue		600
<i>Collected cash for future services.</i>			

If the business then earns all the revenue within the same accounting period, no adjusting entry is needed at the end. However, if the business earns only part of the revenue in that period, it must make an adjusting entry. In our example, Smart Touch Learning has earned only one-third of the \$600, or \$200, by December 31, 2018. Accordingly, Smart Touch Learning must make an adjusting entry to transfer the unearned portion (2/3 of \$600, or \$400) from the revenue account to a liability, as follows:

$$\begin{array}{c} \text{A} \\ \hline \end{array} = \left\{ \begin{array}{l} \text{L} \uparrow \\ \text{Unearned} \\ \text{Revenue} \uparrow \end{array} \right\} + \left\{ \begin{array}{l} \text{E} \downarrow \\ \text{Service} \\ \text{Revenue} \downarrow \end{array} \right\}$$

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Service Revenue	400	
	Unearned Revenue		400
<i>To record unearned revenue.</i>			

The adjusting entry transfers the unearned portion of service revenue to the liability account because Smart Touch Learning still owes e-learning services next year. After posting, the total amount, \$600, is properly divided between the liability account—\$400, and the revenue account—\$200, as follows:

Unearned Revenue			Service Revenue		
	400	Dec. 31	Dec. 31	400	600
				200	Bal.
	400	Bal.			

At December 31, the \$600 cash receipt is correctly divided: \$400 of Unearned Revenue and \$200 of Service Revenue, regardless of whether the business initially credits the cash receipt to a liability or to a revenue account.

Try It!

11A. Iron Horse Printing Services purchased \$1,000 of printing supplies for cash, recording the transaction using the alternative treatment for deferred expenses. At the end of the year, Iron Horse had \$300 of printing supplies remaining. Record the journal entry for the purchase of printing supplies and the adjusting entry for printing supplies not used.

Check your answer online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercises S3A-16 and S3A-17. **Pearson MyLab Accounting**

REVIEW

> Things You Should Know

1. What are the advantages of using cash basis accounting?

- The cash method is an easier accounting method to follow because it generally requires less knowledge of accounting concepts and principles.
- The cash basis accounting method also does a good job of tracking a business's cash flows.

2. What concepts and principles apply to accrual basis accounting?

- The time period concept assumes that a business's activities can be sliced into small time segments and that financial statements can be prepared for specific periods, such as a month, quarter, or year.
- The revenue recognition principle requires companies to record revenue when it has satisfied each performance obligation.
- The matching principle guides accounting for expenses and ensures that all expenses are recorded when they are incurred during the period. It then matches those expenses against the revenues of the period.

3. What are adjusting entries, and how do we record them?

- Adjusting entries are completed at the end of the accounting period and record revenues to the period in which they are earned and expenses to the period in which they occur.
- Adjusting entries also update the asset and liability accounts.

■ Four types of adjusting entries:

- Deferred expenses (or prepaid expenses): advance payment of future expenses adjusted for amount used

Date	Accounts and Explanation	Debit	Credit
	Expense	XXX	
	Asset		XXX

- Deferred revenues (or unearned revenues): advance receipts of future revenues adjusted for amount earned

Date	Accounts and Explanation	Debit	Credit
	Liability	XXX	
	Revenue		XXX

- Accrued expenses: expenses that have been incurred but not paid

Date	Accounts and Explanation	Debit	Credit
	Expense	XXX	
	Liability		XXX

- Accrued revenues: revenues that have been earned but not collected

Date	Accounts and Explanation	Debit	Credit
	Asset	XXX	
	Revenue		XXX

4. What is the purpose of the adjusted trial balance, and how do we prepare it?

- An adjusted trial balance is a list of all the accounts with their adjusted balances.
- It ensures that total debits equal total credits.

5. What is the impact of adjusting entries on the financial statements?

- If adjusting entries are not recorded, the balance sheet and income statement accounts will either be overstated or understated.
- Overstating or understating accounts causes the financial statements to be incorrect.

6. How could a worksheet help in preparing adjusting entries and the adjusted trial balance?

- A worksheet is an internal document that helps identify the accounts that need adjustments.
- In addition, a worksheet helps summarize data for the preparation of the financial statements.

7. What is an alternative treatment of recording deferred expenses and deferred revenues? (Appendix 3A)

- Deferred expenses can be recorded to an expense account at the time of payment. The adjusting entry would transfer any remaining prepayment to the asset account, Prepaid Expenses.
- Deferred revenues can be recorded to a revenue account at the time of cash receipt. The adjusting entry would transfer any remaining liability to the liability account, Unearned Revenue.

> Check Your Understanding

Check your understanding of the chapter by completing this problem and then looking at the solution. Use this practice to help identify which sections of the chapter you need to study more.

The unadjusted trial balance as of December 31, 2018, the end of the annual accounting period for Super Employment Services, follows:

SUPER EMPLOYMENT SERVICES Unadjusted Trial Balance December 31, 2018		
Account Title	Balance	
	Debit	Credit
Cash	\$ 6,000	
Accounts Receivable	5,000	
Office Supplies	1,000	
Land	10,000	
Building	40,000	
Accumulated Depreciation—Building		\$ 30,000
Furniture	10,000	
Accumulated Depreciation—Furniture		4,000
Accounts Payable		2,000
Salaries Payable		
Unearned Revenue		8,000
Common Stock		12,000
Dividends	25,000	
Service Revenue		60,000
Salaries Expense	16,000	
Supplies Expense		
Depreciation Expense—Building		
Depreciation Expense—Furniture		
Advertising Expense	3,000	
Total	<u><u>\$ 116,000</u></u>	<u><u>\$ 116,000</u></u>

Data needed for the adjusting entries include the following:

- a. Office Supplies on hand at year-end, \$200.
- b. Depreciation on furniture, \$2,000.
- c. Depreciation on building, \$1,000.
- d. Salaries owed but not yet paid, \$500.
- e. Accrued service revenue, \$1,300.
- f. \$3,000 of the unearned revenue has been earned.

Requirements

1. Open the ledger accounts in T-account form with their unadjusted balances as shown on the unadjusted trial balance. (See Learning Objective 3)
2. Journalize Super's adjusting entries at December 31, 2018. Use the letter (*a*, *b*, and so on) as the date. (See Learning Objective 3)
3. Post the adjusting entries to T-accounts. Determine the ending balances in the T-accounts on December 31, 2018. (See Learning Objective 3)
4. Prepare an adjusted trial balance. (See Learning Objective 4)
5. Prepare a partial worksheet including the account names, unadjusted trial balance, adjustments, and adjusted trial balance. (See Learning Objective 6)

> Solution

Requirement 1 See next page

Requirement 2

Date	Accounts and Explanations	Debit	Credit
2018			
(a) Dec. 31	Supplies Expense (\$1,000 – \$200) Office Supplies <i>To record office supplies used.</i>	800	800
(b) 31	Depreciation Expense—Furniture Accumulated Depreciation—Furniture <i>To record depreciation expense on furniture.</i>	2,000	2,000
(c) 31	Depreciation Expense—Building Accumulated Depreciation—Building <i>To record depreciation expense on building.</i>	1,000	1,000
(d) 31	Salaries Expense Salaries Payable <i>To accrue salaries expense.</i>	500	500
(e) 31	Accounts Receivable Service Revenue <i>To accrue service revenue.</i>	1,300	1,300
(f) 31	Unearned Revenue Service Revenue <i>To record service revenue earned that was collected in advance.</i>	3,000	3,000

Requirements 1 and 3

ASSETS			LIABILITIES			EQUITY		
Cash			Accounts Payable			Common Stock		Salaries Expense
Bal. 6,000				2,000	Bal.	12,000	Bal.	Bal. 16,000
		Bal. 40,000				(d)	500	(d) 500
Accounts Receivable			Salaries Payable			Dividends		Bal. 16,500
Bal. 5,000				500	(d)	Bal. 25,000		
(e) 1,300				500	Bal.			
Bal. 6,300			Unearned Revenue			Service Revenue		Supplies Expense
		30,000	Bal. 1,000	(f) 3,000	8,000	Bal. 60,000		(a) 800
Office Supplies		Furniture				1,300	(e)	Bal. 800
Bal. 1,000	800	(a)	Bal. 10,000			3,000	(f)	
Bal. 200								
		Accumulated Depreciation—Furniture				64,300	Bal.	Bal. 1,000
Land			4,000	Bal.				
			2,000	(b)				
Bal. 10,000			6,000	Bal.				

Requirement 4

SUPER EMPLOYMENT SERVICES		
Adjusted Trial Balance		
December 31, 2018		
Account Title	Debit	Credit
Cash	\$ 6,000	
Accounts Receivable	6,300	
Office Supplies	200	
Land	10,000	
Building	40,000	
Accumulated Depreciation—Building		\$ 31,000
Furniture	10,000	
Accumulated Depreciation—Furniture		6,000
Accounts Payable		2,000
Salaries Payable		500
Unearned Revenue		5,000
Common Stock		12,000
Dividends		25,000
Service Revenue		64,300
Salaries Expense		16,500
Supplies Expense		800
Depreciation Expense—Building		1,000
Depreciation Expense—Furniture		2,000
Advertising Expense		3,000
Total	\$ 120,800	\$ 120,800

Requirement 5

	A	B	C	D	E	F	G
1	SUPER EMPLOYMENT SERVICES						
2	Worksheet						
3	December 31, 2018						
5	Account Names	Unadjusted Trial Balance		Adjustments		Adjusted Trial Balance	
		Debit	Credit	Debit	Credit	Debit	Credit
7	Cash	\$ 6,000				\$ 6,000	
8	Accounts Receivable	5,000		(e) \$ 1,300		6,300	
9	Office Supplies	1,000			(a) \$ 800	200	
10	Land	10,000				10,000	
11	Building	40,000				40,000	
12	Accumulated Depreciation—Building		\$ 30,000		(c) 1,000		\$ 31,000
13	Furniture	10,000				10,000	
14	Accumulated Depreciation—Furniture		4,000		(b) 2,000		6,000
15	Accounts Payable		2,000				2,000
16	Salaries Payable				(d) 500		500
17	Unearned Revenue		8,000	(f) 3,000			5,000
18	Common Stock		12,000				12,000
19	Dividends	25,000				25,000	
20	Service Revenue		60,000		(e) 1,300		
21					(f) 3,000		64,300
22	Salaries Expense	16,000		(d) 500		16,500	
23	Supplies Expense			(a) 800		800	
24	Depreciation Expense—Building			(c) 1,000		1,000	
25	Depreciation Expense—Furniture			(b) 2,000		2,000	
26	Advertising Expense	3,000				3,000	
27	Total	\$ 116,000	\$ 116,000	\$ 8,600	\$ 8,600	\$ 120,800	\$ 120,800
28							

> Key Terms

- | | | |
|---|---|---|
| <p>Accrual Basis Accounting (p. 146)</p> <p>Accrued Expense (p. 158)</p> <p>Accrued Revenue (p. 162)</p> <p>Accumulated Depreciation (p. 155)</p> <p>Adjusted Trial Balance (p. 166)</p> <p>Adjusting Entry (p. 151)</p> <p>Book Value (p. 156)</p> <p>Cash Basis Accounting (p. 146)</p> | <p>Contra Account (p. 155)</p> <p>Deferred Expense (p. 151)</p> <p>Deferred Revenue (p. 157)</p> <p>Depreciation (p. 153)</p> <p>Fiscal Year (p. 148)</p> <p>Matching Principle (p. 149)</p> <p>Property, Plant, and Equipment (p. 153)</p> | <p>Residual Value (p. 154)</p> <p>Revenue Recognition Principle (p. 148)</p> <p>Straight-Line Method (p. 154)</p> <p>Time Period Concept (p. 148)</p> <p>Worksheet (p. 170)</p> |
|---|---|---|

> Quick Check

Learning Objective 1

1. Which of the following is true of accrual basis accounting and cash basis accounting?
 - a. Accrual accounting records revenue only when it is earned.
 - b. Accrual accounting is not allowed under GAAP.
 - c. Cash basis accounting records all transactions.
 - d. All of the above are true.

2. Get Fit Now gains a client who prepays \$540 for a package of six physical training sessions. Get Fit Now collects the \$540 in advance and will provide the training later. After four training sessions, what should Get Fit Now report on its income statement assuming it uses the accrual basis accounting method?
- Service revenue of \$360
 - Service revenue of \$540
 - Unearned service revenue of \$360
 - Cash of \$180
3. The revenue recognition principle requires
- time to be divided into annual periods to measure revenue properly.
 - revenue to be recorded only after the business has satisfied its performance obligation.
 - expenses to be matched with revenue of the period.
 - revenue to be recorded only after the cash is received.
4. Adjusting the accounts is the process of
- subtracting expenses from revenues to measure net income.
 - recording transactions as they occur during the period.
 - updating the accounts at the end of the period.
 - zeroing out account balances to prepare for the next period.
5. Which of the following is an example of a deferral (or prepaid) adjusting entry?
- Recording the usage of office supplies during the period.
 - Recording salaries expense for employees not yet paid.
 - Recording revenue that has been earned but not yet received.
 - Recording interest expense incurred on a notes payable not due until next year.
6. Assume that the weekly payroll of Blank Canvas Art Supply is \$350. December 31, end of the year, falls on Tuesday, and Blank Canvas will pay its employee on Friday for the full week. What adjusting entry will Blank Canvas make on Tuesday, December 31? (Use five days as a full workweek.)

Date	Accounts and Explanation	Debit	Credit
a.	Salaries Expense Salaries Payable	140	140
b.	Salaries Expense Cash	140	140
c.	Salaries Payable Salaries Expense	350	350
d.	<i>No adjustment is needed because the company will pay the payroll on Friday.</i>		

7. The adjusted trial balance shows
- amounts that may be out of balance.
 - account balances after adjustments.
 - assets and liabilities only.
 - revenues and expenses only.

Learning Objective 1**Learning Objective 2****Learning Objective 3****Learning Objective 3****Learning Objective 3****Learning Objective 4**

Learning Objective 5

8. A & D Window Cleaning performed \$450 of services but has not yet billed customers for the month. If A & D fails to record the adjusting entry, what is the impact on the financial statements?
- balance sheet: assets understated; equity overstated
income statement: expense understated
 - balance sheet: liabilities overstated; equity understated
income statement: revenues understated
 - balance sheet: assets overstated, equity understated
income statement: expenses understated
 - balance sheet: assets understated, equity understated
income statement: revenues understated

Learning Objective 6

9. A worksheet
- is a journal used to record transactions.
 - is a financial statement that reports net income during the period.
 - is an internal document that helps summarize data for the preparation of financial statements.
 - is a ledger listing the account balances and changes in those accounts.

Learning Objective 7
Appendix 3A

- 10A. On February 1, Clyde Walton Law Firm contracted to provide \$5,600 of legal services for the next four months and received \$5,600 cash from the client. Assuming Clyde Walton records deferred revenues using the alternative treatment, what would be the adjusting entry recorded on February 28?

Date	Accounts and Explanation	Debit	Credit
a.	Service Revenue Unearned Revenue	4,200	4,200
b.	Cash Service Revenue	5,600	5,600
c.	Cash Unearned Revenue	5,600	5,600
d.	Unearned Revenue Service Revenue	1,400	1,400

Check your answers at the end of the chapter.

ASSESS YOUR PROGRESS

> Review Questions

- What is the difference between cash basis accounting and accrual basis accounting?
- Which method of accounting (cash or accrual basis) is consistent with Generally Accepted Accounting Principles?
- Which accounting concept or principle requires companies to divide their activities into small time segments such as months, quarters, or years?
- What is a fiscal year? Why might companies choose to use a fiscal year that is not a calendar year?

5. Under the revenue recognition principle, when is revenue recorded?
 6. Under the matching principle, when are expenses recorded?
 7. When are adjusting entries completed, and what is their purpose?
 8. What are the two basic categories of adjusting entries? Provide two examples of each.
 9. What is a deferred expense? Provide an example.
 10. What is the process of allocating the cost of a plant asset over its useful life called?
 11. What is a contra account?
 12. In the recording of depreciation expense, which account is credited?
 13. What does accumulated depreciation represent?
 14. How is book value calculated, and what does it represent?
 15. What are (a) deferred revenue, (b) accrued expense and (c) accrued revenue? Provide examples of each.
 16. What are the two rules to remember about adjusting entries?
 17. When is an adjusted trial balance prepared, and what is its purpose?
 18. If an accrued expense is not recorded at the end of the year, what is the impact on the financial statements?
 19. What is a worksheet, and how is it used to help prepare an adjusted trial balance?
 20. If a payment of a deferred expense was recorded under the alternative treatment, what account would be debited at the time of payment?
 21. If a payment of a deferred expense was recorded under the alternative treatment, what account would be debited in the adjusting entry?

> Short Exercises

S3-1 Comparing cash and accrual basis accounting for expenses

The Orange Lily Law Firm prepays for advertising in the local newspaper. On January 1, the law firm paid \$9,600 for eight months of advertising.

How much advertising expense should Orange Lily Law Firm record for the two months ending February 28 under the

S3-2 Comparing cash and accrual basis accounting for revenues

Secure Home provides house-sitting for people while they are away on vacation. Some of its customers pay immediately after the job is finished. Some customers ask that the business send them a bill. As of the end of the year, Secure Home has collected \$600 from cash-paying customers. Secure Home's remaining customers owe the business \$800.

How much service revenue would Secure Home have for the year under the

Learning Objective 1

Learning Objective 1

Learning Objective 2**S3-3 Applying the revenue recognition principle**

Seacoast Magazine sells subscriptions for \$36 for 18 issues. The company collects cash in advance and then mails out the magazines to subscribers each month.

Apply the revenue recognition principle to determine

- a. when *Seacoast Magazine* should record revenue for this situation.
- b. the amount of revenue *Seacoast Magazine* should record for eight issues.

Learning Objective 2**S3-4 Applying the matching principle**

Suppose on January 1, Alan's Tavern prepaid rent of \$30,000 for the full year.

At October 31, how much rent expense should be recorded for the period January 1 through October 31?

Learning Objective 3**S3-5 Identifying types of adjusting entries**

A select list of transactions for Seaside Photography follows:

-
- | | |
|-------|---|
| May 1 | Paid three months of rent, \$6,000. |
| 8 | Received \$2,000 from customer for three-month service contract that began May 1. |
| 9 | Purchased \$270 of office supplies on account. |
| 20 | Purchased a computer for \$2,500. |
| 31 | Work performed but not yet billed to customer, \$800. |
| 31 | Employees earned \$800 in salaries that will be paid June 2. |
-

Required:

For each transaction, identify what type of adjusting entry would be needed. Select from the following four types of adjusting entries: deferred expense, deferred revenue, accrued expense, and accrued revenue.

Learning Objective 3**S3-6 Journalizing and posting adjusting entries for prepaid rent**

On September 1, Big Fan of Toledo prepaid six months of rent, \$3,300.

Requirements

1. Record the journal entry for the September 1 payment.
2. Record the adjusting entry required at September 30.
3. Using T-accounts, post the journal entry and adjusting entry to the accounts involved and show their balances at September 30. (Ignore the Cash account.)

Learning Objective 3**S3-7 Journalizing and posting an adjusting entry for office supplies**

On November 1, Cooper Equipment had a beginning balance in the Office Supplies account of \$400. During the month, Cooper purchased \$1,000 of office supplies. At November 30, Cooper Equipment had \$300 of office supplies on hand.

Requirements

1. The Office Supplies T-account has been opened for you. Enter the beginning balance and purchase of office supplies.
2. Record the adjusting entry required at November 30.
3. Post the adjusting entry to the two accounts involved, and show their balances at November 30.

S3-8 Journalizing and posting an adjusting entry for depreciation and determining book value

On October 1, Orlando Gold Exchange paid cash of \$57,600 for computers that are expected to remain useful for three years. At the end of three years, the value of the computers is expected to be zero.

Requirements

1. Calculate the amount of depreciation for the month of October using the straight-line depreciation method.
2. Record the adjusting entry for depreciation on October 31.
3. Post the purchase of October 1 and the depreciation on October 31 to T-accounts for the following accounts: Computer Equipment, Accumulated Depreciation—Computer Equipment, and Depreciation Expense—Computer Equipment. Show their balances at October 31.
4. What is the computer equipment's book value on October 31?

S3-9 Journalizing and posting an adjusting entry for unearned revenue

Eastside Magazine collects cash from subscribers in advance and then mails the magazines to subscribers over a one-year period.

Requirements

1. Record the journal entry to record the original receipt of \$180,000 cash.
2. Record the adjusting entry that *Eastside Magazine* makes to record earning \$8,000 in subscription revenue that was collected in advance.
3. Using T-accounts, post the journal entry and adjusting entry to the accounts involved and show their balances after adjustments. (Ignore the Cash account.)

S3-10 Journalizing and posting an adjusting entry for accrued salaries expense

Hickory Park Senior Center has a weekly payroll of \$5,000. December 31 falls on Tuesday, and Hickory Park Senior Center will pay its employees the following Monday (January 6) for the previous full week. Assume Hickory Park Senior Center has a five-day workweek and has an unadjusted balance in Salaries Expense of \$540,000.

Requirements

1. Record the adjusting entry for accrued salaries on December 31.
2. Post the adjusting entry to the accounts involved, and show their balances after adjustments.
3. Record the journal entry for payment of salaries made on January 6.

S3-11 Journalizing and posting an adjusting entry for accrued interest expense

Resort Travel borrowed \$33,000 on September 1, 2018, by signing a one-year note payable to State One Bank. Resort's interest expense on the note payable for the remainder of the fiscal year (September through November) is \$355.

Requirements

1. Record the adjusting entry to accrue interest expense at November 30, 2018.
2. Post the adjusting entry to the T-accounts of the two accounts affected by the adjustment.

Learning Objective 3

Learning Objective 3

Learning Objective 3

Learning Objective 3

Learning Objective 3**S3-12 Journalizing an adjusting entry for accrued revenue**

At the end of June, Gerber Dental had performed \$9,000 of dental services but has not yet billed customers.

Record the adjusting entry for accrued revenue.

Learning Objective 4**S3-13 Preparing an adjusted trial balance**

Simon's Tax Services had the following accounts and account balances after adjusting entries. Assume all accounts have normal balances.

Cash	\$?	Equipment	\$ 13,000
Land	18,000	Accounts Receivable	3,450
Utilities Payable	400	Office Supplies	950
Accounts Payable	4,000	Common Stock	29,300
Accumulated Depreciation—Equipment	2,000	Utilities Expense	1,450
Service Revenue	70,000	Unearned Revenue	900
Supplies Expense	600	Depreciation Expense—Equipment	2,200
Dividends	14,000	Salaries Expense	5,600

Prepare the adjusted trial balance for Simon's Tax Services as of December 31, 2018.

Learning Objective 5**S3-14 Determining the effects on financial statements**

In recording adjusting entries, Reagan Financial Advisors failed to record the adjusting entries for the following situations:

- a. Office supplies on hand, \$100.
- b. Accrued revenues, \$5,000.
- c. Accrued interest expense, \$250.
- d. Depreciation, \$800.
- e. Unearned revenue that has been earned, \$550.

Determine the effects on the income statement and balance sheet by identifying whether assets, liabilities, equity, revenue, and expenses are either overstated or understated. Use the following table. Adjustment *a* has been provided as an example.

Adjustment	Balance Sheet			Income Statement	
	Not Recorded	Assets	Liabilities	Equity	Revenue
		(a) Overstated		Overstated	Understated

S3-15 Preparing a partial worksheet

Just Right Hair Stylists has begun the preparation of its worksheet as follows:

	A	B	C	D	E	F	G
1	JUST RIGHT HAIR STYLISTS						
2	Worksheet						
3	December 31, 2018						
5	Account Names	Unadjusted Trial Balance		Adjustments		Adjusted Trial Balance	
6	6	Debit	Credit	Debit	Credit	Debit	Credit
7	Cash	\$ 300					
8	Office Supplies	900					
9	Equipment	20,600					
10	Accumulated Depreciation—Equipment			\$ 700			
11	Accounts Payable			500			
12	Interest Payable						
13	Note Payable			2,800			
14	Common Stock			4,200			
15	Service Revenue			17,500			
16	Rent Expense	3,200					
17	Supplies Expense						
18	Depreciation Expense—Equipment						
19	Interest Expense	700					
20	Total	\$ 25,700	\$ 25,700				
21							

Year-end data include the following:

- Office supplies on hand, \$300.
- Depreciation, \$700.
- Accrued interest expense, \$800.

Complete Just Right's worksheet through the adjusted trial balance section. In the adjustments section, mark each adjustment by letter.

S3A-16 Journalizing the alternative treatment of deferred expenses

On October 1, 2018, Kitchen Design paid \$15,000 for store rent covering the six-month period ending March 31, 2019.

Requirements

- Journalize the entry on October 1 by using the alternative treatment of deferred expenses.
- Record the December 31, 2018 adjusting entry.

Learning Objective 7
Appendix 3A**S3A-17 Journalizing the alternative treatment of deferred revenues**

On September 1, 2018, Salem Landscaping collected \$24,000 in advance from customers for landscaping services. The service revenue will be earned monthly over the 12-month period ending August 31, 2019.

Learning Objective 7
Appendix 3A**Requirements**

- Journalize the entry on September 1 by using the alternative treatment of deferred revenues.
- Record the December 31, 2018 adjusting entry.

> Exercises

Learning Objectives 1, 2**E3-18 Comparing cash and accrual basis accounting and applying the revenue recognition principle**

Romantic Occasions is a photography business that shoots videos at wedding parties. Mr. & Mrs. Chan pay \$2,000 in advance on April 4 to guarantee services for their party to be held on May 7. Mr. & Mrs. Lee promise a minimum of \$4,200 for filming at their banquet and actually pay cash of \$5,200 on May 17 at the party.

Answer the following questions about the correct way to account for revenue under the accrual basis:

- a. Considering the \$2,000 paid by Mr. & Mrs. Chan, on what date was revenue recognized? Did the recognition occur on the same date that cash was received?
- b. Considering the \$5,200 paid by Mr. & Mrs. Lee, on what date was revenue recognized? Did the recognition occur on the same date that cash was received?

Learning Objectives 1, 2**E3-19 Comparing cash and accrual basis accounting and applying the revenue recognition principle and the matching principle**

Chef's Catering completed the following selected transactions during May 2018:

May 1	Prepaid rent for three months, \$2,400.
5	Received and paid electricity bill, \$700.
9	Received cash for meals served to customers, \$2,600.
14	Paid cash for kitchen equipment, \$3,000.
23	Served a banquet on account, \$2,800.
31	Made the adjusting entry for rent (from May 1).
31	Accrued salary expense, \$1,600.
31	Recorded depreciation for May on kitchen equipment, \$50.

Requirements

1. Show whether each transaction would be handled as a revenue or an expense using both the cash basis and accrual basis accounting systems by completing the following table. (Expenses should be shown in parentheses.) Also, indicate the dollar amount of the revenue or expense. The May 1 transaction has been completed as an example.

Amount of Revenue (Expense) for May		
Date	Cash Basis Amount of Revenue (Expense)	Accrual Basis Amount of Revenue (Expense)
May 1	\$(2,400)	\$0

2. After completing the table, calculate the amount of net income or net loss for Chef's Catering under the accrual basis and cash basis accounting systems for May.
3. Considering your results from Requirement 2, which method gives the best picture of the true earnings of Chef's Catering? Why?

E3-20 Determining the amount of prepaid expenses

Consider the facts presented in the following table for Tropical Vista:

	Situation			
	A	B	C	D
Beginning Prepaid Rent	\$1,200	\$1,100	\$ 100	\$ 700
Payments for Prepaid Rent during the year	1,500	b	1,400	f
Total amount to account for	2,700	1,600	c	e
Subtract: Ending Prepaid Rent	800	300	d	400
Rent Expense	\$ a	\$1,300	\$1,100	\$ 900

Complete the table by filling in the missing values.

E3-21 Journalizing adjusting entries

Consider the following situations:

- Business receives \$4,000 on January 1 for 10-month service contract for the period January 1 through October 31 (Assume services are performed evenly each month throughout the term of the contract).
- Total salaries for all employees is \$4,000 per month. Employees are paid on the 1st and the 15th of the month.
- Work performed but not yet billed to customers for the month is \$1,400.
- The company pays interest on its \$24,000, 9% note payable of \$180 on the first day of each month.

Assume the company records adjusting entries monthly. Journalize the adjusting entries needed as of January 31.

E3-22 Journalizing adjusting entries

Consider the following independent situations at December 31:

- On October 1, a business collected \$3,000 rent in advance, debiting Cash and crediting Unearned Revenue. The tenant was paying one year's rent in advance. On December 31, the business must account for the amount of rent it has earned.
- Salaries expense is \$1,800 per day—Monday through Friday—and the business pays employees each Friday. This year, December 31 falls on a Thursday.
- The unadjusted balance of the Office Supplies account is \$3,000. Office supplies on hand total \$1,900.
- Equipment depreciation was \$500.
- On April 1, when the business prepaid \$4,320 for a two-year insurance policy, the business debited Prepaid Insurance and credited Cash.

Journalize the adjusting entry needed on December 31 for each situation. Use the letters to label the journal entries.

E3-23 Journalizing adjusting entries

Consider the following situations for Betterton Welding Services:

- Depreciation for the current year includes equipment, \$2,100.
- Each Monday, Betterton pays employees for the previous week's work. The amount of weekly payroll is \$1,400 for a seven-day workweek (Monday to Sunday). This year, December 31 falls on Thursday.

Learning Objective 3**Learning Objective 3****Learning Objective 3****Learning Objective 3**

- c. The beginning balance of Office Supplies was \$2,300. During the year, Betterton purchased office supplies for \$3,000, and at December 31 the office supplies on hand totaled \$1,000.
- d. Betterton prepaid a two full years' insurance on July 1 of the current year, \$6,000. Record insurance expense for the year ended December 31.
- e. Betterton had earned \$2,800 of unearned revenue.
- f. Betterton had incurred (but not recorded) \$200 of interest expense on a note payable. The interest will not be paid until February 28.
- g. Betterton billed customers \$3,000 for welding services performed.

Journalize the adjusting entry needed on December 31 for each situation. Use the letters to label the journal entries.

Learning Objective 3

- 3. Unearned Revenue bal. \$800 CR

E3-24 Journalizing adjusting entries and posting to T-accounts

The accounting records of Insite Architects include the following selected, unadjusted balances at March 31: Accounts Receivable, \$1,400; Office Supplies, \$1,000; Prepaid Rent, \$1,950; Equipment, \$8,000; Accumulated Depreciation—Equipment, \$0; Salaries Payable, \$0; Unearned Revenue, \$1,000; Service Revenue, \$4,600; Salaries Expense, \$1,400; Supplies Expense, \$0; Rent Expense, \$0; Depreciation Expense—Equipment, \$0. The data developed for the March 31 adjusting entries are as follows:

- a. Service revenue accrued, \$400.
- b. Unearned revenue that has been earned, \$500.
- c. Office Supplies on hand, \$600.
- d. Salaries owed to employees, \$800.
- e. One month of prepaid rent has expired, \$650.
- f. Depreciation on equipment, \$120.

Requirements

1. Journalize the adjusting entries using the letter and March 31 date in the date column.
2. Post the adjustments to the T-accounts, entering each adjustment by letter. Show each account's adjusted balance.

E3-25 Journalizing adjusting entries and posting to T-accounts

The unadjusted trial balance for All Mopped Up Company, a cleaning service, is as follows:

ALL MOPPED UP COMPANY		
Unadjusted Trial Balance		
December 31, 2018		
	Balance	
Account Title	Debit	Credit
Cash	\$ 800	
Office Supplies	2,000	
Prepaid Insurance	600	
Equipment	30,000	
Accumulated Depreciation—Equipment	\$ 2,000	
Accounts Payable		2,400
Salaries Payable		
Unearned Revenue		700
Common Stock		15,300
Dividends	5,000	
Service Revenue		25,000
Salaries Expense	7,000	
Supplies Expense		
Depreciation Expense—Equipment		
Insurance Expense		
Total	\$ 45,400	\$ 45,400

During the 12 months ended December 31, 2018, All Mopped Up:

- a. used office supplies of \$1,700.
- b. used prepaid insurance of \$580.
- c. depreciated equipment, \$500.
- d. accrued salaries expense of \$310 that hasn't been paid yet.
- e. earned \$400 of unearned revenue.

Requirements

1. Open a T-account for each account using the unadjusted balances.
2. Journalize the adjusting entries using the letter and December 31 date in the date column.
3. Post the adjustments to the T-accounts, entering each adjustment by letter. Show each account's adjusted balance.

Learning Objective 3

- 3. Office Supplies bal. \$300 DR

Note: Exercise E3-26 should be used only in conjunction with Exercise E3-25.

Learning Objective 4

Adj. trial balance \$46,210 total

Learning Objectives 3, 5

E3-26 Preparing an adjusted trial balance

Refer to the data in Exercise E3-25, and prepare an adjusted trial balance.

E3-27 Identifying the impact of adjusting entries on the financial statements

Seaside Rental recorded the following transactions during April:

- a. Received \$3,700 cash from customer for three months of service beginning April 1 and ending June 30. The company recorded a \$3,700 debit to Cash and a \$3,700 credit to Unearned Revenue.
- b. The company pays \$520 on April 1 for its six-month auto insurance policy. The company recorded a \$520 debit to Prepaid Insurance and a \$520 credit to Cash.
- c. Employees are paid \$2,800 on Monday following the five-day workweek. April 30 is on Friday.
- d. The company began April with \$120 of office supplies on hand. On April 10, the company purchased office supplies on account of \$320. The company recorded a \$320 debit to Office Supplies and a \$320 credit to Accounts Payable. The company used \$300 of office supplies during April.
- e. The company received its electric bill on April 30 for \$450 but did not pay it until May 15.
- f. The company paid May's rent of \$3,400 on April 30. On April 30, the company recorded a \$3,400 debit to Rent Expense and a \$3,400 credit to Cash.
- g. The company purchased office furniture for \$1,200 on April 1. The company recorded a \$1,200 debit to Office Furniture and a \$1,200 credit to Accounts Payable. Annual depreciation for the furniture is \$300.

Indicate if an adjusting entry is needed for each item on April 30 for the month of April. Assuming the adjusting entry is not made, indicate which specific category or categories of accounts on the financial statements are misstated and if they are overstated or understated. Use the following table as a guide. Item *a* is completed as an example:

Item	Adjusting Entry Needed?	Specific Category of Accounts on the Balance Sheet	Over / Understated	Specific Category of Accounts on the Income Statement	Over / Understated
(a)	Yes	<i>Liability Equity</i>	<i>Over Under</i>	<i>Revenue</i>	<i>Under</i>

Learning Objectives 3, 5

E3-28 Journalizing adjusting entries and analyzing their effect on the income statement

The following data at July 31, 2018, are given for KTR:

- a. Depreciation, \$700.
- b. Prepaid rent expires, \$900.
- c. Interest expense accrued, \$800.
- d. Employee salaries owed for Monday through Thursday of a five-day workweek; weekly payroll, \$17,000.

- e. Unearned revenue earned, \$1800.
- f. Office supplies used, \$200.

Requirements

1. Journalize the adjusting entries needed on July 31, 2018.
2. Suppose the adjustments made in Requirement 1 were not made. Compute the overall overstatement or understatement of net income as a result of the omission of these adjustments.

E3-29 Using the worksheet to record the adjusting journal entries

The worksheet of Temp-2-Perm Employment Service follows but is incomplete.

Learning Objective 6

1. Adjustments \$3,700 total

	A	B	C	D	E	F	G
1	TEMP-2-PERM EMPLOYMENT SERVICE						
2	Worksheet						
3	April 30, 2018						
5	Account Names	Unadjusted Trial Balance		Adjustments		Adjusted Trial Balance	
		Debit	Credit	Debit	Credit	Debit	Credit
7	Cash	\$ 900					
8	Accounts Receivable	4,500					
9	Office Supplies	800					
10	Equipment	32,900					
11	Accumulated Depreciation—Equipment		\$ 13,700				
12	Salaries Payable						
13	Common Stock		25,600				
14	Dividends	4,700					
15	Service Revenue		9,400				
16	Salaries Expense	3,100					
17	Rent Expense	1,800					
18	Depreciation Expense—Equipment						
19	Supplies Expense						
20	Total	\$ 48,700	\$ 48,700				
21							

The following data at April 30, 2018, are given for Temp-2-Perm Employment Service:

- a. Service revenue accrued, \$1,200.
- b. Office supplies used, \$400.
- c. Depreciation on equipment, \$800.
- d. Salaries owed to employees, \$500.

Requirements

1. Calculate and enter the adjustment amounts directly in the Adjustments columns.
Use letters *a* through *d* to label the four adjustments.
2. Calculate and enter the adjusted account balances in the Adjusted Trial Balance columns.
3. Prepare each adjusting journal entry calculated in Requirement 1. Date the entries and include explanations.

Learning Objective 6**E3-30 Using the worksheet to prepare the adjusted trial balance**

The worksheet of Morgan's Landscaping Services follows but is incomplete.

Adj. trial balance \$273,700 total

	A	B	C	D	E	F	G
1	MORGAN'S LANDSCAPING SERVICES						
2	Worksheet						
3	December 31, 2018						
4							
5	Account Names	Unadjusted Trial Balance		Adjustments		Adjusted Trial Balance	
		Debit	Credit	Debit	Credit	Debit	Credit
7	Cash	\$ 24,300					
8	Accounts Receivable	6,200		(h) \$ 2,600			
9	Office Supplies	550			(b) \$ 380		
10	Prepaid Rent	2,700			(a) 1,350		
11	Equipment	62,000					
12	Accumulated Depreciation—Equipment				(c) 1,000		
13	Trucks	84,000					
14	Accumulated Depreciation—Trucks				(d) 1,400		
15	Accounts Payable		\$ 4,700				
16	Utilities Payable		700				
17	Salaries Payable				(f) 7,500		
18	Interest Payable				(g) 150		
19	Unearned Revenue		3,900	(e) 3,500			
20	Notes Payable		15,000				
21	Common Stock		128,650				
22	Dividends	11,000					
23	Service Revenue		80,000		(e, h) 6,100		
24	Rent Expense	10,800		(a) 1,350			
25	Salaries Expense	25,600		(f) 7,500			
26	Supplies Expense			(b) 380			
27	Utilities Expense	5,800					
28	Depreciation Expense—Equipment			(c) 1,000			
29	Depreciation Expense—Trucks			(d) 1,400			
30	Interest Expense			(g) 150			
31	Total	\$ 232,950	\$ 232,950	\$ 17,880	\$ 17,880		
32							

Requirements

1. Calculate and enter the adjusted account balances in the Adjusted Trial Balance columns.
2. Describe each adjusting entry. For example, (a) Prepaid Rent expires, \$1,350.

E3A-31 Understanding the alternative treatment of prepaid expenses

At the beginning of the year, office supplies of \$800 were on hand. During the year, Spring Air Conditioning Service paid \$5,500 for more office supplies. At the end of the year, Spring has \$700 of office supplies on hand.

Requirements

1. Record the adjusting entry assuming that Spring records the purchase of office supplies by initially debiting an asset account. Post the adjusting entry to the Office Supplies and Supplies Expense T-accounts. Make sure to include the beginning balance and purchase of office supplies in the Office Supplies T-account.
2. Record the adjusting entry assuming that Spring records the purchase of office supplies by initially debiting an expense account. Post the adjusting entry to the Office Supplies and Supplies Expense T-accounts. Make sure to include the beginning balance in the Office Supplies T-account and the purchase of office supplies in the Supplies Expense T-account.
3. Compare the ending balances of the T-accounts under both approaches. Are they the same?

E3A-32 Understanding the alternative treatment of unearned revenues

At the beginning of the year, Modish Advertising owed customers \$2,100 for unearned revenue collected in advance. During the year, Modish received advance cash receipts of \$6,100 and earned \$20,000 of service revenue (exclusive of any amount earned from advance payments). At year-end, the liability for unearned revenue is \$3,100 and unadjusted service revenue is \$20,000.

Requirements

1. Record the adjusting entry assuming that Modish records the cash receipt of unearned revenue by initially crediting a liability account. Post the adjusting entry to the Unearned Revenue and Service Revenue T-accounts. Make sure to include the beginning balance and additional unearned revenue in the Unearned Revenue T-account.
2. Record the adjusting entry assuming that Modish records the cash receipt of unearned revenue by initially crediting a revenue account. Post the adjusting entry to the Unearned Revenue and Service Revenue T-accounts. Make sure to include the beginning balance in the Unearned Revenue T-account and the additional unearned revenue in the Service Revenue T-account.
3. Compare the ending balances of the T-accounts under both approaches. Are they the same?

> Problems Group A**P3-33A Journalizing adjusting entries and subsequent journal entries**

Laughter Landscaping has collected the following data for the December 31 adjusting entries:

- a. Each Friday, Laughter pays employees for the current week's work. The amount of the weekly payroll is \$8,000 for a five-day workweek. This year, December 31 falls on a Tuesday. Laughter will pay its employees on January 3.
- b. On January 1 of the current year, Laughter purchases an insurance policy that covers two years, \$8,000.

**Learning Objectives 3, 7
Appendix 3A****Learning Objectives 3, 7
Appendix 3A**

- c. The beginning balance of Office Supplies was \$4,300. During the year, Laughter purchased office supplies for \$5,600, and at December 31 the office supplies on hand total \$1,500.
- d. During December, Laughter designed a landscape plan and the client prepaid \$6,500. Laughter recorded this amount as Unearned Revenue. The job will take several months to complete, and Laughter estimates that the company has earned 40% of the total revenue during the current year.
- e. At December 31, Laughter had earned \$3,000 for landscape services completed for Turnkey Appliances. Turnkey has stated that it will pay Laughter on January 10.
- f. Depreciation for the current year includes Equipment, \$3,000; and Trucks, \$2,200.
- g. Laughter has incurred \$250 of interest expense on a \$550 interest payment due on January 15.

Requirements

1. Journalize the adjusting entry needed on December 31 for each of the previous items affecting Laughter Landscaping. Assume Laughter records adjusting entries only at the end of the year.
2. Journalize the subsequent journal entries for adjusting entries *a*, *d*, and *g*.

Learning Objectives 3, 5

P3-34A Journalizing adjusting entries and identifying the impact on financial statements

Taylor Fishing Charters has collected the following data for the December 31 adjusting entries:

- a. The company received its electric bill on December 20 for \$325 but will not pay it until January 5. (Use the Utilities Payable account.)
- b. Taylor purchased a nine-month boat insurance policy on November 1 for \$3,600. Taylor recorded a debit to Prepaid Insurance.
- c. As of December 31, Taylor had earned \$3,000 of charter revenue that has not been recorded or received.
- d. Taylor's fishing boat was purchased on January 1 at a cost of \$49,000. Taylor expects to use the boat for ten years and that it will have a residual value of \$4,000. Determine annual depreciation assuming the straight-line depreciation method is used.
- e. On October 1, Taylor received \$7,500 prepayment for a deep-sea fishing charter to take place in December. As of December 31, Taylor has completed the charter.

Requirements

1. Journalize the adjusting entries needed on December 31 for Taylor Fishing Charters. Assume Taylor records adjusting entries only at the end of the year.
2. If Taylor had not recorded the adjusting entries, indicate which specific category of accounts on the financial statements would be misstated and if the misstatement is overstated or understated. Use the following table as a guide.

Adjusting Entry	Specific Category of Accounts on the Balance Sheet	Over / Understated	Specific Category of Accounts on the Income Statement	Over / Understated
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P3-35A Journalizing and posting adjustments to the T-accounts and preparing an adjusted trial balance

The unadjusted trial balance of Anniston Air Purification System at December 31, 2018, and the data needed for the adjustments follow.

Learning Objectives 3, 4

3. Adjusted trial balance total
\$75,600

ANNISTON AIR PURIFICATION SYSTEM		
Unadjusted Trial Balance		
December 31, 2018		
Account Title	Balance	
	Debit	Credit
Cash	\$ 7,600	
Accounts Receivable	19,700	
Prepaid Rent	2,900	
Office Supplies	1,800	
Equipment	22,000	
Accumulated Depreciation—Equipment		\$ 3,900
Accounts Payable		2,900
Salaries Payable		
Unearned Revenue		3,100
Common Stock		43,800
Dividends	9,900	
Service Revenue		15,300
Salaries Expense		3,300
Rent Expense		
Depreciation Expense—Equipment		
Advertising Expense		1,800
Supplies Expense		
Total	<u><u>\$ 69,000</u></u>	<u><u>\$ 69,000</u></u>

Adjustment data at December 31 follow:

- On December 15, Anniston contracted to perform services for a client receiving \$3,100 in advance. Anniston recorded this receipt of cash as Unearned Revenue. As of December 31, Anniston has completed \$2,100 of the services.
- Anniston prepaid two months of rent on December 1. (Assume the Prepaid Rent balance as shown on the unadjusted trial balance represents the two months of rent prepaid on December 1.)
- Anniston used \$750 of office supplies.
- Depreciation for the equipment is \$850.
- Anniston received a bill for December's online advertising, \$1,100. Anniston will not pay the bill until January. (Use Accounts Payable.)
- Anniston pays its employees on Monday for the previous week's wages. Its employees earn \$3,500 for a five-day workweek. December 31 falls on Wednesday this year.
- On October 1, Anniston agreed to provide a four-month air system check (beginning October 1) for a customer for \$3,400. Anniston has completed the system check every month, but payment has not yet been received and no entries have been made.

Requirements

1. Journalize the adjusting entries on December 31.
2. Using the unadjusted trial balance, open the T-accounts with the unadjusted balances. Post the adjusting entries to the T-accounts.
3. Prepare the adjusted trial balance.
4. How will Anniston Air Purification System use the adjusted trial balance?

Learning Objectives 3, 4

3. Adjusted trial balance
\$572,040 total

P3-36A Journalizing and posting adjustments to the four-column accounts and preparing an adjusted trial balance

The unadjusted trial balance of Lexington Inn Company at December 31, 2018, and the data needed for the adjustments follow.

LEXINGTON INN COMPANY		
Unadjusted Trial Balance		
December 31, 2018		
	Balance	
Account Title	Debit	Credit
Cash	\$ 10,800	
Accounts Receivable	13,100	
Prepaid Insurance	2,600	
Office Supplies	1,300	
Building	380,000	
Accumulated Depreciation—Building		\$ 325,000
Accounts Payable		4,500
Salaries Payable		
Unearned Revenue		2,800
Common Stock		63,750
Dividends	1,500	
Service Revenue		17,500
Salaries Expense		3,300
Insurance Expense		
Depreciation Expense—Building		
Advertising Expense		950
Supplies Expense		
Total	<u><u>\$ 413,550</u></u>	<u><u>\$ 413,550</u></u>

Adjustment data at December 31 follow:

- a. As of December 31, Lexington had \$400 of Prepaid Insurance remaining.
- b. At the end of the month, Lexington had \$1,100 of office supplies remaining.
- c. Depreciation on the building is \$3,400.
- d. Lexington pays its employees weekly on Friday. Its employees earn \$1,600 for a five-day workweek. December 31 falls on Wednesday this year.
- e. On November 20, Lexington was contracted to perform services for a client receiving \$2,800 in advance. Lexington recorded this receipt of cash as Unearned Revenue. As of December 31, Lexington has \$2,500 still unearned.

Requirements

1. Journalize the adjusting entries on December 31.
2. The four-column ledger accounts have been opened for you using the unadjusted trial balance. Post the adjusting entries to the ledger accounts.
3. Prepare the adjusted trial balance.
4. Assuming the adjusted trial balance has total debits equal to total credits, does this mean that the adjusting entries have been recorded correctly? Explain.

P3-37A Using the worksheet to record the adjusting journal entries

Learning Objective 6

Greavy Theater Production Company's partially completed worksheet as of December 31, 2018, follows.

	A	B	C	D	E	F	G
1	GREAVY THEATER PRODUCTION COMPANY						
2	Worksheet						
3	December 31, 2018						
5	Account Names	Unadjusted Trial Balance		Adjustments		Adjusted Trial Balance	
		Debit	Credit	Debit	Credit	Debit	Credit
7	Cash	\$ 4,300					
8	Accounts Receivable	5,900					
9	Office Supplies	1,900					
10	Prepaid Insurance	4,550					
11	Equipment	30,000					
12	Accumulated Depreciation—Equipment		\$ 7,600				
13	Accounts Payable		3,600				
14	Salaries Payable						
15	Common Stock		21,950				
16	Dividends	30,500					
17	Service Revenue		77,000				
18	Depreciation Expense—Equipment						
19	Supplies Expense						
20	Utilities Expense	5,500					
21	Salaries Expense	27,500					
22	Insurance Expense						
23	Total	\$ 110,150	\$ 110,150				
24							

Adjustment data at December 31 follow:

- a. As of December 31, Greavy had performed \$500 of service revenue but has not yet billed customers.
- b. At the end of the month, Greavy had \$700 of office supplies remaining.
- c. Prepaid Insurance of \$3,900 remained.
- d. Depreciation expense, \$4,000.
- e. Accrued salaries expense of \$200 that hasn't been paid yet.

Requirements

1. Complete the worksheet. Use letters *a* through *e* to label the five adjustments.
2. Journalize the adjusting entries.

**Learning Objectives 3, 7
Appendix 3A****P3A-38A Understanding the alternative treatment of prepaid expenses and unearned revenues**

Speedy Pack'n Mail completed the following transactions during 2018:

-
- Nov. 1 Paid \$15,000 store rent covering the six-month period ending April 30, 2019.
 - Nov. 1 Paid \$4,800 insurance covering the three-month period ending January 31, 2019.
 - Dec. 1 Collected \$9,600 cash in advance from customers. The service revenue will be earned \$2,400 monthly over the four-month period ending March 31, 2019.
 - Dec. 1 Collected \$2,000 cash in advance from customers. The service revenue will be earned \$500 monthly over the four-month period ending March 31, 2019.
-

Requirements

1. Journalize the transactions assuming that Speedy debits an asset account for prepaid expenses and credits a liability account for unearned revenues.
2. Journalize the related adjusting entries at December 31, 2018.
3. Post the journal and adjusting entries to the T-accounts, and show their balances at December 31, 2018. (Ignore the Cash account.)
4. Repeat Requirements 1–3. This time, debit an expense account for prepaid expenses and credit a revenue account for unearned revenues.
5. Compare the account balances in Requirements 3 and 4. They should be equal.

> Problems Group B**Learning Objective 3****P3-39B Journalizing adjusting entries and subsequent journal entries**

Lopez Landscaping has the following data for the December 31 adjusting entries:

- a. Each Friday, Lopez pays employees for the current week's work. The amount of the weekly payroll is \$6,500 for a five-day workweek. This year, December 31 falls on a Wednesday. Lopez will pay its employees on January 2.
- b. On January 1 of the current year, Lopez purchases an insurance policy that covers two years, \$7,500.
- c. The beginning balance of Office Supplies was \$3,700. During the year, Lopez purchased office supplies for \$5,800, and at December 31 the office supplies on hand total \$3,000.
- d. During December, Lopez designed a landscape plan and the client prepaid \$6,000. Lopez recorded this amount as Unearned Revenue. The job will take several months to complete, and Lopez estimates that the company has earned 70% of the total revenue during the current year.
- e. At December 31, Lopez had earned \$7,500 for landscape services completed for Tomball Appliances. Tomball has stated that it will pay Lopez on January 10.
- f. Depreciation for the current year includes Equipment, \$3,800; and Trucks, \$1,400.
- g. Lopez has incurred \$250 of interest expense on a \$350 interest payment due on January 15.

Requirements

- Journalize the adjusting entry needed on December 31 for each of the previous items affecting Lopez Landscaping. Assume Lopez records adjusting entries only at the end of the year.
- Journalize the subsequent journal entries for adjusting entries *a*, *d*, and *g*.

P3-40B Journalizing adjusting entries and identifying the impact on financial statements

Henderson Fishing Charters has collected the following data for the December 31 adjusting entries:

- The company received its electric bill on December 20 for \$275 but will not pay it until January 5. (Use the Utilities Payable account.)
- Henderson purchased a six-month boat insurance policy on November 1 for \$6,600. Henderson recorded a debit to Prepaid Insurance.
- As of December 31, Henderson had earned \$4,000 of charter revenue that has not been recorded or received.
- Henderson's fishing boat was purchased on January 1 at a cost of \$79,600. Henderson expects to use the boat for five years and that it will have a residual value of \$4,600. Determine annual depreciation assuming the straight-line depreciation method is used.
- On October 1, Henderson received \$3,000 prepayment for a deep-sea fishing charter to take place in December. As of December 31, Henderson has completed the charter.

Requirements

- Journalize the adjusting entries needed on December 31 for Henderson Fishing Charters. Assume Henderson records adjusting entries only at the end of the year.
- If Henderson had not recorded the adjusting entries, indicate which specific category of accounts on the financial statements would be misstated and if the misstatement is overstated or understated. Use the following table as a guide:

Adjusting Entry	Specific Category of Accounts on the Balance Sheet	Over / Understated	Specific Category of Accounts on the Income Statement	Over / Understated

Learning Objectives 3, 5

Learning Objectives 3, 4

3. Adjusted trial balance total
\$69,800

P3-41B Journalizing and posting adjustments to the T-accounts and preparing an adjusted trial balance

The unadjusted trial balance of Avery Air Purification System at December 31, 2018, and the data needed for the adjustments follow.

AVERY AIR PURIFICATION SYSTEM Unadjusted Trial Balance December 31, 2018		
Account Title	Debit	Credit
Cash	\$ 7,100	
Accounts Receivable	19,100	
Prepaid Rent	2,400	
Office Supplies	1,400	
Equipment	20,000	
Accumulated Depreciation—Equipment		\$ 3,800
Accounts Payable		3,500
Salaries Payable		
Unearned Revenue		2,700
Common Stock		39,300
Dividends		9,400
Service Revenue		15,900
Salaries Expense		3,900
Rent Expense		
Depreciation Expense—Equipment		
Advertising Expense		1,900
Supplies Expense		
Total	<u><u>\$ 65,200</u></u>	<u><u>\$ 65,200</u></u>

Adjustment data at December 31 follow:

- a. On December 15, Avery contracted to perform services for a client receiving \$2,700 in advance. Avery recorded this receipt of cash as Unearned Revenue. As of December 31, Avery has completed \$2,100 of the services.
- b. Avery prepaid two months of rent on December 1. (Assume the Prepaid Rent balance as shown on the unadjusted trial balance represents the two months of rent prepaid on December 1.)
- c. Avery used \$750 of office supplies during the month.
- d. Depreciation for the equipment is \$800.
- e. Avery received a bill for December's online advertising, \$500. Avery will not pay the bill until January. (Use Accounts Payable.)
- f. Avery pays its employees weekly on Monday for the previous week's wages. Its employees earn \$2,000 for a five-day workweek. December 31 falls on Wednesday this year.
- g. On October 1, Avery agreed to provide a four-month air system check (beginning October 1) for a customer for \$2,800. Avery has completed the system check every month, but payment has not yet been received and no entries have been made.

Requirements

1. Journalize the adjusting entries on December 31.
2. Using the unadjusted trial balance, open the T-accounts with the unadjusted balances. Post the adjusting entries to the T-accounts.
3. Prepare the adjusted trial balance.
4. How will Avery Air Purification System use the adjusted trial balance?

P3-42B Journalizing and posting adjustments to the four-column accounts and preparing an adjusted trial balance

The unadjusted trial balance of Midway Inn Company at December 31, 2018, and the data needed for the adjustments follow.

MIDWAY INN COMPANY Unadjusted Trial Balance December 31, 2018		
Account Title	Balance	
	Debit	Credit
Cash	\$ 14,500	
Accounts Receivable	15,100	
Prepaid Insurance	1,400	
Office Supplies	700	
Building	518,000	
Accumulated Depreciation—Building		\$ 310,000
Accounts Payable		4,210
Salaries Payable		
Unearned Revenue		1,600
Common Stock		222,160
Dividends	1,890	
Service Revenue		16,900
Salaries Expense	2,600	
Insurance Expense		
Depreciation Expense—Building		
Advertising Expense	680	
Supplies Expense		
Total	<u>\$ 554,870</u>	<u>\$ 554,870</u>

Learning Objectives 3, 4

3. Adjusted trial balance total \$557,750

Adjustment data at December 31 follow:

- a. As of December 31, Midway Inn had \$800 of Prepaid Insurance remaining.
- b. At the end of the month, Midway Inn had \$500 of office supplies remaining.
- c. Depreciation on the building is \$2,100.
- d. Midway Inn pays its employees on Friday for the weekly salaries. Its employees earn \$1,300 for a five-day workweek. December 31 falls on Wednesday this year.
- e. On November 20, Midway Inn contracted to perform services for a client receiving \$1,600 in advance. Midway Inn recorded this receipt of cash as Unearned Revenue. As of December 31, Midway Inn has \$1,400 still unearned.

Requirements

1. Journalize the adjusting entries on December 31.
2. Using the unadjusted trial balance, open the accounts (use a four-column ledger) with the unadjusted balances. Post the adjusting entries to the ledger accounts.
3. Prepare the adjusted trial balance.
4. Assuming the adjusted trial balance has total debits equal to total credits, does this mean that the adjusting entries have been recorded correctly? Explain.

Learning Objective 6

P3-43B Using the worksheet to record the adjusting journal entries

Galaxy Theater Production Company's partially completed worksheet as of December 31, 2018, follows.

	A	B	C	D	E	F	G
1	GALAXY THEATER PRODUCTION COMPANY						
2	Worksheet						
3	December 31, 2018						
5	Account Names	Unadjusted Trial Balance		Adjustments		Adjusted Trial Balance	
		Debit	Credit	Debit	Credit	Debit	Credit
7	Cash	\$ 3,600					
8	Accounts Receivable	5,700					
9	Office Supplies	1,500					
10	Prepaid Insurance	900					
11	Equipment	23,000					
12	Accumulated Depreciation—Equipment		\$ 8,500				
13	Accounts Payable		4,600				
14	Salaries Payable						
15	Common Stock		9,900				
16	Dividends	26,000					
17	Service Revenue		72,000				
18	Depreciation Expense—Equipment						
19	Supplies Expense						
20	Utilities Expense	4,300					
21	Salaries Expense	30,000					
22	Insurance Expense						
23	Total	\$95,000	\$95,000				
24							

Adjustment data at December 31 follow:

- a. As of December 31, Galaxy had performed \$900 of service revenue but has not yet billed customers.
- b. At the end of the month, Galaxy had \$500 of office supplies remaining.
- c. Prepaid Insurance of \$600 remained.
- d. Depreciation expense, \$4,200.
- e. Accrued salaries expense of \$150 that hasn't been paid yet.

Requirements

1. Complete the worksheet. Use letters *a* through *e* to label the five adjustments.
2. Journalize the adjusting entries.

P3A-44B Understanding the alternative treatment of prepaid expenses and unearned revenues

Sent It Pack'n Mail completed the following transactions during 2018:

- Nov. 1 Paid \$1,500 store rent covering the three-month period ending January 31, 2019.
- Nov. 1 Paid \$9,600 insurance covering the six-month period ending April 30, 2019.
- Dec. 1 Collected \$6,000 cash in advance from customers. The service revenue will be earned \$1,500 monthly over the four-month period ending March 31, 2019.
- Dec. 1 Collected \$6,400 cash in advance from customers. The service revenue will be earned \$1,600 monthly over the four-month period ending March 31, 2019.

Learning Objectives 3, 7 Appendix 3A

Requirements

1. Journalize the transactions assuming that Sent It debits an asset account for prepaid expenses and credits a liability account for unearned revenues.
2. Journalize the related adjusting entries at December 31, 2018.
3. Post the journal and adjusting entries to the T-accounts, and show their balances at December 31, 2018. (Ignore the Cash account.)
4. Repeat Requirements 1–3. This time debit an expense account for prepaid expenses and credit a revenue account for unearned revenues.
5. Compare the account balances in Requirements 3 and 4. They should be equal.

CRITICAL THINKING

> Using Excel

P3-45 Using Excel to journalize and post adjusting entries, and to create the Adjustments and Adjusted Trial Balance columns of the worksheet

Download an Excel template for this problem online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

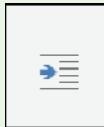
Cedar River Corporation started operations on July 1, 2018. The transactions that occurred during the month were journalized and posted, and a trial balance was prepared at the end of the month. The month-end adjusting entries are to be journalized and posted to T-accounts. A worksheet is to be used to help prepare the adjusted trial balance.

Requirements

1. Use Excel to journalize the adjusting entries. Use the blue shaded areas for inputs.
 - a. To record the account name in the journal, click in the Account and Explanation column. A drop down arrow will appear to the right. Click the arrow and select an account from the chart of accounts. Use the explanation to help you with the entry.

Date	Account and Explanation	DR	CR
Jul 31	Cash		
	Accounts Receivable		
	Office Supplies		
	Prepaid Rent		
	Land		
	Building		
	Accumulated Depreciation-Building		
	Furniture		
	Accumulated Depreciation-Furniture		
31			

- b. Indent the account name of the account to be credited using the indent button on the Home tab. Click the Increase Indent button twice.



2. Once the adjustments have been journalized, post the amounts to the correct side of the T-account. (Note that the balance at the end of the month has been posted as a single entry.)
 - a. The T-account totals will be calculated automatically.
 - b. Total debits should equal total credits. The debit-credit balance check appears in the top right-hand corner of the T-account worksheet.
3. Use a formula to fill in the Adjustment debit and credit columns on the worksheet by referencing the adjusting entries.
4. Use a formula to add or subtract the adjustments to the trial balance amounts to calculate the amounts in the Adjusted Trial Balance columns.
5. Use a formula to total the Adjustments and Adjusted Trial Balance columns.
6. On the Worksheet
 - a. Format the cells requiring dollar signs.
 - b. Format the cells requiring a single underline and cells requiring double underlines.
 - c. Boldface the totals.

> Continuing Problem

P3-46 Preparing adjusting entries and preparing an adjusted trial balance

This problem continues the Let's Bike Company situation from Chapter 2. You will need to use the unadjusted trial balance and posted T-accounts that you prepared in Chapter 2.

At December 31, the business gathers the following information for the adjusting entries:

- a. Interest expense accrued on the notes payable, \$25.
- b. The employee who has been working in the rental booth has earned \$1,700 in wages that will be paid January 15, 2019.
- c. \$350 of unearned revenue has now been earned.
- d. Let's Bike has earned \$2,450 of bike rental revenue that has not been recorded or received.
- e. Determine the depreciation on the bikes purchased on November 2 using straight-line depreciation. Assume the useful life of the bikes is 3 years and the residual value is \$0.
- f. Rent of one month has been used. (Hint: See December 1 transaction from Problem 2-42)
- g. Determine the depreciation on the building using straight-line depreciation. Assume the useful life of the building is 5 years and the residual value is \$4,000. (Hint: The building was purchased on December 1.)
- h. Determine the depreciation on the bikes purchased on December 1 using straight-line depreciation. Assume the useful life of the bikes is 3 years and the residual value is \$0.
- i. Office supplies on hand, \$270.

Requirements

1. Journalize and post the adjusting entries using the T-accounts that you completed in Chapter 2. In the T-accounts, denote each adjusting amount as *Adj.* and an account balance as *Balance*.
2. Prepare an adjusted trial balance as of December 31, 2018.

> Tying It All Together Case 3-1

Before you begin this assignment, review the *Tying It All Together* feature in the chapter.

iHeartMedia, Inc. in their annual report for the year ending December 31, 2015, state that the plant assets reported on its balance sheet includes the following:

Plant Asset	Useful Life
Buildings and improvements	10 to 39 years
Structures	5 to 15 years
Towers, transmitters, and studio equipment	7 to 20 years
Furniture and other equipment	3 to 20 years

Depreciation is computed using the straight-line method.

Requirements

1. Suppose iHeartMedia, Inc. purchases a new advertising structure for \$100,000 on August 1. The residual value of the structure is \$4,000 and the useful life is 10 years. How would iHeartMedia record the depreciation expense on December 31 in the first year of use? What about the second year of use?
2. What would be the book value of the structure at the end of the first year? What would be the book value of the structure at the end of the second year?
3. What would be the impact on iHeartMedia, Inc. financial statements if they failed to record the adjusting entry related to the structure?

> Decision Case 3-1

One year ago, Tyler Stasney founded Swift Classified Ads. Stasney remembers that you took an accounting course while in college and comes to you for advice. He wishes to know how much net income his business earned during the past year in order to decide whether to keep the company going. His accounting records consist of the T-accounts from his ledger, which were prepared by an accountant who moved to another city. The ledger at December 31 follows. The accounts have *not* been adjusted.

Cash	Accounts Payable	Common Stock	Salaries Expense
Dec. 31 5,800	21,500 Dec. 31	20,000 Dec. 31	Dec. 31 17,000
Accounts Receivable	Unearned Revenue	Dividends	Depreciation Expense—Equipment
Dec. 31 12,000	4,000 Dec. 31	Dec. 31 28,000	
Prepaid Rent	Salaries Payable	Service Revenue	Rent Expense
Jan. 2 2,800		59,500 Dec. 31	
Office Supplies			Utilities Expense
Jan. 2 2,600			Dec. 31 800
Equipment			Supplies Expense
Jan. 2 36,000			
Accumulated Depreciation—Equipment			

Stasney indicates that at year-end, customers owe the business \$1,600 for accrued service revenue. These revenues have not been recorded. During the year, Swift Classified Ads collected \$4,000 service revenue in advance from customers, but the business earned only \$900 of that amount. Rent expense for the year was \$2,400, and the business used up \$1,700 of the supplies. Swift determines that depreciation on its equipment was \$5,000 for the year. At December 31, the business owes an employee \$1,200 accrued salary.

Help Swift Classified Ads compute its net income for the year. Advise Stasney whether to continue operating Swift Classified Ads.

> Ethical Issue 3-1

The net income of Steinbach & Sons, a landscaping company, decreased sharply during 2018. Mort Steinbach, owner and manager of the company, anticipates the need for a bank loan in 2019. Late in 2018, Steinbach instructs the company's accountant to record \$2,000 service revenue for landscape services for the Steinbach family, even though the services will not be performed until January 2019. Steinbach also tells the accountant *not* to make the following December 31, 2018, adjusting entries:

Salaries owed to employees	\$ 900
Prepaid insurance that has expired	400

Requirements

1. Compute the overall effects of these transactions on the company's reported net income for 2018.
2. Why is Steinbach taking this action? Is his action ethical? Give your reason, identifying the parties helped and the parties harmed by Steinbach's action.
3. As a personal friend, what advice would you give the accountant?

> Fraud Case 3-1

XM, Ltd. was a small engineering firm that built high-tech robotic devices for electronics manufacturers. One very complex device was partially completed at the end of 2018. Barb McLaren, head engineer, knew the experimental technology was a failure and XM would not be able to complete the \$20,000,000 contract next year. However, the corporation was getting ready to be sold in January. She told the controller that the device was 80% complete at year-end and on track for successful completion the following spring; the controller accrued 80% of the contract revenue at December 31, 2018. McLaren sold the company in January 2019 and retired. By mid-year, it became apparent that XM would not be able to complete the project successfully and the new owner would never recoup his investment.

Requirements

1. For complex, high-tech contracts, how does a company determine the percentage of completion and the amount of revenue to accrue?
2. What action do you think was taken by XM in 2019 with regard to the revenue that had been accrued the previous year?

> Financial Statement Case 3-1

Target Corporation—like all other businesses—makes adjusting entries at year-end in order to measure assets, liabilities, revenues, and expenses properly. Examine Target Corporation’s balance sheet and income statement in its Fiscal 2015 Annual Report. Visit <http://www.pearsonglobaleditions.com/Sitemap/Horngren/> to view a link to Target Corporation’s annual report.

Requirements

1. Which asset accounts might Target record adjusting entries for?
2. Which liability accounts might Target record adjusting entries for?
3. Review Note 14 (Property and Equipment) in the Notes to Consolidated Financial Statements. How are property, plant, and equipment carried on the balance sheet? How is depreciation of these assets calculated? What is the range of useful lives used when depreciating these assets?

> Communication Activity 3-1

In 75 words or fewer, explain adjusting journal entries.

Pearson MyLab Accounting

For a wealth of online resources, including exercises, problems, media, and immediate tutorial help, please visit <http://www.myaccountinglab.com>.

> Quick Check Answers

1. a 2. a 3. b 4. c 5. a 6. a 7. b 8. d 9. c 10A. a

4

Completing the Accounting Cycle



It's the End of the Year, Now What?

The Bear Paw Inn just celebrated its one-year corporate anniversary. Christina Merthieu, the majority stockholder and manager, is excited that she has one year of experience working for a successful business. Although her previous job of working as a resort manager has helped her in dealing with customers, she has had to learn a lot about the accounting side of the business. Christina attributes her first-year success to always offering exceptional quality and personal service to her customers. In addition,

Christina found a great accountant who has been helping her with the books.

From the beginning, Christina relied on her accountant to provide

advice about recording transactions throughout the year. Now that the first year of business has been completed, she is ready to perform the final accounting tasks of the year. The corporation's accountant has told her that she can now prepare financial statements to help her evaluate the inn's profit for the year and its financial position. Bear Paw Inn will use those financial statements to assess the business's performance over the past year. The business is also ready to start the next year of business, and in order to do this, Christina must get the books ready for next year by recording closing entries.



What Happens at Year-End?

As we saw with Christina and the Bear Paw Inn, businesses have special tasks that have to be completed at the end of the accounting cycle. These tasks help the business in evaluating the past year's operations and also prepare the business to start a new year. For example, **Hyatt Hotels Corporation** must prepare annual financial statements that report on the business's profit or loss for the year and its financial position at the end of the year. In addition, Hyatt Hotels must prepare its books for next year—a process that is called *closing the books*, which consists of journalizing closing entries and updating the Retained Earnings account for the year. These final tasks in the accounting cycle are what you learn about in this chapter.





Chapter 4 Learning Objectives



- | | |
|---|---|
| <p>1 Prepare the financial statements including the classified balance sheet</p> <p>2 Use the worksheet to prepare financial statements</p> <p>3 Explain the purpose of, journalize, and post closing entries</p> <p>4 Prepare the post-closing trial balance</p> | <p>5 Describe the accounting cycle</p> <p>6 Use the current ratio to evaluate business performance</p> <p>7 Explain the purpose of, journalize, and post reversing entries (Appendix 4A)</p> |
|---|---|

In Chapter 3, our fictitious company, Smart Touch Learning, had completed the adjusting entries necessary to properly measure net income on the income statement and assets and liabilities on the balance sheet. Now that its accounts are up to date, Smart Touch Learning is ready to take the next step in the accounting cycle—preparing the financial statements. In this chapter, you review the financial statements that you have already learned about and learn how to prepare a more complete version of the balance sheet. In addition, you complete the accounting cycle by learning how to close the books.

HOW DO WE PREPARE FINANCIAL STATEMENTS?

Learning Objective 1

Prepare the financial statements including the classified balance sheet



Following IFRS, companies must present a statement of profit or loss (income statement), statement of financial position (balance sheet), statement of changes in equity (similar to statement of retained earnings) and statement of cash flows—the same as U.S. companies. Yet the statements may look quite different. Revenue may be called *Turnover*, and Net Income may be called *Profit*. On the balance sheet, assets and liabilities are presented in a different order. Cash is often one of the last assets listed.

The financial statements of Smart Touch Learning are prepared from the adjusted trial balance, which you learned in Chapter 3. Exhibit 4-1 shows the adjusted trial balance for Smart Touch Learning. In the right margin of the exhibit, we see how the accounts are distributed to the financial statements.

As always, the financial statements should be prepared in the following order:

- 1. Income statement**—reports revenues and expenses and calculates net income or net loss for the time period.
- 2. Statement of retained earnings**—shows how retained earnings changed during the period due to net income (or net loss) and dividends.
- 3. Balance sheet**—reports assets, liabilities, and stockholders' equity as of the last day of the period.


Exhibit 4-1 | Adjusted Trial Balance

SMART TOUCH LEARNING Adjusted Trial Balance December 31, 2018		
Account Title	Balance	
	Debit	Credit
Cash	\$ 12,200	
Accounts Receivable	1,800	
Office Supplies	100	
Prepaid Rent	2,000	
Land	20,000	
Building	60,000	
Accumulated Depreciation—Building	\$ 250	
Furniture	18,000	
Accumulated Depreciation—Furniture	300	
Accounts Payable	200	
Utilities Payable	100	
Salaries Payable	1,200	
Interest Payable	100	
Unearned Revenue	400	
Notes Payable	60,000	
Common Stock	48,000	
Dividends	5,000	
Service Revenue	17,500	
Rent Expense	3,000	
Salaries Expense	4,800	
Supplies Expense	400	
Utilities Expense	100	
Depreciation Expense—Building	250	
Depreciation Expense—Furniture	300	
Interest Expense	100	
Total	<u><u>\$ 128,050</u></u>	<u><u>\$ 128,050</u></u>

3. Balance Sheet Accounts

2. Statement of Retained Earnings Account

1. Income Statement Accounts

The financial statements for Smart Touch Learning are presented in Exhibit 4-2 (on the next page).

Relationships Among the Financial Statements

The arrows in Exhibit 4-2 (on the next page) show how the financial statements relate to each other.

1. Net income from the income statement increases Retained Earnings on the statement of retained earnings. A net loss decreases Retained Earnings.
2. Ending Retained Earnings from the statement of retained earnings goes to the balance sheet and makes total liabilities plus total stockholders' equity equal total assets, satisfying the accounting equation.

To solidify your understanding of these relationships, trace net income from the income statement to the statement of retained earnings. Then trace ending Retained Earnings to


Exhibit 4-2 | Smart Touch Learning Financial Statements

SMART TOUCH LEARNING Income Statement Two Months Ended December 31, 2018		SMART TOUCH LEARNING Statement of Retained Earnings Two Months Ended December 31, 2018	
Revenues:		Retained Earnings, November 1, 2018	\$ 0
Service Revenue	\$ 17,500	Net income for the two months	8,550
Expenses:			8,550
Salaries Expense	\$ 4,800	Dividends	(5,000)
Rent Expense	3,000	Retained Earnings, December 31, 2018	\$ 3,550
Supplies Expense	400		=====
Depreciation Expense—Furniture	300		
Depreciation Expense—Building	250		
Utilities Expense	100		
Interest Expense	100		
Total Expenses	8,950		
Net Income	\$ 8,550		

SMART TOUCH LEARNING Balance Sheet December 31, 2018			
Assets	Liabilities		
Cash	\$ 12,200	Accounts Payable	\$ 200
Accounts Receivable	1,800	Utilities Payable	100
Office Supplies	100	Salaries Payable	1,200
Prepaid Rent	2,000	Interest Payable	100
Land	20,000	Unearned Revenue	400
Building	\$ 60,000	Notes Payable	60,000
Less: Acc. Depr.—Building	(250)	Total Liabilities	62,000
Furniture	18,000		
Less: Acc. Depr.—Furniture	(300)		
Total Assets	\$ 113,550	Stockholders' Equity	
		Common Stock	48,000
		Retained Earnings	3,550
		Total Stockholders' Equity	51,550
		Total Liabilities and Stockholders' Equity	\$ 113,550

1

2

the balance sheet. Note that these are the three main financial statements you learned about in the first chapter. They are always prepared in the order described previously: income statement, then statement of retained earnings, and then balance sheet.

Classified Balance Sheet

So far we have presented the *unclassified* balance sheet of Smart Touch Learning. We are now ready for the balance sheet that is actually used in practice—called a **classified balance sheet**. In a classified balance sheet, each asset and each liability are placed into a specific category or classification.

Classified Balance Sheet

A balance sheet that places each asset and each liability into a specific category.



In a classified balance sheet, assets are shown in order of liquidity and liabilities are classified by the order in which they must be paid, either *current* (within one year) or *long-term* (more than one year). **Liquidity** measures how quickly and easily an account can be converted to cash (because cash is the most liquid asset). Accounts Receivable are relatively liquid because receivables are collected quickly. Office Supplies are less liquid, and Buildings and Furniture are even less so because they take longer to convert to cash or to be used up.

Assets

The balance sheet lists assets in the order of liquidity. A classified balance sheet reports two asset categories: *current assets* and *long-term assets*.

Current assets will be converted to cash, sold, or used up during the next 12 months or within the business's operating cycle if the cycle is longer than a year. The **operating cycle** is the time span when

1. Cash is used to acquire goods and services.
2. These goods and services are sold to customers.
3. The business collects cash from customers.

For most businesses, the operating cycle is a few months. Cash, Accounts Receivable, Office Supplies, and Prepaid Expenses are examples of current assets.

Long-term assets are all the assets that will not be converted to cash or used up within the business's operating cycle or one year, whichever is greater. Long-term assets are typically made up of three categories: long-term investments; property, plant, and equipment; and intangible assets.

Long-term Investments Notes Receivable and other investments that are held long-term are considered **long-term investments** and include investments in bonds or stocks in which the company intends to hold for longer than one year.

Property, Plant, and Equipment Another category of long-term assets is **property, plant, and equipment** (also called *fixed assets* or *plant assets*). Land, Buildings, Furniture, and Equipment used in operations are plant assets. Property, plant, and equipment are presented in order of the category name, with Land (property) being presented first and then Buildings (plant) and Equipment, Furniture, and other accounts presented last.

Intangible Assets Assets with no physical form are **intangible assets**. Examples of intangible assets include patents, copyrights, and trademarks. Intangible assets are long-term assets that convey special rights, such as the exclusive right to produce or sell an invention (patent) or book (copyright), or the symbol or image of a distinctive brand (trademark).

Liabilities

The balance sheet lists liabilities in the order in which they must be paid. The two liability categories reported on the balance sheet are *current liabilities* and *long-term liabilities*.

Current liabilities must be paid either with cash or with goods and services within one year or within the entity's operating cycle if the cycle is longer than a year. Accounts Payable, Notes Payable due within one year, Salaries Payable, Interest Payable, and Unearned Revenue are all current liabilities. Any portion of a long-term liability that is due within the next year is also reported as a current liability. Current liabilities are listed in the order that they are due.

Long-term liabilities are all liabilities that do not need to be paid within one year or within the entity's operating cycle, whichever is longer. Many Notes Payable are long-term, such as a Smart Touch Learning's mortgage on its building.

Liquidity

A measure of how quickly an item can be converted to cash.

Current Asset

An asset that is expected to be converted to cash, sold, or used up during the next 12 months or within the business's normal operating cycle if the cycle is longer than a year.

Operating Cycle

The time span during which cash is paid for goods and services, which are then sold to customers from whom the business collects cash.

Long-term Asset

An asset that will not be converted to cash or used up within the business's operating cycle or one year, whichever is greater.

Long-term Investment

Investments in bonds (debt securities) or stocks (equity securities) in which the company intends to hold the investment for longer than one year.

Property, Plant, and Equipment

Long-lived, tangible assets, such as land, buildings, and equipment, used in the operation of a business.

Intangible Asset

An asset with no physical form that is valuable because of the special rights it carries.

Current Liability

A liability that must be paid with cash or with goods and services within one year or within the entity's operating cycle if the cycle is longer than a year.

Long-term Liability

A liability that does not need to be paid within one year or within the entity's operating cycle, whichever is longer.



Stockholders' Equity

Stockholders' equity represents the stockholders' claims to the assets of the business. The stockholders' equity section reported on the balance sheet is in part transferred from the ending Retained Earnings balance on the statement of retained earnings. The equity balance also reflects the stockholders' contributions through common stock. It represents the amount of assets that is left over after the corporation has paid its liabilities.

Exhibit 4-3 presents Smart Touch Learning's classified balance sheet. Notice that the company classifies each asset and each liability into specific categories, and that the total assets of \$113,550 is the same as the total assets on the unclassified balance sheet in Exhibit 4-2.

Exhibit 4-3 | Classified Balance Sheet

This classified balance sheet contains both current assets and long-term assets, but there is only one category of long-term assets: Property, Plant, and Equipment. Other categories of long-term assets that could be included are Long-term Investments and Intangible Assets.

SMART TOUCH LEARNING Balance Sheet December 31, 2018		
Assets		
Current Assets:		
Cash	\$ 12,200	
Accounts Receivable	1,800	
Office Supplies	100	
Prepaid Rent	2,000	
Total Current Assets	\$ 16,100	
Property, Plant, and Equipment:		
Land	20,000	
Building	\$ 60,000	
Less: Accumulated Depreciation—Building	(250)	59,750
Furniture	18,000	
Less: Accumulated Depreciation—Furniture	(300)	17,700
Total Property, Plant, and Equipment	97,450	
Total Assets	\$ 113,550	
Liabilities		
Current Liabilities:		
Accounts Payable	\$ 200	
Utilities Payable	100	
Salaries Payable	1,200	
Interest Payable	100	
Unearned Revenue	400	
Total Current Liabilities	\$ 2,000	
Long-term Liabilities:		
Notes Payable	60,000	
Total Liabilities	62,000	
Stockholders' Equity		
Common Stock	48,000	
Retained Earnings	3,550	
Total Stockholders' Equity	51,550	
Total Liabilities and Stockholders' Equity	\$ 113,550	



Compare the balance sheet in Exhibit 4-3 with the balance sheet in Exhibit 4-2. You'll notice two differences. Exhibit 4-3 is a classified balance sheet, but it is also in a different format than Exhibit 4-2. The balance sheet in Exhibit 4-3 is being presented in the *report form*, which lists the assets at the top and liabilities and stockholders' equity below. Smart Touch Learning's balance sheet in Exhibit 4-2 lists the assets on the left and the liabilities and the stockholders' equity on the right in an arrangement known as the *account form*. Although either form is acceptable, the *report form* is more popular.

Try It!

For each account listed, identify the category in which it would appear on a classified balance sheet.

1. Patents
2. Mortgage Payable (due in five years)
3. Land
4. Office Supplies
5. Unearned Revenue
6. Investments in stock of another company held long-term
7. Accumulated Depreciation—Furniture

Check your answers online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercises S4-1 through S4-5. [Pearson MyLab Accounting](#)

HOW COULD A WORKSHEET HELP IN PREPARING FINANCIAL STATEMENTS?

Previously you learned how a worksheet can be used to help prepare adjusting entries. Now you'll learn how the worksheet can be used to help in the preparation of financial statements. Exhibit 4-4 (on the next page) shows the completed worksheet for Smart Touch Learning. Sections 1 through 4 of the worksheet, shown with a purple background, were completed in Chapter 3. You are now ready to complete the remaining sections that will help in preparing the financial statements.

Learning Objective 2

Use the worksheet to prepare financial statements

Section 5—Income Statement

The income statement section includes only revenue and expense accounts. The revenues and expenses from the adjusted trial balance section will be transferred into the appropriate column in the income statement section. For example, the \$17,500 credit balance for Service Revenue in the adjusted trial balance section will be carried over into the credit column in the income statement section. Each debit and credit column will then be totaled.

Section 6—Balance Sheet

The balance sheet section includes the asset and liability accounts and all equity accounts except revenues and expenses. The balance of each of these accounts will be transferred from the adjusted trial balance section of the worksheet to the appropriate column in the balance sheet section. For example, Accumulated Depreciation—Furniture, a contra-asset, has a \$300 credit balance in the adjusted trial balance section. This amount will be reported as a credit of \$300 in the balance sheet section. Each debit and credit column will then be totaled.


Exhibit 4-4 | Completed Worksheet

	A	B	C	D	E	F	G	H	I	J	K	L	M	
1	SMART TOUCH LEARNING Worksheet December 31, 2018													
2	Section 5 Section 6													
3														
4														
5	Account Names		Unadjusted Trial Balance		Adjustments		Adjusted Trial Balance		Income Statement		Balance Sheet			
			Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit		
7	Cash		\$ 12,200				\$ 12,200				\$ 12,200			
8	Accounts Receivable		1,000		(h)	\$ 800					1,800		1,800	
9	Office Supplies		500				\$ 400	(b)			100		100	
10	Prepaid Rent		3,000				1,000	(a)			2,000		2,000	
11	Land		20,000								20,000		20,000	
12	Building		60,000								60,000		60,000	
13	Accumulated Depreciation—Building					250	(d)			\$ 250			\$ 250	
14	Furniture		18,000							18,000			18,000	
15	Accumulated Depreciation—Furniture					300	(c)			300			300	
16	Accounts Payable			\$ 200						200			200	
17	Utilities Payable			100						100			100	
18	Salaries Payable					1,200	(f)			1,200			1,200	
19	Interest Payable					100	(g)			100			100	
20	Unearned Revenue			600	(e)	200				400			400	
21	Notes Payable			60,000						60,000			60,000	
22	Common Stock			48,000						48,000			48,000	
23	Dividends		5,000					5,000					5,000	
24	Service Revenue			16,500			1,000	(e,h)		17,500			\$ 17,500	
25	Rent Expense		2,000		(a)	1,000				3,000			\$ 3,000	
26	Salaries Expense		3,600		(f)	1,200				4,800			4,800	
27	Supplies Expense				(b)	400				400			400	
28	Utilities Expense		100							100			100	
29	Depreciation Expense—Building				(d)	250				250			250	
30	Depreciation Expense—Furniture				(c)	300				300			300	
31	Interest Expense				(g)	100				100			100	
32	Total		\$ 125,400	\$ 125,400		\$ 4,250	\$ 4,250		\$ 128,050	\$ 128,050	\$ 8,950	\$ 17,500	\$ 119,100	\$ 110,550
33														
34													Net Income	
35													8,550	
													Section 7	

Sections 1–4

Net Income = \$17,500 – \$8,950

Section 7—Determine Net Income or Net Loss

Compute net income or net loss as total revenues minus total expenses (\$17,500 – \$8,950). Enter net income (loss) as the balancing amount in the income statement and balance sheet sections. If net income exists, the balance will be entered in the *debit* column of the income statement section and the *credit* column of the balance sheet section. For example, Smart Touch Learning has net income of \$8,550. This amount should be entered as a debit in the income statement section and a credit in the balance sheet section.

If expenses exceed revenues, the result is a net loss. In that event, print **Net Loss** on the worksheet next to the result. The net loss amount should be entered in the *credit* column of the income statement (to balance out) and in the *debit* column of the balance sheet (to balance out). The main thing to remember is that the net income or net loss is the balancing amount on the worksheet. It should always be entered on the side that makes the debit and credit columns balance.

Smart Touch Learning has now completed the worksheet as of December 31. Remember that the worksheet is an internal tool that can be used to help in recording adjusting entries and preparing financial statements. The adjusting entries still need to be recorded in the journal and posted to the ledger (as shown in Chapter 3), and the financial statements must still be prepared (as shown in Exhibits 4-2 and 4-3).

What if Smart Touch Learning had a net loss instead of net income? Would the amount of net loss be entered in the debit column of the income statement section and the credit column of the balance sheet section?





Try It!

For each account listed, identify whether the account would appear in either the income statement section or the balance sheet section of the worksheet. Assuming normal balances, identify if the account would be recorded in the debit (DR) or credit (CR) column.

- | | |
|---|---|
| 8. Service Revenue
9. Accounts Payable
10. Cash | 11. Depreciation Expense—Building
12. Dividends
13. Accumulated Depreciation—Building |
|---|---|

Check your answers online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercises S4-6 through S4-8. [Pearson MyLab Accounting](#)

WHAT IS THE CLOSING PROCESS, AND HOW DO WE CLOSE THE ACCOUNTS?

At the end of the accounting cycle, after the financial statements have been prepared, Smart Touch Learning is ready to close the books. Often referred to as the closing process, this consists of journalizing and posting the closing entries in order to get the accounts ready for the next period. The **closing process** zeroes out all revenue accounts and all expense accounts in order to measure each period's net income separately from all other periods. It also updates the Retained Earnings account balance for net income or loss during the period and any dividends paid to the stockholders. The closing process prepares the accounts for the next time period by setting the balances of revenues, expenses, and dividends to zero. By completing the closing process, the business is following the time period concept in that it is slicing its activities into small time segments and preparing financial statements for only those specific periods.

Recall that the income statement reports net income for a specific period. For example, Smart Touch Learning's net income for the two months ended December 31, 2018, relates exclusively to November and December, 2018. At December 31, 2018, Smart Touch Learning closes its revenue and expense accounts for the last two months of the year. For this reason, revenues and expenses are called **temporary accounts** (also known as *nominal accounts*). For example, Smart Touch Learning's balance of Service Revenue at December 31, 2018, is \$17,500. This balance relates exclusively to the last two months of 2018 and must be zeroed out before the company records revenue for the next year. Similarly, the various expense account balances are for the last two months of 2018 only and must also be zeroed out at the end of the year.

The Dividends account is also temporary and must be closed at the end of the period because it measures the payments to stockholders for only that one period. All temporary accounts (revenues, expenses, and dividends) are closed (zeroed). The balances of temporary accounts do not carry forward into the next time period. Instead, the business starts the new time period with a zero beginning balance in the temporary accounts.

By contrast, the **permanent accounts** (also known as *real accounts*)—the assets, liabilities, Common Stock, and Retained Earnings—are not closed at the end of the period. Permanent account balances are carried forward into the next time period. All accounts on the balance sheet are permanent accounts.

Learning Objective 3

Explain the purpose of, journalize, and post closing entries

Closing Process

A step in the accounting cycle that occurs at the end of the period. The closing process consists of journalizing and posting the closing entries to set the balances of the revenues, expenses, Income Summary, and Dividends accounts to zero for the next period.

Temporary Account

An account that relates to a particular accounting period and is closed at the end of that period—the revenues, expenses, Income Summary, and Dividends accounts.

Permanent Account

An account that is *not* closed at the end of the period—the asset, liability, Common Stock, and Retained Earnings accounts.



Closing Entries

Entries that transfer the revenues, expenses, and Dividends balances to the Retained Earnings account to prepare the company's books for the next period.

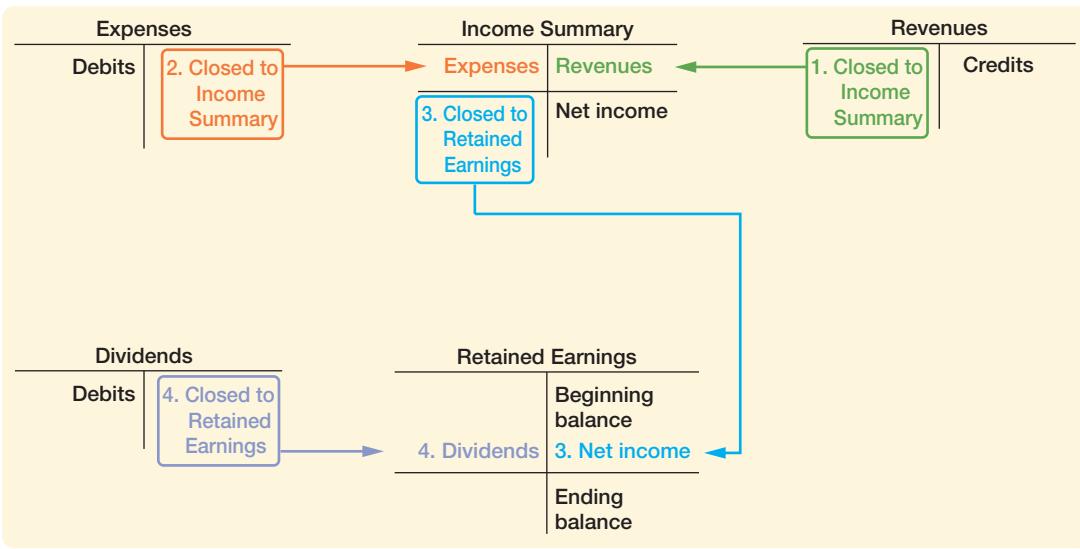
Income Summary

A temporary account into which revenues and expenses are transferred prior to their final transfer into the Retained Earnings account. Summarizes net income (or net loss) for the period.

Closing entries transfer the revenues, expenses, and Dividends balances to the Retained Earnings account to prepare the company's books for the next period. This transfer to Retained Earnings also causes the Retained Earnings ledger account to now equal its balance reported on the balance sheet.

As an intermediate step, the revenues and the expenses may be transferred first to an account titled **Income Summary**. The Income Summary account *summarizes* the net income (or net loss) for the period by collecting the sum of all the expenses (a debit) and the sum of all the revenues (a credit). The Income Summary account is like a temporary “holding tank” that shows the amount of net income or net loss of the current period. Its ending balance—net income or net loss—is then transferred (closed) to the Retained Earnings account (the final account in the closing process). Exhibit 4-5 summarizes the closing process.

Exhibit 4-5 | The Closing Process



When thinking about which accounts to close, consider your grades in this class as an example.

If you made a failing grade on an exam in this class, would you want your exam grade for this class to carry forward to your next accounting class? Your answer would probably be no, because your exam grade in this class does not necessarily represent your knowledge in your next class. In this example, your exam grades are temporary and should not carry forward to your next accounting class. In the same sense, a business's revenues, expenses, and dividends for a specific time period should not be carried forward to the next time period because doing so does not accurately reflect that future period.

Closing Temporary Accounts—Net Income for the Period

As stated previously, all temporary accounts are closed (zeroed out) during the closing process. Revenue, expenses, and dividends accounts are not permanent. Only the balance sheet accounts are permanent. The four steps in closing the books follow (and are illustrated in Exhibit 4-6).

Step 1: Make the revenue accounts equal zero via the Income Summary account. This closing entry transfers total revenues to the *credit* side of the Income Summary account.



For example, Smart Touch Learning has a \$17,500 credit balance in Service Revenue. To close this account (make it zero), we *debit* Service Revenue and *credit* Income Summary.

Service Revenue		Income Summary	
	17,500 Adj. Bal.		17,500 Clos. 1
Clos. 1 17,500			
0 Bal.			

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Service Revenue	17,500	
	Income Summary		17,500
	<i>To close revenue.</i>		

$$A = \left\{ \begin{array}{l} L + E \\ \downarrow \quad \uparrow \\ \text{Service} \\ \text{Revenue} \\ \downarrow \\ \text{Income} \\ \text{Summary} \\ \uparrow \end{array} \right\}$$

Step 2: Make expense accounts equal zero via the Income Summary account. This closing entry transfers total expenses to the *debit* side of the Income Summary account.

As an example, we will review the Rent Expense account for Smart Touch Learning, which has a \$3,000 debit balance. This account will be closed with a *credit* to Rent Expense.

Rent Expense		
Adj. Bal. 3,000		
	3,000 Clos. 2	
Bal. 0		

Smart Touch Learning will close all expense accounts in the same manner. This will most likely be done with a compound closing entry. Each individual expense account will be *credited* and the Income Summary account will be *debited* for the total amount of expenses.

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Income Summary	8,950	
	Rent Expense		3,000
	Salaries Expense		4,800
	Supplies Expense		400
	Utilities Expense		100
	Depreciation Expense—Building		250
	Depreciation Expense—Furniture		300
	Interest Expense		100
	<i>To close expenses.</i>		

$$A = \left\{ \begin{array}{l} L + E \\ \downarrow \quad \uparrow \\ \text{Income} \\ \text{Summary} \\ \downarrow \\ \text{Expenses} \\ \downarrow \end{array} \right\}$$



The Income Summary account now holds the net income of \$8,550 for the period. The Income Summary T-account after closing revenues and expenses is:

Income Summary			
Clos. 2	8,950	17,500	Clos. 1
		8,550	Bal.

Step 3: Make the Income Summary account equal zero via the Retained Earnings account. This closing entry transfers net income (or net loss) to the Retained Earnings account.

Smart Touch Learning has an \$8,550 credit balance in the Income Summary account. This represents net income for the period. Net income will now be transferred to the Retained Earnings account. We will *debit* Income Summary and *credit* Retained Earnings. Notice that this closing entry, in effect, increases the Retained Earnings account for the net income of the period.

Income Summary				Retained Earnings	
Clos. 2	8,950	17,500	Clos. 1	0 Adj. Bal.	
		8,550	Bal.	8,550 Clos. 3	
Clos. 3	8,550			Net Income	
		0	Bal.		

$$A = \left\{ \begin{array}{l} L + E \downarrow \\ \text{Income} \\ \text{Summary} \downarrow \\ \text{Retained} \\ \text{Earnings} \uparrow \end{array} \right.$$

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Income Summary	8,550	
	Retained Earnings		8,550
	To close Income Summary.		

Step 4: Make the Dividends account equal zero via the Retained Earnings account. This entry transfers the dividends to the *debit* side of the Retained Earnings account.

Smart Touch Learning has a \$5,000 debit balance in the Dividends account. This account will be closed with a *debit* to Retained Earnings and a *credit* to Dividends.

Retained Earnings		Dividends	
	0 Adj. Bal.	Adj. Bal.	5,000
Clos. 4	5,000	8,550 Clos. 3	
		3,550 Bal.	Bal. 0

Balance of Retained Earnings on the balance sheet

$$A = \left\{ \begin{array}{l} L + E \downarrow \\ \text{Retained} \\ \text{Earnings} \downarrow \\ \text{Dividends} \downarrow \end{array} \right.$$

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Retained Earnings	5,000	
	Dividends		5,000
	To close Dividends.		



Closing Temporary Accounts—Net Loss for the Period

If a business had a net loss for the period, closing entries 1, 2, and 4 would be similar to those completed for net income. However, the closing entry to close the Income Summary account would be different. Consider this example. Suppose a business had a net loss of \$2,000. The Income Summary T-account would hold a *debit* balance instead of a *credit* balance. Therefore, the closing entry to close Income Summary would be a *debit* to Retained Earnings and a *credit* to Income Summary.

Income Summary			Retained Earnings		
	Clos. 2	5,000	3,000	Clos. 1	
Bal.		2,000			
Net Loss			2,000	Clos. 3	
			0	Bal.	

What if a business had a net loss for the period? Would the closing entries be the same?



Date	Accounts and Explanation	Debit	Credit
Dec. 31	Retained Earnings	2,000	
	Income Summary		2,000
	To close Income Summary.		

$$A = \left\{ \begin{array}{l} L + E \uparrow \\ \text{Retained} \\ \text{Earnings} \downarrow \\ \text{Income} \\ \text{Summary} \uparrow \end{array} \right\}$$

Notice that the effect of this closing entry decreases Retained Earnings. This is because a net loss decreases the Retained Earnings account.

Closing Temporary Accounts—Summary

Exhibit 4-6 (on the next page) shows the complete closing process for Smart Touch Learning. Panel A gives the closing entries, and Panel B shows the accounts after posting. After the closing entries, Retained Earnings ends with a balance of \$3,550. Trace this balance to the statement of retained earnings and then to the balance sheet in Exhibit 4-2.



Exhibit 4-6 | Journalizing and Posting Closing Entries

Panel A: Journalizing

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Service Revenue	17,500	
	Income Summary		17,500
	<i>To close revenue.</i>		
31	Income Summary	8,950	
	Rent Expense		3,000
	Salaries Expense		4,800
	Supplies Expense		400
	Utilities Expense		100
	Depreciation Expense—Building		250
	Depreciation Expense—Furniture		300
	Interest Expense		100
	<i>To close expenses.</i>		
31	Income Summary	8,550	
	Retained Earnings		8,550
	<i>To close Income Summary.</i>		
31	Retained Earnings	5,000	
	Dividends		5,000
	<i>To close Dividends.</i>		

When a business uses a computerized accounting system, the software automatically closes the books. The software identifies the temporary accounts, records the closing entries, and posts to the ledger accounts. The closing entries are completed in a matter of seconds.

Panel B: Posting



TYING IT ALL TOGETHER

Hyatt Hotels Corporation was founded in 1957 when Jay Pritzker purchased the first Hyatt hotel next to the Los Angeles International Airport. Today, Hyatt Hotels owns and operates hotels in 52 countries around the world. For the year ended December 31, 2015, the company reported revenues totaling \$4.3 billion with net income of \$124 million. (You can find Hyatt Hotels Corporation's annual report at <https://www.sec.gov/Archives/edgar/data/1468174/000146817416000152/h10-k123115.htm>)

Would Hyatt Hotels Corporation record closing entries and why?

Hyatt Hotels would record closing entries in order to get the accounts ready for next year. All companies record closing entries in order to zero out all revenue and expense accounts. In addition, the closing process updates the Retained Earnings account balance for net income or loss during the period and any dividends paid to stockholders.

Why are temporary accounts important in the closing process? What type of temporary accounts would Hyatt Hotels Corporation have?

Temporary accounts are important in the closing process because these accounts relate to a particular accounting period and are

closed at the end of the period. Revenues, expenses, and dividends are all temporary accounts. Some examples of temporary accounts that Hyatt Hotels might have include Owned and Leased Hotels Revenue; Selling, General, and Administrative Expense; Interest Expense; and Dividends.

When would Hyatt Hotels Corporation prepare its post-closing trial balance? What type of accounts would be reported on this trial balance?

A post-closing trial balance is a list of all permanent accounts and their balances at the end of the accounting period and is prepared after the closing process. Hyatt Hotels would report only permanent accounts on its post-closing trial balance. Some examples of permanent accounts that Hyatt Hotels might have include assets, such as Cash and Property; liabilities, such as Accounts Payable; and equity, such as Common Stock and Retained Earnings.

Try It!

Benson Auto Repair had the following account balances after adjustments. Assume all accounts had normal balances.

Cash	\$ 4,000	Common Stock	\$ 20,000
Accounts Receivable	3,200	Retained Earnings, January 1	15,700
Prepaid Rent	1,900	Dividends	2,100
Office Supplies	3,000	Service Revenue	1,600
Equipment	34,800	Depreciation Expense—Equipment	300
Accumulated Depreciation—Equipment	1,600	Salaries Expense	800
Accounts Payable	5,400	Rent Expense	500
Notes Payable (long-term)	7,000	Utilities Expense	600
		Supplies Expense	100

14. Prepare the closing entries for Benson at December 31.
15. What is the balance of Retained Earnings after closing entries have been recorded? (Use a T-account to determine the balance.)

Check your answers online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.



HOW DO WE PREPARE A POST-CLOSING TRIAL BALANCE?

Learning Objective 4

Prepare the post-closing trial balance

Post-Closing Trial Balance

A list of the accounts and their balances at the end of the period after journalizing and posting the closing entries. It should include only permanent accounts.

After closing entries are recorded and posted, the accounting cycle ends with a **post-closing trial balance** (see Exhibit 4-7). This step lists the accounts and their balances after closing.

Only assets, liabilities, Common Stock, and Retained Earnings accounts (permanent accounts) appear on the post-closing trial balance. No temporary accounts—revenues, expenses, Income Summary, or Dividends—are included because they have been closed (their balances are zero). Also notice that the Retained Earnings account has been updated to reflect the period's net income (or net loss) and any dividends. The ledger is now up to date and ready for the next period.

Notice that the Adjusted Trial Balance for Smart Touch Learning (Exhibit 4-1) and the Post-Closing Trial Balance (Exhibit 4-7) are similar. An easy way to make sure that you didn't make an error in the closing process is to compare the Adjusted Trial Balance to the Post-Closing Trial Balance to ensure that: (1) account balances above Retained Earnings are the same; (2) account balances below Retained Earnings are zero and, therefore, not included; and (3) the Retained Earnings account balance matches Retained Earnings on the balance sheet.

Exhibit 4-7 | Post-Closing Trial Balance

SMART TOUCH LEARNING Post-Closing Trial Balance December 31, 2018		
Account Title	Balance	
	Debit	Credit
Cash	\$ 12,200	
Accounts Receivable	1,800	
Office Supplies	100	
Prepaid Rent	2,000	
Land	20,000	
Building	60,000	
Accumulated Depreciation—Building		\$ 250
Furniture	18,000	
Accumulated Depreciation—Furniture		300
Accounts Payable	200	
Utilities Payable	100	
Salaries Payable		1,200
Interest Payable		100
Unearned Revenue		400
Notes Payable		60,000
Common Stock		48,000
Retained Earnings		3,550
Total	<u><u>\$ 114,100</u></u>	<u><u>\$ 114,100</u></u>

Permanent Accounts



Try It!

For each account listed, identify whether the account would appear on the post-closing trial balance. Indicate either yes or no.

16. Dividends
17. Service Revenue
18. Cash
19. Advertising Expense
20. Retained Earnings

Check your answers online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercise S4-12. [Pearson MyLab Accounting](#)

WHAT IS THE ACCOUNTING CYCLE?

We have now completed the accounting cycle for Smart Touch Learning. The **accounting cycle** is the process by which companies produce their financial statements for a specific period. It is the steps that are followed throughout the time period. The accounting cycle starts with the beginning asset, liability, and stockholders' equity account balances left over from the preceding period. Exhibit 4-8 (on the next page) outlines the complete accounting cycle of Smart Touch Learning and every other business. Start with Step 1 and move clockwise.

Accounting takes place at two different times:

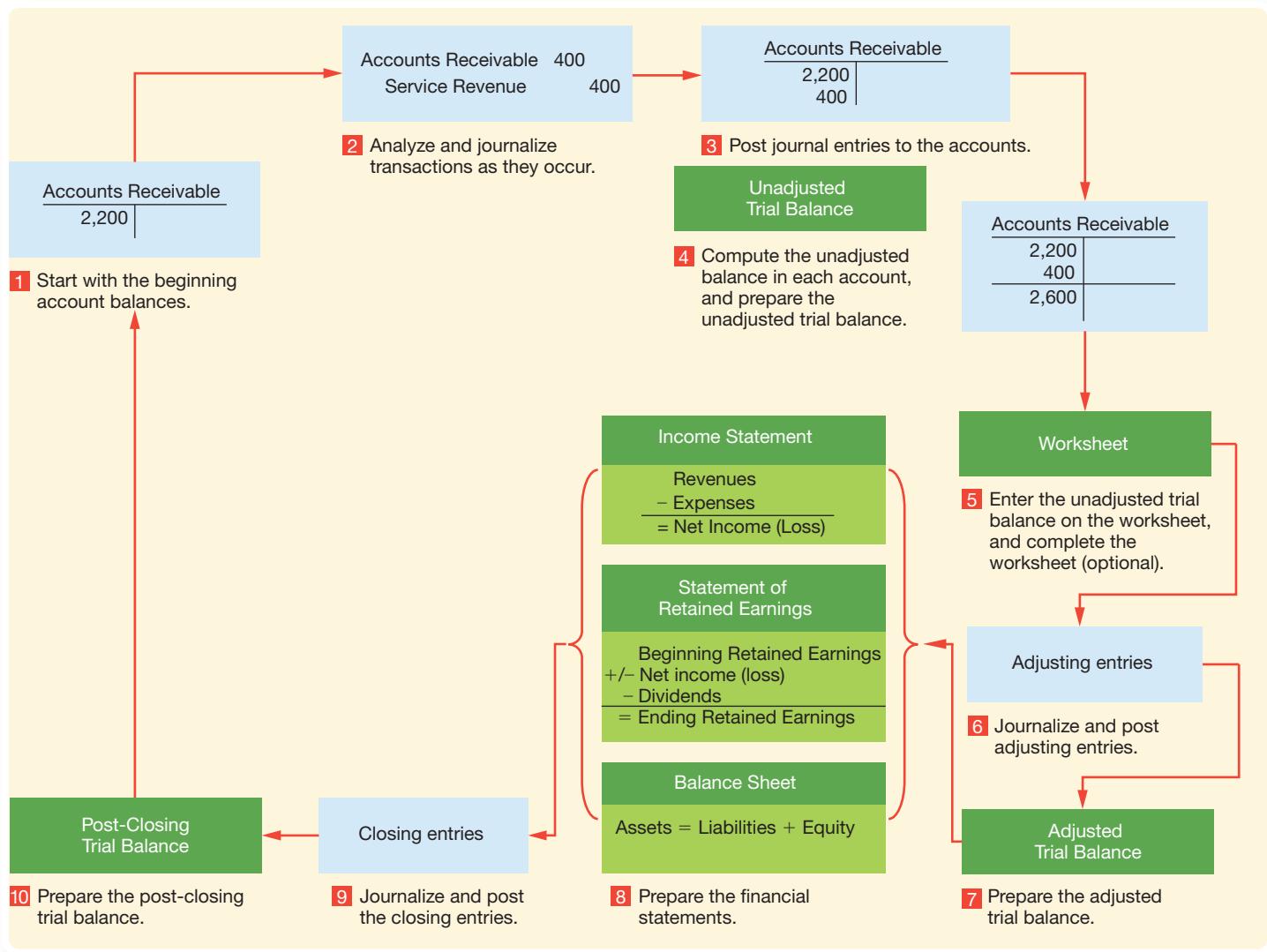
- During the period (Steps 1 through 3)—Journalizing transactions and posting to the accounts
- End of the period (Steps 4 through 10)—Adjusting the accounts, preparing the financial statements, and closing the accounts

Learning Objective 5

Describe the accounting cycle

Accounting Cycle

The process by which companies produce their financial statements for a specific period.


Exhibit 4-8 | The Accounting Cycle


Try It!

21. The steps of the accounting cycle are presented below. Identify the correct order of the steps.

- Journalize and post the closing entries.
- Start with the beginning account balances.
- Prepare the financial statements.
- Compute the unadjusted balance in each account, and prepare the unadjusted trial balance.
- Journalize and post adjusting entries.
- Enter the unadjusted trial balance on the worksheet, and complete the worksheet (optional).
- Prepare the adjusted trial balance.
- Analyze and journalize transactions as they occur.
- Post journal entries to the accounts.
- Prepare the post-closing trial balance.

Check your answers online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.



HOW DO WE USE THE CURRENT RATIO TO EVALUATE BUSINESS PERFORMANCE?

Accounting is designed to provide information that stockholders, managers, and lenders can use to make decisions. A bank considering lending money to a business must predict whether that business can repay the loan. If a business already has a lot of debt, repayment is less certain than if it does not owe much money. In this chapter, we will introduce another ratio that can be used to measure the business's financial position, the current ratio.

The **current ratio** measures a company's ability to pay its current liabilities with its current assets. This ratio is computed as follows:

$$\text{Current ratio} = \text{Total current assets} / \text{Total current liabilities}$$

A company prefers to have a high current ratio because that means it has plenty of current assets to pay its current liabilities. A current ratio that has increased from the prior period indicates improvement in a company's ability to pay its current debts. A current ratio that has decreased from the prior period signals deterioration in the company's ability to pay its current liabilities.

A rule of thumb: A strong current ratio is 1.50, which indicates that the business has \$1.50 in current assets for every \$1.00 in current liabilities. A current ratio of 1.00 is considered low and somewhat risky.

Returning to **Kohl's Corporation**, we can now evaluate Kohl's current ratio. Kohl's had the following total current assets and current liabilities, found on the balance sheet. Visit <http://www.pearsonglobaleditions.com/Sitemap/Horngren/> to view a link to Kohl's Corporation's annual report.

	As of Jan. 30, 2016	As of Jan. 31, 2015
Total current assets (in millions)	\$ 5,076	\$ 5,580
Total current liabilities (in millions)	2,714	2,859

The current ratio for Kohl's Corporation as of January 30, 2016, follows:

$$\text{Current ratio} = \$5,076 / \$2,714 = 1.87^*$$

*rounded

In comparison, the current ratio as of January 31, 2015, for Kohl's Corporation was:

$$\text{Current ratio} = \$5,580 / \$2,859 = 1.95^*$$

*rounded

The current ratio has decreased a little from 2015 to 2016. This indicates that Kohl's Corporation has deteriorated slightly in its ability to pay its current debts. Given that the current ratio is above 1.5 for both years, Kohl's Corporation would be considered a less risky investment than another business with a lower current ratio. Similarly, creditors would be more willing to extend credit to Kohl's Corporation than another company with a lower current ratio.

Learning Objective 6

Use the current ratio to evaluate business performance

Current Ratio

Measures the company's ability to pay current liabilities from current assets. Total current assets / Total current liabilities.



ETHICS

Should revenue be recorded early?

Carnival Custom Painting's controller, Kristi Seay, is hoping to get a loan from a local bank. The business's van engine has just died, and the corporation has no extra cash to replace the engine. It needs a short-term loan of \$3,000. A teller at the bank has told Kristi that the bank will only approve the loan if the business has a current ratio that is above 1.2. Currently, Carnival's current ratio is 1.1. The corporation has just received a contract for painting a new commercial building. Kristi has told the teller that she expects revenue of \$15,000 from the contract but won't receive payment until the job is completed. The business plans on starting the job next week but won't be finished for another two months, not soon enough to use the cash to replace the engine in the van. The teller has suggested to Kristi that she go ahead and record the revenue and cash receipt of the painting contract even though it hasn't been completed. This, he tells her, will increase the business's current assets and thereby increase the current ratio to 1.4, well

above the bank minimum. What should Kristi do? What would you do?

Solution

Kristi should not record the revenue and cash receipt early. The revenue recognition principle requires that businesses record revenue only when it has been earned. Given that Carnival Custom Painting has not yet started the job, no revenue has been earned. Kristi should look for alternative sources of financing instead of trying to manipulate the current ratio to meet the minimum required by the bank. Another possibility would be for Kristi to renegotiate the contract with the new client to receive \$3,000 in advance instead of after the completion of the job. This would allow Kristi to make the repairs on the van and not have to borrow the money from the bank.

Try It!

22. Benson Auto Repair has the following account balances at December 31, 2018, from its adjusted trial balance. Compute Benson Auto Repair's current ratio.

Cash	\$ 4,000	Common Stock	\$ 20,000
Accounts Receivable	3,200	Retained Earnings	15,700
Prepaid Rent	1,900	Dividends	2,100
Office Supplies	3,000	Service Revenue	1,600
Equipment	34,800	Depreciation Expense—Equipment	300
Accumulated Depreciation—Equipment	1,600	Salaries Expense	800
Accounts Payable	5,400	Rent Expense	500
Notes Payable (long-term)	7,000	Utilities Expense	600
		Supplies Expense	100

Check your answer online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercise S4-14. **Pearson MyLab Accounting**

APPENDIX 4A: Reversing Entries: An Optional Step

WHAT ARE REVERSING ENTRIES?

Reversing entries are special journal entries that ease the burden of accounting for transactions in a later period. Reversing entries are the exact opposite of certain adjusting entries. Reversing entries are used in conjunction with accrual-type adjustments, such as accrued salaries expense and accrued service revenue. Generally Accepted Accounting Principles do not require reversing entries. They are used only for convenience and to save time.

Accounting for Accrued Expenses

To see how reversing entries work, let's return to Smart Touch Learning. In the unadjusted trial balance, Salaries Expense has a debit balance of \$3,600 for salaries paid during November and December. At December 31, the business still owes its employees an additional \$1,200 for the last half of the month, so the business makes the following adjusting entry:

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Salaries Expense	1,200	
	Salaries Payable		1,200
<i>To accrue salaries expense.</i>			

Learning Objective 7

Explain the purpose of, journalize, and post reversing entries

$$A = \left\{ \begin{array}{l} L \uparrow + E \downarrow \\ \text{Salaries Payable} \uparrow \quad \text{Salaries Expense} \uparrow \end{array} \right.$$

After posting, the accounts are updated as of December 31:

Salaries Payable		Salaries Expense	
	1,200 Adj.	Nov. 15	1,200
	1,200 Adj. Bal.	Dec. 1	1,200
		Dec. 15	1,200
		Adj.	1,200
		Adj. Bal.	4,800

After the adjusting entry, the following are noted:

- The income statement reports Salaries Expense of \$4,800.
- The balance sheet reports Salaries Payable of \$1,200.

The \$4,800 debit balance of Salaries Expense is closed at December 31, 2018, with the following closing entry:

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Income Summary	4,800	
	Salaries Expense		4,800
<i>To close expense.</i>			

$$A = \left\{ \begin{array}{l} L + E \uparrow \\ \text{Income Summary} \downarrow \quad \text{Salaries Expense} \downarrow \end{array} \right.$$

After posting the closing entry, Salaries Expense has a zero balance as follows:

Salaries Expense		
Nov. 15	1,200	
Dec. 1	1,200	
Dec. 15	1,200	
Adj.	1,200	
		Adj. Bal. 4,800
		4,800 Clos.
Bal.	0	

Accounting Without a Reversing Entry

Assume that Smart Touch Learning will pay its employees the second half of December's salaries along with the first half of January on January 15, 2019. On January 15, the company would record the following journal entry:

$$\left. \begin{array}{l} A \downarrow \\ \text{Cash} \downarrow \end{array} \right\} = \left\{ \begin{array}{l} L \downarrow \\ \text{Salaries Payable} \downarrow \end{array} + \begin{array}{l} E \downarrow \\ \text{Salaries Expense} \uparrow \end{array} \right.$$

Date	Accounts and Explanation	Debit	Credit
2019			
Jan. 15	Salaries Payable	1,200	
	Salaries Expense	1,200	
	Cash		2,400
<i>To record payment of salaries.</i>			

After posting the cash payment, the Salaries Payable and Salaries Expense accounts are as follows:

Salaries Payable		Salaries Expense	
	1,200 Bal. 1/1/19	Jan. 15	1,200
Jan. 15	1,200		
0 Bal.			

This method of recording the cash payment is correct. However, it wastes time because the business must refer back to the December 31 adjustments. Otherwise, the business does not know the amount of the debit to Salaries Payable (in this example \$1,200). Searching December's adjusting entries wastes time and money. To save time, accountants can use reversing entries.

Reversing Entry

A special journal entry that eases the burden of accounting for transactions in the next period. Such entries are the exact opposite of a prior adjusting entry.

Accounting with a Reversing Entry

A **reversing entry** switches the debit and the credit of a previous entry. A reversing entry, then, is the exact opposite of a prior adjusting entry. The reversing entry is dated the first day of the new period.

To illustrate reversing entries, recall that on December 31 Smart Touch Learning made the following adjusting entry to accrue Salaries Expense:

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Salaries Expense	1,200	
	Salaries Payable		1,200
<i>To accrue salaries expense.</i>			

$$\boxed{A} \left. = \right\{ \frac{L \uparrow}{\text{Salaries Payable} \uparrow} + \frac{E \downarrow}{\text{Salaries Expense} \uparrow}$$

The reversing entry just reverses the debit and the credit of the adjustment:

Date	Accounts and Explanation	Debit	Credit
2019			
Jan. 1	Salaries Payable	1,200	
	Salaries Expense		1,200
<i>To reverse the salaries adjusting entry.</i>			

$$\boxed{A} \left. = \right\{ \frac{L \downarrow}{\text{Salaries Payable} \downarrow} + \frac{E \uparrow}{\text{Salaries Expense} \downarrow}$$

Observe that the reversing entry is dated the first day of the new period. It is the exact opposite of the adjusting entry. Ordinarily, the accountant who makes the adjusting entries will also prepare reversing entries at the same time. Smart Touch Learning dates the reversing entry as of January 1 so that it affects only the new period. Note how the accounts appear after the accounting clerk posts the reversing entry:

Salaries Payable		Salaries Expense	
	1,200 Adj.	Bal. 1/1/19	0
	1,200 Bal. 1/1/19		1,200 Rev. Jan. 1 ←
← Rev. Jan. 1 1,200			
		0 Bal.	

The arrow between the T-accounts shows the transfer of the \$1,200 from Salaries Payable to Salaries Expense. This credit in Salaries Expense does not mean that the entity has negative salaries expense, as you might think. Instead, the odd credit balance in the Salaries Expense account is merely a temporary result of the reversing entry. The credit balance is eliminated on January 15, when Smart Touch Learning pays the payroll and debits Salaries Expense:

Date	Accounts and Explanation	Debit	Credit
Jan. 15	Salaries Expense	2,400	
	Cash		2,400
<i>To record payment of salaries.</i>			

$$\boxed{A \downarrow} \left. = \right\{ \frac{L}{\text{Cash} \downarrow} + \frac{E \downarrow}{\text{Salaries Expense} \uparrow}$$

This payment is posted to the Salaries Expense account as follows:

Salaries Expense	
Bal. 1/1/19	0
Jan. 15	2,400
Bal.	1,200
	1,200 Rev. Jan. 1

Now Salaries Expense has a debit balance of \$1,200, which is correct and represents only the January salaries. The payment of salaries covered two periods: \$1,200 related to 2018 and \$1,200 related to 2019. The Salaries Expense account should only contain the amount that relates to 2019.

Try It!

Winters Landscape Services accrued \$4,000 of Salaries Expense at December 31. Winters paid the next payroll at January 10 of \$6,000. This payment included the accrued amount at December 31, plus \$2,000 for the first few days of January.

23A. Record the adjusting entry to accrue Salaries Expense.

24A. Record the reversing entry.

25A. Journalize the cash payment.

Check your answers online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercise S4A-15. [Pearson MyLab Accounting](#)

REVIEW

> Things You Should Know

1. How do we prepare financial statements?

- Financial statements are prepared from the adjusted trial balance in the following order:
 1. Income statement—reports revenues and expenses and calculates net income or net loss during the period
 2. Statement of retained earnings—shows how retained earnings changed during the period due to net income or net loss and dividends
 3. Balance sheet—reports assets, liabilities, and stockholders' equity as of the last day of the period
- A classified balance sheet classifies each asset and each liability into specific categories.

2. How could a worksheet help in preparing financial statements?

- The columns of a worksheet can be extended to help in preparing the financial statements.
- The income statement section will include only revenue and expense accounts.
- The balance sheet section will include asset and liability accounts and all equity accounts except revenues and expenses.

3. What is the closing process, and how do we close the accounts?

- The closing process consists of zeroing out all temporary accounts (revenues, expenses, Income Summary, and Dividends) in order to get the accounts ready for the next period.
- The closing process also updates the Retained Earnings account balance for net income or net loss during the period and any dividends paid to the stockholders.
- There are four steps in the closing process:
 1. Make the revenue accounts equal zero via the Income Summary account.
 2. Make the expense accounts equal zero via the Income Summary account.
 3. Make the Income Summary account equal zero via the Retained Earnings account.
 4. Make the Dividends account equal zero via the Retained Earnings account.

4. How do we prepare a post-closing trial balance?

- A post-closing trial balance is prepared after the closing entries are recorded and posted to the ledger.
- It contains only assets, liabilities, Common Stock, and Retained Earnings accounts (permanent accounts).

5. What is the accounting cycle?

- The accounting cycle is the process by which companies produce their financial statements for a specific period.
 1. Start with the beginning account balances.
 2. Analyze and journalize transactions as they occur.
 3. Post journal entries to the accounts.
 4. Compute the unadjusted balance in each account, and prepare the unadjusted trial balance.
 5. Enter the unadjusted trial balance on the worksheet, and complete the worksheet (optional).
 6. Journalize and post adjusting entries.
 7. Prepare the adjusted trial balance.
 8. Prepare the financial statements.
 9. Journalize and post the closing entries.
 10. Prepare the post-closing trial balance.

6. How do we use the current ratio to evaluate business performance?

- The current ratio measures a company's ability to pay its current liabilities with its current assets.
- Current ratio = Total current assets / Total current liabilities.

7. What are reversing entries? (Appendix 4A)

- Reversing entries are special journal entries that ease the burden of accounting for transactions in a later period.
- Reversing entries are the exact opposite of certain adjusting entries and are used only for accrual adjusting entries.

> Check Your Understanding

Check your understanding of the chapter by completing this problem and then looking at the solution. Use this practice to help identify which sections of the chapter you need to study more.

The adjusted trial balance of Martinez Advertising Services, at December 31, 2018, follows. This is the first year of operations.

MARTINEZ ADVERTISING SERVICES Adjusted Trial Balance December 31, 2018		
	Balance	
Account Title	Debit	Credit
Cash	\$ 6,000	
Accounts Receivable	6,300	
Office Supplies	200	
Land	10,000	
Building	42,000	
Accumulated Depreciation—Building		\$ 24,000
Furniture	8,000	
Accumulated Depreciation—Furniture		6,000
Accounts Payable		2,000
Salaries Payable		500
Unearned Revenue		5,000
Notes Payable (long-term)		7,000
Common Stock		12,000
Dividends	25,000	
Service Revenue		64,300
Salaries Expense	16,500	
Supplies Expense	800	
Depreciation Expense—Building	1,000	
Depreciation Expense—Furniture	2,000	
Advertising Expense	3,000	
Total	\$ 120,800	\$ 120,800

Requirements

1. Prepare the income statement for the year ended December 31, 2018 (See Learning Objective 1).
2. Prepare the statement of retained earnings for the year ended December 31, 2018 (See Learning Objective 1).
3. Prepare the classified balance sheet at December 31, 2018. Use the report form (See Learning Objective 1).
4. Calculate the current ratio at December 31, 2018 (See Learning Objective 6).
5. Journalize and post the closing entries. Indicate the balance of the Retained Earnings account after the closing entries are posted (See Learning Objective 3).
6. Prepare a post-closing trial balance at December 31, 2018 (See Learning Objective 4).

> Solution

Requirement 1

MARTINEZ ADVERTISING SERVICES	
Income Statement	
Year Ended December 31, 2018	
Revenues:	
Service Revenue	\$ 64,300
Expenses:	
Salaries Expense	\$ 16,500
Advertising Expense	3,000
Depreciation Expense—Building	1,000
Depreciation Expense—Furniture	2,000
Supplies Expense	800
Total Expenses	<u>23,300</u>
Net Income	<u><u>\$ 41,000</u></u>

Requirement 2

MARTINEZ ADVERTISING SERVICES	
Statement of Retained Earnings	
Year Ended December 31, 2018	
Retained Earnings, January 1, 2018	\$ 0
Net income for the year	41,000
	<u>41,000</u>
Dividends	(25,000)
Retained Earnings, December 31, 2018	<u><u>\$ 16,000</u></u>

Requirement 3

MARTINEZ ADVERTISING SERVICES Balance Sheet December 31, 2018		
Assets		
Current Assets:		
Cash	\$ 6,000	
Accounts Receivable	6,300	
Office Supplies	200	
Total Current Assets	<u>\$ 12,500</u>	
Property, Plant, and Equipment:		
Land	10,000	
Building	\$ 42,000	
Less: Accumulated Depreciation—Building	(24,000)	18,000
Furniture	8,000	
Less: Accumulated Depreciation—Furniture	(6,000)	2,000
Total Property, Plant, and Equipment	<u>30,000</u>	
Total Assets	<u>\$ 42,500</u>	
Liabilities		
Current Liabilities:		
Accounts Payable	\$ 2,000	
Salaries Payable	500	
Unearned Revenue	5,000	
Total Current Liabilities	<u>\$ 7,500</u>	
Long-term Liabilities:		
Notes Payable	7,000	
Total Liabilities	<u>14,500</u>	
Stockholders' Equity		
Common Stock	12,000	
Retained Earnings	<u>16,000</u>	
Total Stockholders' Equity	<u>28,000</u>	
Total Liabilities and Stockholders' Equity	<u>\$ 42,500</u>	

Requirement 4

Current ratio = Total current assets / Total current liabilities = \$12,500 / \$7,500 = 1.67*

*rounded

Requirement 5

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Service Revenue	64,300	
	Income Summary		64,300
	<i>To close revenue.</i>		
31	Income Summary	23,300	
	Salaries Expense		16,500
	Supplies Expense		800
	Depreciation Expense—Building		1,000
	Depreciation Expense—Furniture		2,000
	Advertising Expense		3,000
	<i>To close expenses.</i>		
31	Income Summary	41,000	
	Retained Earnings		41,000
	<i>To close Income Summary.</i>		
31	Retained Earnings	25,000	
	Dividends		25,000
	<i>To close Dividends.</i>		

Retained Earnings			Dividends			Service Revenue			Salaries Expense		
	Adj. Bal.		Adj. Bal.	25,000	25,000	Dec. 31	Dec. 31	64,300	64,300	Adj. Bal.	Adj. Bal.
Dec. 31	25,000	41,000	Dec. 31							0	Bal.
		16,000	Bal.								
Income Summary											
Dec. 31	23,300	64,300	Dec. 31			Dec. 31	64,300	64,300	Adj. Bal.	Adj. Bal.	Adj. Bal.
		41,000	Bal.								
Dec. 31	41,000							0	Bal.		
Depreciation Expense—Building											
Adj. Bal.	1,000		Adj. Bal.	1,000		Dec. 31			Adj. Bal.	16,500	16,500
Bal.	0		Bal.	0					Bal.	0	
Depreciation Expense—Furniture											
Adj. Bal.	2,000		Adj. Bal.	2,000		Dec. 31			Adj. Bal.	800	800
Bal.	0		Bal.	0					Bal.	0	
Advertising Expense											
Adj. Bal.	3,000		Adj. Bal.	3,000		Dec. 31			Adj. Bal.	3,000	3,000
Bal.	0		Bal.	0					Bal.	0	

Requirement 6

MARTINEZ ADVERTISING SERVICES Post-Closing Trial Balance December 31, 2018		
	Balance	
Account Title	Debit	Credit
Cash	\$ 6,000	
Accounts Receivable	6,300	
Office Supplies	200	
Land	10,000	
Building	42,000	
Accumulated Depreciation—Building		\$ 24,000
Furniture	8,000	
Accumulated Depreciation—Furniture		6,000
Accounts Payable		2,000
Salaries Payable		500
Unearned Revenue		5,000
Notes Payable (long-term)		7,000
Common Stock		12,000
Retained Earnings		16,000
Total	<u>\$ 72,500</u>	<u>\$ 72,500</u>

>Key Terms

- | | | |
|-----------------------------------|-------------------------------|---|
| Accounting Cycle (p. 227) | Income Summary (p. 220) | Permanent Account (p. 219) |
| Classified Balance Sheet (p. 214) | Intangible Asset (p. 215) | Property, Plant, and Equipment (p. 215) |
| Closing Entries (p. 220) | Liquidity (p. 215) | Post-Closing Trial Balance (p. 226) |
| Closing Process (p. 219) | Long-term Asset (p. 215) | Reversing Entry (p. 232) (Appendix 4A) |
| Current Asset (p. 215) | Long-term Investment (p. 215) | Temporary Account (p. 219) |
| Current Liability (p. 215) | Long-term Liability (p. 215) | |
| Current Ratio (p. 229) | Operating Cycle (p. 215) | |

> Quick Check

Learning Objective 1

1. Assets are listed on the balance sheet in the order of their
 - a. purchase date.
 - b. adjustments.
 - c. liquidity.
 - d. balance.
2. Which of the following accounts would be included in the property, plant, and equipment category of the classified balance sheet?
 - a. Land held for investment
 - b. Accumulated Depreciation
 - c. Office Supplies
 - d. Mortgage Payable

Learning Objective 1

3. Which situation indicates a net loss within the Income Statement section of the worksheet?
 - a. Total credits exceed total debits
 - b. Total debits exceed total credits
 - c. Total debits equal total credits
 - d. None of the above

4. Which of the following accounts is *not* closed?
 - a. Depreciation Expense
 - b. Dividends
 - c. Service Revenue
 - d. Accumulated Depreciation

5. What do closing entries accomplish?
 - a. Zero out the revenues, expenses, and dividends
 - b. Transfer revenues, expenses, and dividends to the Retained Earnings account
 - c. Bring the Retained Earnings account to its correct ending balance
 - d. All of the above

6. Which of the following is *not* a closing entry?

Date	Accounts and Explanation	Debit	Credit
a.	Retained Earnings Dividends	xxx	xxx
b.	Service Revenue Income Summary	xxx	xxx
c.	Salaries Payable Income Summary	xxx	xxx
d.	Income Summary Rent Expense	xxx	xxx

7. Which of the following accounts may appear on a post-closing trial balance?
 - a. Cash, Salaries Payable, and Retained Earnings
 - b. Cash, Salaries Payable, and Service Revenue
 - c. Cash, Service Revenue, and Salaries Expense
 - d. Cash, Salaries Payable, and Salaries Expense

8. Which of the following steps of the accounting cycle is not completed at the end of the period?
 - a. Journalize transactions as they occur.
 - b. Journalize and post the closing entries.
 - c. Prepare the post-closing trial balance.
 - d. Prepare the financial statements.

9. Worldwide Cellular has Cash of \$300, Accounts Receivable of \$800, and Office Supplies of \$600. Worldwide owes \$200 on Accounts Payable and has Salaries Payable of \$400. Worldwide's current ratio is
 - a. 1.10
 - b. 0.64
 - c. 2.83
 - d. 0.35

Learning Objective 2**Learning Objective 3****Learning Objective 3****Learning Objective 3****Learning Objective 4****Learning Objective 5****Learning Objective 6**

Learning Objective 7
Appendix 4A

- 10A.** Which of the following statements concerning reversing entries is true?
- Reversing entries are required by Generally Accepted Accounting Principles.
 - Reversing entries are most often used with accrual-type adjustments.
 - Reversing entries are dated December 31, the end of the fiscal year.
 - Reversing entries are recorded before adjusting entries.

Check your answers at the end of the chapter.

ASSESS YOUR PROGRESS

> Review Questions

- What document are financial statements prepared from?
- What does the income statement report?
- What does the statement of retained earnings show?
- What does the balance sheet report?
- Why are financial statements prepared in a specific order? What is that order?
- What is a classified balance sheet?
- Identify two asset categories on the classified balance sheet, and give examples of each category.
- Identify two liability categories on the classified balance sheet, and give examples of each category.
- What does liquidity mean?
- How could a worksheet help in preparing financial statements?
- If a business had a net loss for the year, where would the net loss be reported on the worksheet?
- What is the closing process?
- What are temporary accounts? Are temporary accounts closed in the closing process?
- What are permanent accounts? Are permanent accounts closed in the closing process?
- How is the Income Summary account used? Is it a temporary or permanent account?
- What are the steps in the closing process?
- If a business had a net loss for the year, what would be the closing entry to close Income Summary and transfer the net loss to the Retained Earnings account?
- What types of accounts are listed on the post-closing trial balance?
- List the steps of the accounting cycle.
- What is the current ratio, and how is it calculated?
- 21A.** What are reversing entries? Are they required by GAAP?

> Short Exercises

S4-1 Preparing an income statement

Kyle Home Cleaning was incorporated on January 1, 2018. Kyle's adjusted trial balance follows. Prepare Kyle's income statement for the year ended December 31, 2018.

KYLE HOME CLEANING Adjusted Trial Balance December 31, 2018		
	Balance	
Account Title	Debit	Credit
Cash	\$ 4,000	
Accounts Receivable	3,400	
Prepaid Insurance	2,400	
Equipment	36,000	
Accumulated Depreciation—Equipment	\$ 4,500	
Accounts Payable		1,300
Interest Payable		360
Notes Payable		3,600
Common Stock		33,900
Dividends	1,500	
Service Revenue		24,000
Salaries Expense	14,300	
Insurance Expense	1,200	
Depreciation Expense—Equipment	4,500	
Interest Expense	360	
Total	<u>\$ 67,660</u>	<u>\$ 67,660</u>

S4-2 Preparing a statement of retained earnings

Refer to the data in Short Exercise S4-1. Prepare Kyle's statement of retained earnings for the year ended December 31, 2018.

Learning Objective 1

S4-3 Preparing a balance sheet (unclassified, account form)

Refer to the data in Short Exercise S4-1. Prepare Kyle's *unclassified* balance sheet at December 31, 2018. Use the account form.

Learning Objective 1

S4-4 Preparing a balance sheet (classified, report form)

Refer to the data in Short Exercise S4-1. Prepare Kyle's classified balance sheet at December 31, 2018. Assume the Notes Payable is due on December 1, 2020, and the Prepaid Insurance will expire in 2019. Use the report form.

Learning Objective 1

Learning Objective 1

Learning Objective 1**S4-5 Classifying balance sheet accounts**

For each account listed, identify the category in which it would appear on a classified balance sheet.

- a. Office Supplies
- b. Interest Payable
- c. Retained Earnings
- d. Copyrights
- e. Land
- f. Accumulated Depreciation—Furniture
- g. Land (held for long-term investment purposes)
- h. Unearned Revenue
- i. Notes Payable (due in six years)

Learning Objective 2**S4-6 Using the worksheet to prepare financial statements**

Answer the following questions:

Requirements

1. What type of normal balance does the Retained Earnings account have—debit or credit?
2. Which type of income statement account has the same type of balance as the Retained Earnings account?
3. Which type of income statement account has the opposite type of balance as the Retained Earnings account?
4. What do we call the difference between total debits and total credits on the income statement section of the worksheet?

Learning Objective 2**S4-7 Determining net income using a worksheet**

A partial worksheet for Randall Law Firm is presented below. Solve for the missing information.

	A	J	K	L	M
5		Income Statement		Balance Sheet	
6		Debit	Credit	Debit	Credit
32 Total		(a)	\$ 24,225	\$ 217,750	\$ 209,775
33 Net (b)		7,975			(c)
34 Total		(d)	\$ 24,225	(e)	(f)
35					

Learning Objective 2**S4-8 Determining net loss using a worksheet**

A partial worksheet for Ackler Adjusters is presented below. Solve for the missing information.

	A	J	K	L	M
5		Income Statement		Balance Sheet	
6		Debit	Credit	Debit	Credit
32 Total		\$ 21,580	(a)	(b)	\$ 60,900
33 Net (c)			5,000	(d)	
34 Total		(e)	(f)	(g)	\$ 60,900
35					

S4-9 Identifying temporary and permanent accounts**Learning Objective 3**

For each account listed, identify whether the account is a temporary account (T) or a permanent account (P).

- | | |
|---------------------|---------------------|
| a. Rent Expense | f. Dividends |
| b. Prepaid Rent | g. Service Revenue |
| c. Equipment | h. Supplies Expense |
| d. Common Stock | i. Office Supplies |
| e. Salaries Payable | |

S4-10 Journalizing closing entries**Learning Objective 3**

Brett Teddy Enterprises had the following accounts and normal balances listed on its December 31st adjusted trial balance: Service Revenue, \$21,900; Salaries Expense, \$6,000; Rent Expense, \$4,400; Advertising Expense, \$3,100; and Dividends, \$6,900.

Journalize the closing entries for Teddy Enterprises.

S4-11 Posting closing entries directly to T-accounts**Learning Objective 3**

The following balances appear on the books of Brett Kaufman Enterprises: Retained Earnings, \$23,400; Dividends, \$6,500; Income Summary, \$0; Service Revenue, \$22,200; Salaries Expense, \$7,300; Rent Expense, \$3,600; and Advertising Expense, \$3,000. All accounts have normal balances.

Requirements

1. The T-accounts have been set up for you. Insert each account's adjusted balance as given (denote as *Adj. Bal.*) at December 31.
2. Post the closing entries to the accounts, denoting posted amounts as *Clos.*.
3. Compute the ending balance of Retained Earnings.

S4-12 Identifying accounts included on a post-closing trial balance**Learning Objective 4**

For each account listed, identify whether the account would be included on a post-closing trial balance. Signify either Yes (Y) or No (N).

- | | |
|----------------------|---------------------------------------|
| a. Office Supplies | f. Accumulated Depreciation—Furniture |
| b. Interest Expense | g. Rent Expense |
| c. Retained Earnings | h. Unearned Revenue |
| d. Dividends | i. Accounts Payable |
| e. Service Revenue | |

S4-13 Identifying steps in the accounting cycle**Learning Objective 5**

Review the steps in the accounting cycle, and answer the following questions:

1. What is the first step?
2. Are any steps optional?
3. Which steps are completed throughout the period?
4. Which steps are completed only at the end of the period?
5. What is the last step in the accounting cycle?

Learning Objective 6**S4-14 Calculating the current ratio**

Heart of Texas Telecom has these account balances at December 31, 2018:

Notes Payable, long-term	\$ 8,200	Accounts Payable	\$ 3,500
Prepaid Rent	1,700	Accounts Receivable	5,700
Salaries Payable	1,500	Cash	3,000
Service Revenue	13,900	Depreciation Expense—Equip.	1,700
Office Supplies	600	Equipment	22,000
Accumulated Depreciation—Equip.	5,000	Common Stock	4,350
Advertising Expense	650	Rent Expense	1,100

Requirements

1. Calculate Heart of Texas Telecom's current ratio.
2. How much in *current* assets does Heart of Texas Telecom have for every dollar of *current* liabilities that it owes?

Learning Objective 7
Appendix 4A**S4A-15 Journalizing reversing entries**

Mountain View Associates accrued \$6,500 of Service Revenue at December 31. Mountain View Associates received \$17,000 on January 15, including the accrued revenue recorded on December 31.

Requirements

1. Record the adjusting entry to accrue Service Revenue.
2. Record the reversing entry.
3. Journalize the cash receipt.

> Exercises

E4-16 Preparing the financial statements

The adjusted trial balance for Burlington Advertising Services is presented below:

BURLINGTON ADVERTISING SERVICES Adjusted Trial Balance December 31, 2018		
Account Title	Balance	
	Debit	Credit
Cash	\$ 14,200	
Accounts Receivable	16,100	
Office Supplies	7,300	
Land	18,100	
Building	48,900	
Accumulated Depreciation—Building		\$ 35,200
Furniture	20,500	
Accumulated Depreciation—Furniture		13,100
Accounts Payable		9,600
Salaries Payable		7,500
Unearned Revenue		17,000
Common Stock		32,500
Retained Earnings		37,600
Dividends	20,500	
Service Revenue		44,500
Salaries Expense	28,000	
Supplies Expense	8,900	
Depreciation Expense—Building	3,100	
Depreciation Expense—Furniture	600	
Advertising Expense	10,800	
Total	<u>\$ 197,000</u>	<u>\$ 197,000</u>

Requirements

1. Prepare the income statement for the year ending December 31, 2018.
2. Prepare the statement of retained earnings for the year ending December 31, 2018.
3. Prepare the classified balance sheet as of December 31, 2018. Use the report form.

E4-17 Classifying balance sheet accounts

For each account listed, identify the category that it would appear on a classified balance sheet. Use the following categories: Current Assets; Long-term Investments; Property, Plant, and Equipment; Intangible Assets; Current Liabilities; Long-term Liabilities; and Stockholders' Equity. If the item does not belong on the classified balance sheet, put an X.

- | | |
|------------------------------|--|
| a. Land (used in operations) | b. Accumulated
Depreciation—Equipment |
|------------------------------|--|

Learning Objective 1

2. Ending Retained Earnings
\$8,200

- c. Common Stock
- d. Service Revenue
- e. Investment in Starbucks Corporation
(to be held long-term)
- f. Accounts Receivable
- g. Equipment
- h. Buildings
- i. Notes Payable (due in 10 years)
- j. Unearned Revenue
- k. Cash
- l. Accounts Payable
- m. Prepaid Rent
- n. Dividends
- o. Land (held for investment purposes)
- p. Depreciation Expense

Learning Objectives 1, 6

1. Total Assets \$62,600

E4-18 Preparing a classified balance sheet and calculating the current ratio

The adjusted trial balance of Fran O'Flynn Dance Studio Company follows:

FRAN O'FLYNN DANCE STUDIO COMPANY		
Trial Balance		
August 31, 2018		
	Balance	
Account Title	Debit	Credit
Cash	\$ 13,400	
Office Supplies	2,800	
Prepaid Rent	1,200	
Equipment	57,000	
Accumulated Depreciation—Equipment		\$ 5,400
Accounts Payable		4,500
Salaries Payable		500
Unearned Revenue		4,500
Notes Payable (long-term)		4,800
Common Stock		15,500
Retained Earnings		29,850
Dividends	800	
Service Revenue		18,100
Salaries Expense	4,500	
Rent Expense	1,500	
Depreciation Expense—Equipment	450	
Supplies Expense	700	
Utilities Expense	800	
Total	<u><u>\$ 83,150</u></u>	<u><u>\$ 83,150</u></u>

Requirements

1. Prepare the classified balance sheet of Fran O'Flynn Dance Studio Company at August 31, 2018. Use the report form. You must compute the ending balance of Retained Earnings.
2. Compute O'Flynn's current ratio at August 31, 2018. One year ago, the current ratio was 1.72. Indicate whether O'Flynn's ability to pay current debts has improved, deteriorated, or remained the same.

E4-19 Preparing a worksheet**Learning Objective 2**

The unadjusted trial balance of Optical Service at October 31, 2018, follows:

OPTICAL SERVICE Unadjusted Trial Balance October 31, 2018		
Account Title	Balance	
	Debit	Credit
Cash	\$ 5,600	
Accounts Receivable	2,400	
Prepaid Rent	2,400	
Office Supplies	2,300	
Equipment	42,000	
Accumulated Depreciation—Equipment		\$ 1,750
Accounts Payable		4,900
Salaries Payable		
Common Stock		39,650
Dividends	200	
Service Revenue		14,000
Salaries Expense	4,500	
Rent Expense		
Depreciation Expense—Equipment		
Utilities Expense	900	
Supplies Expense		
Total	\$ 60,300	\$ 60,300

Additional information at October 31, 2018:

- Office Supplies used, \$1,400.
- Prepaid Rent expired, \$800.
- Accrued Salaries Expense, \$1,500.
- Depreciation, \$875.
- Accrued Service Revenue, \$190.

Requirements

- Compute Optical Service's worksheet for the month ended October 31, 2018.
- How much was net income for October?

Note: Exercise E4-20 should be used only after completing Exercise E4-19.

Learning Objectives 1, 2

2. Ending Retained Earnings
\$1,650

Learning Objective 3

E4-20 Preparing financial statements from the completed worksheet

Use your answer from Exercise E4-19 to prepare Optical Service's financial statements.

Requirements

1. Complete the income statement for the month ended October 31, 2018.
2. Complete the statement of retained earnings for the month ended October 31, 2018. Assume beginning Retained Earnings was \$0.
3. Complete the classified balance sheet as of October 31, 2018. Use the report form.

E4-21 Preparing closing entries from an adjusted trial balance

The adjusted trial balance of Stone Sign Company follows:

STONE SIGN COMPANY Adjusted Trial Balance January 31, 2018		
Account Title	Balance	
	Debit	Credit
Cash	\$ 15,400	
Office Supplies	1,500	
Prepaid Rent	1,400	
Equipment	60,000	
Accumulated Depreciation—Equipment		\$ 7,000
Accounts Payable		3,800
Salaries Payable		100
Unearned Revenue		4,200
Notes Payable (long-term)		4,300
Common Stock		48,800
Dividends	800	
Service Revenue		17,300
Salaries Expense		3,700
Rent Expense		1,400
Depreciation Expense—Equipment		400
Supplies Expense		300
Utilities Expense		600
Total	<u><u>\$ 85,500</u></u>	<u><u>\$ 85,500</u></u>

Requirements

1. Assume Stone Sign Company has a January 31 year-end. Journalize Stone's closing entries at January 31.
2. How much net income or net loss did Stone Sign Company earn for the year ended January 31? How can you tell?

E4-22 Preparing closing entries from T-accounts**Learning Objective 3**

Selected accounts for Kenmore Photography at December 31, 2018, follow:

Dividends	Retained Earnings
18,000	53,000
Salaries Expense	Service Revenue
33,900	31,000
500	7,000
Depreciation Expense—Building	Supplies Expense
7,200	3,300
Depreciation Expense—Furniture	
1,200	

Requirements

1. Journalize Kenmore Photography's closing entries at December 31, 2018.
2. Determine Kenmore Photography's ending Retained Earnings balance at December 31, 2018.

E4-23 Determining the effects of closing entries on the Retained Earnings account**Learning Objective 3**

Smith Insurance Agency started the year with a beginning Retained Earnings balance of \$29,000. During the year, Smith Insurance Agency earned \$38,000 of Service Revenue and incurred \$23,000 of various expenses. Dividends of \$16,000 from the business were paid to stockholders. After the closing entries are recorded and posted, what will be the balance of Retained Earnings?

Learning Objectives 2, 3**E4-24 Preparing a worksheet and closing entries**

Cynthia Elmer, CPA, had the following partial worksheet:

1. Net Income \$15,350

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	CYNTHIA ELMER, CPA												
2	Worksheet												
3	December 31, 2018												
5	Account Names	Unadjusted Trial Balance		Adjustments		Adjusted Trial Balance		Income Statement		Balance Sheet		Debit	Credit
		Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit		
7	Cash	\$ 46,900						\$ 46,900					
8	Accounts Receivable	9,600		(h) \$ 3,700				13,300					
9	Office Supplies	800				\$ 500	(b)	300					
10	Prepaid Rent	8,000				3,300	(a)	4,700					
11	Land	35,000						35,000					
12	Building	125,000						125,000					
13	Accumulated Depreciation—Building					1,150	(c)		\$ 1,150				
14	Furniture	28,000						28,000					
15	Accumulated Depreciation—Furniture					2,000	(d)		2,000				
16	Accounts Payable		\$ 3,500							3,500			
17	Utilities Payable		710							710			
18	Salaries Payable					4,200	(f)		4,200				
19	Interest Payable					500	(g)		500				
20	Unearned Revenue		5,000	(e)	1,300					3,700			
21	Notes Payable		15,000							15,000			
22	Common Stock		118,000							118,000			
23	Retained Earnings		118,090							118,090			
24	Dividends	29,000						29,000					
25	Service Revenue		95,000			5,000	(e,h)			100,000			
26	Rent Expense	20,000		(a)	3,300			23,300					
27	Salaries Expense	28,000		(f)	4,200			32,200					
28	Supplies Expense			(b)	500			500					
29	Utilities Expense	25,000						25,000					
30	Depreciation Expense—Building			(c)	1,150			1,150					
31	Depreciation Expense—Furniture			(d)	2,000			2,000					
32	Interest Expense			(g)	500			500					
33	Total	\$ 355,300	\$ 355,300		\$ 16,650	\$ 16,650		\$ 366,850	\$ 366,850				
34													
35													
36													

Requirements

1. Complete the worksheet.
2. Prepare the closing entries for Cynthia Elmer, CPA.

Learning Objectives 3, 4, 6**E4-25 Preparing closing entries from an adjusted trial balance; preparing a post-closing trial balance; and calculating the current ratio**

Manny's Bowling Alley's adjusted trial balance as of December 31, 2018, is presented below:

MANNY'S BOWLING ALLEY Adjusted Trial Balance December 31, 2018		
Account Title	Balance	
	Debit	Credit
Cash	\$ 17,500	
Accounts Receivable	3,100	
Office Supplies	500	
Prepaid Insurance	3,200	
Land	30,000	
Building	140,000	
Accumulated Depreciation—Building		\$ 10,000
Equipment	47,000	
Accumulated Depreciation—Equipment		13,000
Accounts Payable		3,900
Utilities Payable		575
Salaries Payable		3,600
Unearned Revenue		1,400
Common Stock		104,000
Retained Earnings		93,525
Dividends	24,000	
Service Revenue		115,000
Insurance Expense	21,000	
Salaries Expense	37,000	
Supplies Expense	900	
Utilities Expense	18,000	
Depreciation Expense—Equipment	2,500	
Depreciation Expense—Building	300	
Total	<u><u>\$ 345,000</u></u>	<u><u>\$ 345,000</u></u>

Requirements

1. Prepare the closing entries for Manny's Bowling Alley.
2. Prepare a post-closing trial balance.
3. Compute the current ratio for Manny's Bowling Alley.

Learning Objectives 2, 3, 4

1. Net Loss \$(12,150)

E4-26 Preparing a worksheet, closing entries, and a post-closing trial balance

Houston Veterinary Hospital completed the following worksheet as of December 31, 2018.

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	HOUSTON VETERINARY HOSPITAL												
2	Worksheet												
3	December 31, 2018												
4	Account Names	Unadjusted Trial Balance			Adjustments			Adjusted Trial Balance		Income Statement		Balance Sheet	
5		Debit	Credit		Debit	Credit		Debit	Credit	Debit	Credit	Debit	Credit
6													
7	Cash	\$ 31,200						\$ 31,200					
8	Accounts Receivable	8,700		(f) \$ 1,400				10,100					
9	Office Supplies	1,500				\$ 275	(b)	1,225					
10	Prepaid Rent	6,000				600	(a)	5,400					
11	Equipment	27,000						27,000					
12	Accumulated Depreciation—Equipment					1,900	(c)			\$ 1,900			
13	Accounts Payable		\$ 3,400							3,400			
14	Utilities Payable		310							310			
15	Salaries Payable					1,075	(e)			1,075			
16	Unearned Revenue		13,000	(d)	1,300					11,700			
17	Common Stock		41,000							41,000			
18	Retained Earnings		55,690							55,690			
19	Dividends	28,000						28,000					
20	Service Revenue		35,000			2,700	(d,f)			37,700			
21	Rent Expense	23,000		(a) 600				23,600					
22	Salaries Expense	12,000		(e) 1,075				13,075					
23	Supplies Expense			(b) 275				275					
24	Utilities Expense	11,000						11,000					
25	Depreciation Expense—Equipment			(c) 1,900				1,900					
26	Total	\$ 148,400	\$ 148,400		\$ 6,550	\$ 6,550		\$ 152,775	\$ 152,775				
27													
28													
29													

Requirements

1. Complete the worksheet for Houston Veterinary Hospital.
2. Prepare the closing entries.
3. Prepare a post-closing trial balance.

**Learning Objective 7
Appendix 4A****E4A-27 Journalizing reversing entries**

Lucas Architects recorded the following adjusting entries as of December 31:

- a. Service Revenue accrued, \$2,600.
- b. Unearned Revenue that has been earned, \$1,300.
- c. Office Supplies on hand, \$530. The balance of the Office Supplies account was \$880.
- d. Salaries owed to employees, \$600.
- e. One month of Prepaid Rent has expired, \$3,100.
- f. Depreciation on equipment, \$1,075.

Journalize any necessary reversing entries for Lucas Architects.

E4A-28 Journalizing reversing entries

Travel Services had the following unadjusted balances at December 31, 2018: Salaries Payable, \$0; and Salaries Expense, \$600. The following transactions have taken place during the end of 2018 and beginning of 2019:

Learning Objective 7
Appendix 4A**2018**

- Dec. 31 Accrued Salaries Expense at December 31, \$7,000.
31 Closed the Salaries Expense account.

2019

- Jan. 1 Reversed the accrued salaries. (Requirement 3 only)
4 Paid salaries of \$8,500. This payment included the Salaries Payable amount, plus \$1,500 for the first few days of January.

Requirements

1. The T-accounts have been opened for you. Enter the Salaries Payable and Salaries Expense unadjusted balances at December 31, 2018.
2. Journalize the entries assuming Travel Services does not use reversing entries. **Do not record the reversing entry on Jan. 1.** Post to the accounts.
3. Journalize the entries assuming Travel Services uses reversing entries. **Do not forget to record the reversing entry on Jan. 1.** Post to the accounts. Compare the balances on January 4, 2019 with the Requirement 2 balances on January 4, 2019.

> Problems Group A

Learning Objectives 1, 3, 4

1. Net Loss \$(9,500)

P4-29A Preparing financial statements including a classified balance sheet in report form, preparing and posting closing entries, and preparing a post-closing trial balance

The adjusted trial balance of Eldrich Real Estate Appraisal at June 30, 2018, follows:

ELDRICH REAL ESTATE APPRAISAL Adjusted Trial Balance June 30, 2018		
Account Title	Balance	
	Debit	Credit
Cash	\$ 4,800	
Accounts Receivable	5,700	
Office Supplies	2,500	
Prepaid Insurance	1,500	
Land	12,800	
Building	83,000	
Accumulated Depreciation—Building		\$ 25,500
Accounts Payable		20,700
Interest Payable		8,000
Salaries Payable		2,100
Unearned Revenue		7,000
Notes Payable (long-term)		38,000
Common Stock		6,500
Retained Earnings		36,500
Dividends	26,900	
Service Revenue		48,900
Insurance Expense	4,300	
Salaries Expense	32,600	
Supplies Expense	800	
Interest Expense	8,000	
Utilities Expense	2,000	
Depreciation Expense—Building	8,300	
Total	<u><u>\$ 193,200</u></u>	<u><u>\$ 193,200</u></u>

Requirements

1. Prepare the company's income statement for the year ended June 30, 2018.
2. Prepare the company's statement of retained earnings for the year ended June 30, 2018.
3. Prepare the company's classified balance sheet in report form at June 30, 2018.
4. Journalize the closing entries.
5. T-accounts have been opened using the balances from the adjusted trial balance. Post the closing entries to the T-accounts.
6. Prepare the company's post-closing trial balance at June 30, 2018.

P4-30A Preparing financial statements including a classified balance sheet in report form, preparing closing entries, and using the current ratio to evaluate a company

Learning Objectives 1, 3, 6

2. Ending Retained Earnings
\$68,200

The adjusted trial balance of Brinney Irrigation System at December 31, 2018, follows:

BRINNEY IRRIGATION SYSTEM Adjusted Trial Balance December 31, 2018		
Account Title	Balance	
	Debit	Credit
Cash	\$ 14,000	
Accounts Receivable	47,600	
Office Supplies	1,600	
Prepaid Insurance	5,000	
Building	57,300	
Accumulated Depreciation—Building		\$ 25,100
Equipment	20,000	
Accumulated Depreciation—Equipment		7,400
Accounts Payable		25,100
Interest Payable		1,800
Salaries Payable		2,700
Unearned Revenue		1,400
Notes Payable (long-term)		33,350
Common Stock		16,000
Retained Earnings		4,000
Dividends	2,500	
Service Revenue		55,300
Insurance Expense	600	
Salaries Expense	15,900	
Supplies Expense	850	
Interest Expense	1,800	
Depreciation Expense—Equipment	2,900	
Depreciation Expense—Building	2,100	
Total	<u><u>\$ 172,150</u></u>	<u><u>\$ 172,150</u></u>

Requirements

1. Prepare the company's income statement for the year ended December 31, 2018.
2. Prepare the company's statement of retained earnings for the year ended December 31, 2018.
3. Prepare the company's classified balance sheet in report form at December 31, 2018.
4. Journalize the closing entries for Brinney Irrigation System.
5. Compute the company's current ratio at December 31, 2018. At December 31, 2017, the current ratio was 2. Did the company's ability to pay current debts improve or deteriorate, or did it remain the same?

Learning Objectives 1, 2, 3

2. Total Assets \$106,500

P4-31A Preparing a worksheet, financial statements, and closing entries

The *unadjusted* trial balance of Frank Investment Advisers at December 31, 2018, follows:

FRANK INVESTMENT ADVISERS Unadjusted Trial Balance December 31, 2018		
Account Title	Balance	
	Debit	Credit
Cash	\$ 33,000	
Accounts Receivable	48,000	
Office Supplies	4,000	
Equipment	25,000	
Accumulated Depreciation—Equipment	\$ 14,000	
Accounts Payable		17,000
Salaries Payable		
Unearned Revenue		4,000
Notes Payable (long-term)		19,000
Common Stock		20,000
Retained Earnings		24,000
Dividends	27,000	
Service Revenue		95,000
Insurance Expense	4,000	
Salaries Expense		35,000
Supplies Expense		
Interest Expense	6,000	
Rent Expense		11,000
Depreciation Expense—Equipment		
Total	\$ 193,000	\$ 193,000

Adjustment data at December 31, 2018:

- Unearned Revenue earned during the year, \$900.
- Office Supplies on hand, \$3,000.
- Depreciation for the year, \$3,000.
- Accrued Salaries Expense, \$1,500.
- Accrued Service Revenue, \$5,500.

Requirements

- Prepare a worksheet for Frank Investment Advisers at December 31, 2018.
- Prepare the income statement, the statement of retained earnings, and the classified balance sheet in account format.
- Prepare closing entries.

P4-32A Completing the accounting cycle from adjusting entries to post-closing trial balance with an optional worksheet

**Learning Objectives 1, 2, 3,
4, 5, 6**

The *unadjusted* trial balance of Whitticker Anvils at December 31, 2018, and the data for the adjustments follow:

5. Net Income \$18,890

WHITTICKER ANVILS Unadjusted Trial Balance December 31, 2018		
Account Title	Balance	
	Debit	Credit
Cash	\$ 11,260	
Accounts Receivable	16,800	
Prepaid Rent	1,740	
Office Supplies	1,500	
Equipment	36,000	
Accumulated Depreciation—Equipment		\$ 7,000
Accounts Payable		6,800
Salaries Payable		
Unearned Revenue		6,600
Common Stock		18,000
Retained Earnings		13,200
Dividends	3,800	
Service Revenue		21,500
Salaries Expense	2,000	
Rent Expense		
Depreciation Expense—Equipment		
Supplies Expense		
Total	<u><u>\$ 73,100</u></u>	<u><u>\$ 73,100</u></u>

Adjustment data:

- Unearned Revenue still unearned at December 31, \$3,400.
- Prepaid Rent still in force at December 31, \$1,600.
- Office Supplies used, \$1,400.
- Depreciation, \$400.
- Accrued Salaries Expense at December 31, \$150.

Requirements

- Prepare the adjusting entries and post to the accounts. T-accounts have been opened using the balances from the unadjusted trial balance.
- Prepare an adjusted trial balance.
- Complete the worksheet for the year ended December 31, 2018.
- Prepare the income statement, the statement of retained earnings, and the classified balance sheet in report form.
- Prepare the closing entries, and post to the accounts.

**Learning Objectives 1, 2, 3,
4, 5**

6. Ending Retained Earnings \$5,095

6. Prepare a postclosing trial balance.
7. Calculate the current ratio for the company.

P4-33A Completing the accounting cycle from journal entries to post-closing trial balance with an optional worksheet

On December 1, Don Walker began an auto repair shop, Walker's Quality Automotive. The following transactions occurred during December:

- | | |
|--------|---|
| Dec. 1 | Walker contributed \$50,000 cash to the business in exchange for shares of common stock. |
| 1 | Purchased \$9,000 of equipment paying cash. |
| 1 | Paid \$600 for a three-month insurance policy starting on December 1. |
| 9 | Paid \$16,000 cash to purchase land to be used in operations. |
| 10 | Purchased office supplies on account, \$1,600. |
| 19 | Borrowed \$20,000 from the bank for business use. Walker signed a note payable to the bank in the name of the corporation. The note is due in five years. |
| 22 | Paid \$1,500 for advertising expenses. |
| 26 | Paid \$800 on account. |
| 28 | The business received a bill for utilities to be paid in January, \$180. |
| 31 | Revenues earned during the month included \$19,500 cash and \$2,900 on account. |
| 31 | Paid employees' salaries \$3,400 and building rent \$800. Record as a compound entry. |
| 31 | The business received \$1,110 for auto screening services to be performed next month. |
| 31 | Paid cash dividends of \$3,000 to stockholders. |

The business uses the following accounts: Cash; Accounts Receivable; Office Supplies; Prepaid Insurance; Land; Equipment; Accumulated Depreciation—Equipment; Accounts Payable; Utilities Payable; Interest Payable; Unearned Revenue; Notes Payable; Common Stock; Retained Earnings; Dividends; Income Summary; Service Revenue; Salaries Expense; Rent Expense; Utilities Expense; Advertising Expense; Supplies Expense; Insurance Expense; Interest Expense; and Depreciation Expense—Equipment.

Adjustment data:

- a. Office Supplies used during the month, \$1,200.
- b. Depreciation for the month, \$150.
- c. One month insurance has expired.
- d. Accrued Interest Expense, \$60.

Requirements

1. Prepare the journal entries, and post to the T-accounts.
2. Prepare an unadjusted trial balance.
3. Complete the worksheet for the month ended December 31, 2018.
4. Prepare the adjusting entries, and post to the T-accounts.
5. Prepare an adjusted trial balance.

6. Prepare the income statement, the statement of retained earnings, and the classified balance sheet in report form.
7. Prepare the closing entries, and post to the T-accounts.
8. Prepare a post-closing trial balance.

P4A-34A Preparing adjusting entries and reversing entries

The unadjusted trial balance and adjustment data of Myla's Motors at December 31, 2018, follow:

Learning Objective 7
Appendix 4A

MYLA'S MOTORS Unadjusted Trial Balance December 31, 2018		
Account Title	Balance	
	Debit	Credit
Cash	\$ 4,000	
Accounts Receivable	26,900	
Office Supplies	1,300	
Prepaid Insurance	2,200	
Equipment	53,700	
Accumulated Depreciation—Equipment		\$ 36,200
Accounts Payable		15,500
Wages Payable		
Unearned Revenue		4,900
Common Stock		18,600
Dividends	2,900	
Service Revenue		19,400
Depreciation Expense—Equipment		
Wages Expense	1,700	
Insurance Expense		
Utilities Expense	1,900	
Supplies Expense		
Total	<u><u>\$ 94,600</u></u>	<u><u>\$ 94,600</u></u>

Adjustment data at December 31, 2018:

- a. Depreciation on equipment, \$1,600.
- b. Accrued Wages Expense, \$1,400.
- c. Office Supplies on hand, \$400.
- d. Prepaid Insurance expired during December, \$500.
- e. Unearned Revenue earned during December, \$4,100.
- f. Accrued Service Revenue, \$200.

2019 transactions:

- a. On January 4, Myla's Motors paid wages of \$1,700. Of this, \$1,400 related to the accrued wages recorded on December 31.
- b. On January 10, Myla's Motors received \$600 for Service Revenue. Of this, \$200 is related to the accrued Service Revenue recorded on December 31.

Requirements

1. Journalize adjusting entries.
2. Journalize reversing entries for the appropriate adjusting entries.
3. Refer to the 2019 data. Journalize the cash payment and the cash receipt that occurred in 2019.

> Problems Group B

Learning Objectives 1, 3, 4

1. Net Loss \$(6,600)

P4-35B Preparing financial statements including a classified balance sheet in report form, preparing and posting closing entries, and preparing a post-closing trial balance

The adjusted trial balance of Elmo Real Estate Appraisal at June 30, 2018, follows:

ELMO REAL ESTATE APPRAISAL Adjusted Trial Balance June 30, 2018		
Account Title	Debit	Credit
Cash	\$ 4,200	
Accounts Receivable	4,400	
Office Supplies	1,700	
Prepaid Insurance	1,600	
Land	12,400	
Building	83,000	
Accumulated Depreciation—Building		\$ 26,700
Accounts Payable		20,500
Interest Payable		8,800
Salaries Payable		2,000
Unearned Revenue		8,600
Notes Payable (long-term)		36,000
Common Stock		1,000
Retained Earnings		38,000
Dividends	27,600	
Service Revenue		48,700
Insurance Expense		3,900
Salaries Expense		31,800
Supplies Expense		600
Interest Expense		8,800
Utilities Expense		2,000
Depreciation Expense—Building		8,300
Total	<u><u>\$ 190,300</u></u>	<u><u>\$ 190,300</u></u>

Requirements

1. Prepare the company's income statement for the year ended June 30, 2018.
2. Prepare the company's statement of retained earnings for the year ended June 30, 2018.
3. Prepare the company's classified balance sheet in report form at June 30, 2018.
4. Journalize the closing entries.
5. T-accounts have been opened using the balances from the adjusted trial balance.
Post the closing entries to the T-accounts.
6. Prepare the company's post-closing trial balance at June 30, 2018.

P4-36B Preparing financial statements including a classified balance sheet in report form, preparing closing entries, and using the current ratio to evaluate a company

The adjusted trial balance of Bradley Irrigation System at December 31, 2018, follows:

BRADLEY IRRIGATION SYSTEM Adjusted Trial Balance December 31, 2018		
Account Title	Balance	
	Debit	Credit
Cash	\$ 12,000	
Accounts Receivable	51,000	
Office Supplies	28,300	
Prepaid Insurance	4,700	
Building	57,300	
Accumulated Depreciation—Building		\$ 25,300
Equipment	21,000	
Accumulated Depreciation—Equipment		6,800
Accounts Payable		40,700
Interest Payable		2,000
Salaries Payable		3,500
Unearned Revenue		1,800
Notes Payable (long-term)		21,000
Common Stock		13,000
Retained Earnings		32,000
Dividends	3,200	
Service Revenue		56,000
Insurance Expense	1,200	
Salaries Expense	16,200	
Supplies Expense	1,400	
Interest Expense	2,000	
Depreciation Expense—Building	1,200	
Depreciation Expense—Equipment	2,600	
Total	<u>\$ 202,100</u>	<u>\$ 202,100</u>

Learning Objectives 1, 3, 6

2. Ending Retained Earnings
\$60,200

Requirements

1. Prepare the company's income statement for the year ended December 31, 2018.
2. Prepare the company's statement of retained earnings for the year ended December 31, 2018.
3. Prepare the company's classified balance sheet in report form at December 31, 2018.
4. Journalize the closing entries for Bradley Irrigation System.
5. Compute the company's current ratio at December 31, 2018. At December 31, 2017, the current ratio was 1.7. Did the company's ability to pay current debts improve or deteriorate, or did it remain the same?

Learning Objectives 1, 2, 3

2. Total Assets \$92,000

P4-37B Preparing a worksheet, financial statements, and closing entries

The *unadjusted* trial balance of Foyer Investment Advisers at December 31, 2018, follows:

FROYER INVESTMENT ADVISERS Unadjusted Trial Balance December 31, 2018		
	Balance	
Account Title	Debit	Credit
Cash	\$ 25,000	
Accounts Receivable	41,000	
Office Supplies	5,500	
Equipment	24,000	
Accumulated Depreciation—Equipment		\$ 14,000
Accounts Payable		12,000
Salaries Payable		
Unearned Revenue		2,500
Notes Payable (long-term)		22,000
Common Stock		20,000
Retained Earnings		18,500
Dividends	36,000	
Service Revenue		92,000
Insurance Expense	3,500	
Salaries Expense	33,000	
Supplies Expense		
Interest Expense	4,000	
Rent Expense	9,000	
Depreciation Expense—Equipment		
Total	\$ 181,000	\$ 181,000

Adjustment data at December 31, 2018:

- a. Unearned Revenue earned during the year, \$700.
- b. Office Supplies on hand, \$1,500.
- c. Depreciation for the year, \$7,500.
- d. Accrued Salaries Expense, \$4,000.
- e. Accrued Service Revenue, \$2,000.

Requirements

1. Prepare a worksheet for Foyer Investment Advisers at December 31, 2018.
2. Prepare the income statement, the statement of retained earnings, and the classified balance sheet in account format.
3. Prepare closing entries.

P4-38B Completing the accounting cycle from adjusting entries to post-closing trial balance with an optional worksheet

The *unadjusted* trial balance of Watson Anvils at December 31, 2018, and the data for the adjustments follow:

Learning Objectives 1, 2, 3, 4, 5, 6

5. Net Income \$17,380

WATSON ANVILS		
Unadjusted Trial Balance		
December 31, 2018		
	Balance	
Account Title	Debit	Credit
Cash	\$ 13,560	
Accounts Receivable	17,000	
Prepaid Rent	2,140	
Office Supplies	2,800	
Equipment	30,000	
Accumulated Depreciation—Equipment		\$ 11,000
Accounts Payable		7,200
Salaries Payable		
Unearned Revenue		5,600
Common Stock		12,000
Retained Earnings		17,600
Dividends	4,600	
Service Revenue		19,000
Salaries Expense	2,300	
Rent Expense		
Depreciation Expense—Equipment		
Supplies Expense		
Total	<u><u>\$ 72,400</u></u>	<u><u>\$ 72,400</u></u>

Adjustment data:

- a. Unearned Revenue still unearned at December 31, \$3,600.
- b. Prepaid Rent still in force at December 31, \$2,000.
- c. Office Supplies used, \$600.
- d. Depreciation, \$400.
- e. Accrued Salaries Expense at December 31, \$180.

Requirements

1. Open the T-accounts using the balances in the unadjusted trial balance.
2. Complete the worksheet for the year ended December 31, 2018 (optional).
3. Prepare the adjusting entries, and post to the accounts.
4. Prepare an adjusted trial balance.
5. Prepare the income statement, the statement of retained earnings, and the classified balance sheet in report form.
6. Prepare the closing entries, and post to the accounts.
7. Prepare a post-closing trial balance.
8. Calculate the current ratio for the company.

Learning Objectives 1, 2, 3, 4, 5

6. Ending Retained Earnings \$9,080

P4-39B Completing the accounting cycle from journal entries to post-closing trial balance with an optional worksheet

On December 1, Ed Wonder began an auto repair shop, Wonder's Quality Automotive. The following transactions occurred during December:

-
- | | |
|--------|--|
| Dec. 1 | Wonder contributed \$62,000 cash to the business in exchange for shares of common stock. |
| 1 | Purchased \$16,200 of equipment paying cash. |
| 1 | Paid \$4,200 for a twelve-month insurance policy starting on December 1. |
| 9 | Paid \$25,000 cash to purchase land to be used in operations. |
| 10 | Purchased office supplies on account, \$1,700. |
| 19 | Borrowed \$30,000 from the bank for business use. Wonder signed a notes payable to the bank in the name of the corporation. The note is due in five years. |
| 22 | Paid \$1,000 for advertising expenses. |
| 26 | Paid \$700 on account. |
| 28 | The business received a bill for utilities to be paid in January, \$300. |
| 31 | Revenues earned during the month included \$20,600 cash and \$2,900 on account. |
| 31 | Paid employees' salaries \$4,200 and building rent \$700. Record as a compound entry. |
| 31 | The business received \$1,380 for auto screening services to be performed next month. |
| 31 | Paid cash dividends of \$6,500 to stockholders. |
-

The business uses the following accounts: Cash; Accounts Receivable; Office Supplies; Prepaid Insurance; Land; Equipment; Accumulated Depreciation—Equipment; Accounts Payable; Utilities Payable; Interest Payable; Unearned Revenue; Notes Payable; Common Stock; Retained Earnings; Dividends; Income Summary; Service Revenue; Salaries Expense; Rent Expense; Utilities Expense; Advertising Expense; Supplies Expense; Insurance Expense; Interest Expense; and Depreciation Expense—Equipment.

Adjustment data:

- a. Office Supplies used during the month, \$500.
- b. Depreciation for the month, \$270.
- c. One month insurance has expired.
- d. Accrued Interest Expense, \$100.

Requirements

1. Prepare the journal entries, and post to the T-accounts.
2. Prepare an unadjusted trial balance.
3. Prepare the adjusting entries, and post to the T-accounts.
4. Prepare an adjusted trial balance.
5. Complete the worksheet for the month ended December 31, 2018.
6. Prepare the income statement, the statement of retained earnings, and the classified balance sheet in report form.
7. Prepare the closing entries, and post to the T-accounts.
8. Prepare a post-closing trial balance.

P4A-40B Preparing adjusting entries and reversing entries

The unadjusted trial balance and adjustment data of Mildred's Motors at December 31, 2018, follow:

Learning Objective 7
Appendix 4A

MILDRED'S MOTORS Unadjusted Trial Balance December 31, 2018		
Account Title	Balance	
	Debit	Credit
Cash	\$ 4,100	
Accounts Receivable	27,900	
Office Supplies	700	
Prepaid Insurance	2,000	
Equipment	54,000	
Accumulated Depreciation—Equipment		\$ 35,900
Accounts Payable		13,400
Wages Payable		
Unearned Revenue		8,100
Common Stock		19,200
Dividends	2,900	
Service Revenue		18,000
Depreciation Expense—Equipment		
Wages Expense		1,100
Insurance Expense		
Utilities Expense		1,900
Supplies Expense		
Total	<u><u>\$ 94,600</u></u>	<u><u>\$ 94,600</u></u>

Adjustment data at December 31, 2018:

- a. Depreciation on equipment, \$1,900.
- b. Accrued Wages Expense, \$700.
- c. Office Supplies on hand, \$100.
- d. Prepaid Insurance expired during December, \$100.

e. Unearned Revenue earned during December, \$4,200.

f. Accrued Service Revenue, \$1,000.

2019 transactions:

a. On January 4, Mildred's Motors paid wages of \$1,000. Of this, \$700 related to the accrued wages recorded on December 31.

b. On January 10, Mildred's Motors received \$1,800 for Service Revenue. Of this, \$1,000 related to the accrued Service Revenue recorded on December 31.

Requirements

1. Journalize adjusting entries.
2. Journalize reversing entries for the appropriate adjusting entries.
3. Refer to the 2019 data. Journalize the cash payment and the cash receipt that occurred in 2019.

CRITICAL THINKING

> Using Excel

P4-41 Using Excel to prepare financial statements, closing entries, and the post-closing trial balance

Download an Excel template for this problem online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

Cedar River Corporation started operations on July 1, 2018. On July 31, a trial balance was prepared, adjusting entries were journalized and posted, and an adjusted trial balance was completed. A worksheet is to be used to help prepare the financial statements and the post-closing trial balance.

Requirements

1. Use Excel to complete the Income Statement and Balance Sheet columns of the worksheet. Carry numbers from the adjusted trial balance columns of the worksheet to the income statement and balance sheet columns using Excel formulas.
 - a. Use formulas to total the columns.
 - b. Use a formula to determine the amount of the net income or net loss.
 - c. Format the cells requiring dollar signs.
 - d. Boldface the totals.
2. Prepare the income statement, the statement of retained earnings, and a classified balance sheet.
 - a. Use the Increase Indent button on the Home tab to indent items.
 - b. Use formulas to sum items.
 - c. Format the cells requiring dollar signs.
 - d. Format the cells requiring double underlines.
3. Journalize the closing entries. The account titles are available when you click on the down-arrow. Indent the account to be credited.
4. Post the closing entries to the T-accounts. Use cell references from the closing entries.
5. Complete the post-closing trial balance using formulas referencing the T-accounts. The account titles are available when you click the down-arrow.
 - a. Format the cells requiring dollar signs.
 - b. Boldface the totals.
 - c. Format the cells requiring double underlines.

> Continuing Problem

P4-42 Completing the accounting cycle from adjusted trial balance to post-closing trial balance with an optional worksheet

This problem continues the Let's Bike Company situation from Chapter 3.

Requirements

1. Complete the worksheet at December 31, 2018 (optional). Use the unadjusted trial balance from Chapter 2 and the adjusting entries from Chapter 3.
2. Prepare an income statement for the two months ended December 31, 2018. Use the worksheet prepared in Requirement 1 or the adjusted trial balance from Chapter 3.
3. Prepare a statement of retained earnings for the two months ended December 31, 2018.
4. Prepare a classified balance sheet (report form) at December 31, 2018. Assume the Notes Payable is long-term.
5. Journalize and post the closing entries at December 31, 2018. Open T-accounts for Income Summary and Retained earnings. Determine the ending balance for each account. Denote each closing amount as *Clos.* and each account balance as *Balance*.
6. Prepare a post-closing trial balance at December 31, 2018.

COMPREHENSIVE PROBLEMS

> Comprehensive Problem 1 for Chapters 1–4

Murphy Delivery Service completed the following transactions during December 2018:

-
- | | |
|--------|---|
| Dec. 1 | Murphy Delivery Service began operations by receiving \$13,000 cash and a truck with a fair value of \$9,000 from Russ Murphy. The business issued Murphy shares of common stock in exchange for this contribution. |
| 1 | Paid \$600 cash for a six-month insurance policy. The policy begins December 1. |
| 4 | Paid \$750 cash for office supplies. |
| 12 | Performed delivery services for a customer and received \$2,200 cash. |
| 15 | Completed a large delivery job, billed the customer, \$3,300, and received a promise to collect the \$3,300 within one week. |
| 18 | Paid employee salary, \$800. |
| 20 | Received \$7,000 cash for performing delivery services. |
| 22 | Collected \$2,200 in advance for delivery service to be performed later. |
| 25 | Collected \$3,300 cash from customer on account. |
| 27 | Purchased fuel for the truck, paying \$150 on account. (Credit Accounts Payable) |
| 28 | Performed delivery services on account, \$1,400. |
| 29 | Paid office rent, \$1,400, for the month of December. |
| 30 | Paid \$150 on account. |
| 31 | Cash dividends of \$2,500 were paid to stockholders. |
-

Requirements

1. Record each transaction in the journal using the following chart of accounts. Explanations are not required.

Cash	Retained Earnings
Accounts Receivable	Dividends
Office Supplies	Income Summary
Prepaid Insurance	Service Revenue
Truck	Salaries Expense
Accumulated Depreciation—Truck	Depreciation Expense—Truck
Accounts Payable	Insurance Expense
Salaries Payable	Fuel Expense
Unearned Revenue	Rent Expense
Common Stock	Supplies Expense

2. Post the transactions in the T-accounts.
3. Prepare an unadjusted trial balance as of December 31, 2018.
4. Prepare a worksheet as of December 31, 2018 (optional).
5. Journalize the adjusting entries using the following adjustment data and also by reviewing the journal entries prepared in Requirement 1. Post adjusting entries to the T-accounts.

Adjustment data:

- a. Accrued Salaries Expense, \$800.
- b. Depreciation was recorded on the truck using the straight-line method. Assume a useful life of five years and a salvage value of \$3,000.
- c. Prepaid Insurance for the month has expired.
- d. Office Supplies on hand, \$450.
- e. Unearned Revenue earned during the month, \$700.
- f. Accrued Service Revenue, \$450.
6. Prepare an adjusted trial balance as of December 31, 2018.
7. Prepare Murphy Delivery Service's income statement and statement of retained earnings for the month ended December 31, 2018, and the classified balance sheet on that date. On the income statement, list expenses in decreasing order by amount—that is, the largest expense first, the smallest expense last.
8. Journalize the closing entries, and post to the T-accounts.
9. Prepare a post-closing trial balance as of December 31, 2018.

> Comprehensive Problem 2 for Chapters 1–4

This comprehensive problem is a continuation of Comprehensive Problem 1. Murphy Delivery Service has completed closing entries and the accounting cycle for 2018. The business is now ready to record January 2019 transactions.

-
- Jan. 3 Collected \$200 cash from customer on account.
- 5 Purchased office supplies on account, \$1,000.
- 12 Performed delivery services for a customer and received \$3,000 cash.
- 15 Paid employee salary, including the amount owed on December 31, \$4,100.
- 18 Performed delivery services on account, \$1,350.
- 20 Paid \$300 on account.
- 24 Purchased fuel for the truck, paying \$200 cash.
- 27 Completed the remaining work due for Unearned Revenue.
- 28 Paid office rent, \$2,200, for the month of January.
- 30 Collected \$3,000 in advance for delivery service to be performed later.
- 31 Cash dividends of \$1,500 were paid to stockholders.
-

Requirements

1. Record each January transaction in the journal. Explanations are not required.
2. Post the transactions in the T-accounts. Don't forget to use the December 31, 2018, ending balances as appropriate.
3. Prepare an unadjusted trial balance as of January 31, 2019.
4. Prepare a worksheet as of January 31, 2019 (optional).
5. Journalize the adjusting entries using the following adjustment data and also by reviewing the journal entries prepared in Requirement 1. Post adjusting entries to the T-accounts.

Adjustment data:

- a. Office Supplies on hand, \$600.
- b. Accrued Service Revenue, \$1,800.
- c. Accrued Salaries Expense, \$500.
- d. Prepaid Insurance for the month has expired.
- e. Depreciation was recorded on the truck for the month.
6. Prepare an adjusted trial balance as of January 31, 2019.
7. Prepare Murphy Delivery Service's income statement and statement of retained earnings for the month ended January 31, 2019, and the classified balance sheet on that date. On the income statement, list expenses in decreasing order by amount—that is, the largest expense first, the smallest expense last.
8. Calculate the following ratios as of January 31, 2019, for Murphy Delivery Service: return on assets, debt ratio, and current ratio.

> Tying It All Together 4-1

Before you begin this assignment, review the *Tying It All Together* feature in the chapter. It will also be helpful if you review Hyatt Hotels Corporation's 2015 annual report (<https://www.sec.gov/Archives/edgar/data/1468174/000146817416000152/h10-k123115.htm>).

Hyatt Hotels Corporation is headquartered in Chicago and is a leading global hospitality company. The company develops, owns, and operates hotels, resorts, and vacation ownership properties in 52 different countries. For the year ended December 31, 2015, Hyatt Hotels reported the following select account information (in millions):

Revenue	\$ 4,328
Selling, general, and administrative expense	4,005
Other Expenses	61
Interest Expense	68
Income Tax Expense	70
Dividends	0
Retained Earnings, December 31, 2014	2,165

Requirements

1. Journalize Hyatt Hotels Corporation's closing entries at December 31, 2015.
2. Determine Hyatt Hotels Corporation's ending Retained Earnings balance at December 31, 2015.
3. Review the Hyatt Hotels Corporation's balance sheet included in the 2015 annual report and find ending Retained Earnings, December 31, 2015. Does your ending Retained Earnings calculated in Requirement 2 match?

> Ethical Issue 4-1

Grant Film Productions wishes to expand and has borrowed \$100,000. As a condition for making this loan, the bank requires that the business maintain a current ratio of at least 1.50.

Business has been good but not great. Expansion costs have brought the current ratio down to 1.40 on December 15. Rita Grant, owner of the business, is considering what might happen if she reports a current ratio of 1.40 to the bank. One course of action for Grant is to record in December \$10,000 of revenue that the business will earn in January of next year. The contract for this job has been signed.

Requirements

1. Journalize the revenue transaction, and indicate how recording this revenue in December would affect the current ratio.
2. Discuss whether it is ethical to record the revenue transaction in December. Identify the accounting principle relevant to this situation, and give the reasons underlying your conclusion.

> Financial Statement Case 4-1

This case, based on the balance sheet of **Target Corporation**, will familiarize you with some of the assets and liabilities of that company. Visit <http://www.pearsonglobaleditions.com/Sitemap/Horngren/> to view a link to Target Corporation's Fiscal 2015 Annual Report. Use the Target Corporation balance sheet to answer the following questions.

Requirements

1. Which balance sheet format does Target use?
2. Name the company's largest current asset and largest current liability at January 30, 2016.
3. Compute Target's current ratios at January 30, 2016, and January 31, 2015. Did the current ratio improve, worsen, or hold steady?
4. Under what category does Target report furniture, fixtures, and equipment?
5. What was the cost of the company's property, plant, and equipment at January 30, 2016? What was the amount of accumulated depreciation? What was the book value of the property, plant, and equipment?

> Team Project 4-1

Kathy Wintz formed a lawn service business as a summer job. To start the corporation on May 1, 2018, she deposited \$1,000 in a new bank account in the name of the business. The \$1,000 consisted of a \$600 loan from Bank One to her company, Wintz Lawn Service, and \$400 of her own money. The company issued \$400 of common stock to Wintz. Wintz rented lawn equipment, purchased supplies, and hired other students to mow and trim customers' lawns.

At the end of each month, Wintz mailed bills to the customers. On August 31, she was ready to dissolve the corporation and return to college. Because she was so busy, she kept few records other than the checkbook and a list of receivables from customers.

At August 31, the business's checkbook shows a balance of \$2,000, and customers still owe \$750. During the summer, the business collected \$5,500 from customers. The business checkbook lists payments for supplies totaling \$400, and it still has gasoline, weed trimmer cord, and other supplies that cost a total of \$50. The business paid employees \$1,800 and still owes them \$300 for the final week of the summer.

Wintz rented some equipment from Ludwig's Machine Shop. On May 1, the business signed a six-month rental agreement on mowers and paid \$600 for the full rental period in advance. Ludwig's will refund the unused portion of the prepayment if the equipment is returned in good shape. In order to get the refund, Wintz has kept the mowers in excellent condition. In fact, the business had to pay \$300 to repair a mower.

To transport employees and equipment to jobs, Wintz used a trailer that the business bought for \$300. The business estimates that the summer's work used up one-third of the trailer's service potential. The business checkbook lists a payment of \$500 for cash dividends paid during the summer. The business paid the loan back during August. (For simplicity, ignore any interest expense associated with the loan.)

Requirements

1. As a team, prepare the income statement and the statement of retained earnings of Wintz Lawn Service for the four months May 1 through August 31, 2018.
2. Prepare the classified balance sheet (report form) of Wintz Lawn Service at August 31, 2018.
3. Was Wintz's summer work successful? Give your team's reason for your answer.

Pearson MyLab Accounting

For a wealth of online resources, including exercises, problems, media, and immediate tutorial help, please visit <http://www.myaccountinglab.com>.

> Quick Check Answers

1. c 2. b 3. b 4. d 5. d 6. c 7. a 8. a 9. c 10A. b

Merchandising Operations

5



Will They Buy It?

Julie Ryski studied the model on the catwalk who was wearing the latest spring fashion. As a retail buyer for a nationwide high-end department store, Julie is responsible for selecting merchandise that will be sold in stores across America. Not only must Julie have a keen eye for the latest fashion designs and seasonal variations, but she must also understand the needs of the department store's customers. Julie enjoys attending fashion shows and other fashion-oriented promotions, but she knows that there is more to her responsibilities than simply selecting the newest spring outfits.

As Julie contemplates the model and whether she should purchase this merchandise for the department store's spring line, she knows that she has to always keep the department store's gross profit in

mind. She is responsible for ensuring that the merchandise she buys will be purchased by customers and that it is priced effectively to ensure the highest profit maximization possible. In addition, she must ensure that this merchandise can meet the department store's sales goals and ultimate financial objectives. In the long run, Julie is responsible for all aspects of the merchandise that is sold in the store. She must understand how merchandise is reported on the financial statements, how it is recorded in the accounting records, and how the department store determines gross profit (the difference between the original cost and the retail price). Julie's buying decisions and expertise play a major role in the company's profits. Her pricing decisions ultimately affect the net income of the department store and are a major component of the department store's bottom line.



How Do Businesses Account for Merchandise Inventory?

In this chapter, we begin our exploration of companies that sell goods (called *merchandise inventory*) to customers. Although many of the accounting concepts you have learned concerning service businesses apply, merchandisers (businesses that sell inventory) have some unique characteristics you must learn to account for. For example, **Macy's, Inc.**, a nationally known premier retailer of the Macy's and Bloomingdale's brands with nearly 900 stores in 45 states, must have a way of accurately tracking the purchase and sale of its inventory. In addition, Macy's needs to determine if it is selling its merchandise at the right sales prices in order to ensure maximum profit. This chapter explores merchandising operations and how these businesses account for merchandise inventory.



Chapter 5 Learning Objectives



- | | |
|--|---|
| <p>1 Describe merchandising operations and the two types of merchandise inventory systems</p> <p>2 Account for the purchase of merchandise inventory using a perpetual inventory system</p> <p>3 Account for the sale of merchandise inventory using a perpetual inventory system</p> <p>4 Adjust and close the accounts of a merchandising business</p> | <p>5 Prepare a merchandiser's financial statements</p> <p>6 Use the gross profit percentage to evaluate business performance</p> <p>7 Account for multiple performance obligations using a perpetual inventory system (Appendix 5A)</p> <p>8 Account for the purchase and sale of merchandise inventory using a periodic inventory system (Appendix 5B)</p> |
|--|---|

WHAT ARE MERCHANDISING OPERATIONS?

Learning Objective 1

Describe merchandising operations and the two types of merchandise inventory systems

Merchandiser

A business that sells merchandise, or goods, to customers.

Merchandise Inventory

The merchandise that a business sells to customers.

Wholesaler

A type of merchandiser who buys goods from manufacturers and then sells them to retailers.

Retailer

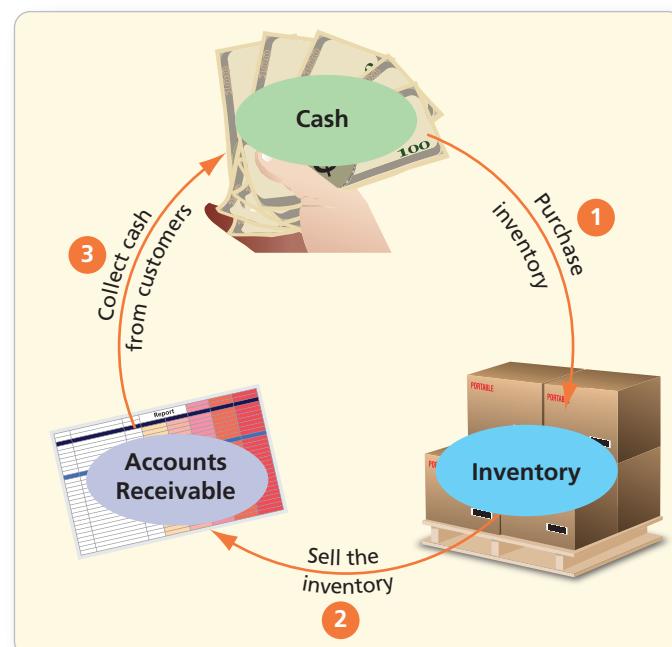
A type of merchandiser who buys merchandise either from a manufacturer or a wholesaler and then sells those goods to consumers.

In earlier chapters, you learned about accounting for Smart Touch Learning, an e-learning business that specializes in providing services: online courses in accounting, economics, marketing, and management. In this chapter, you learn about accounting for merchandisers. A **merchandiser** is a business that sells merchandise, or goods, to customers. The merchandise that this type of business sells is called **merchandise inventory**. Merchandisers are often identified as either wholesalers or retailers. A **wholesaler** is a merchandiser who buys goods from a manufacturer and then sells them to retailers. A **retailer** buys merchandise either from a manufacturer or a wholesaler and then sells those goods to consumers.

The Operating Cycle of a Merchandising Business

The operating cycle of a merchandiser is as follows (see Exhibit 5-1):

Exhibit 5-1 | Operating Cycle of a Merchandiser





- It begins when the company purchases inventory from an individual or business, called a **vendor**.
- The company then sells the inventory to a customer.
- Finally, the company collects cash from customers.

Because the operating cycle of a merchandiser is different than that of a service company, the financial statements differ. Exhibit 5-2 shows how a service company's financial statements (on the left) differ from a merchandiser's financial statements (on the right). As you can see, merchandisers have some new balance sheet and income statement items.

On the income statement, a merchandising company reports revenues using an account called *Sales Revenue* rather than the account *Service Revenue* used by service companies. A merchandiser also reports the cost of merchandise inventory that has been sold to customers, or **Cost of Goods Sold (COGS)**. Cost of Goods Sold is also called *Cost of Sales*. Because COGS is usually a merchandiser's main expense, an intermediary calculation,

Vendor

The individual or business from whom a company purchases goods.

Cost of Goods Sold (COGS)

The cost of the merchandise inventory that the business has sold to customers.

Exhibit 5-2 | Financial Statements of a Service Company and a Merchandising Company

SERVICE COMPANY		MERCHANTISING COMPANY	
Income Statement		Income Statement	
Year Ended December 31, 2018		Year Ended December 31, 2018	
Service Revenue	\$ 230,000	Sales Revenue	\$ 230,000
Operating Expenses:		Cost of Goods Sold	100,000
Salaries Expense	\$ 80,000	Gross Profit	130,000
Rent Expense	24,000	Operating Expenses:	
Depreciation Expense—Furniture	9,000	Salaries Expense	\$ 80,000
Utilities Expense	3,000	Rent Expense	24,000
Total Operating Expenses	116,000	Depreciation Expense—Furniture	9,000
Net Income	\$ 114,000	Utilities Expense	3,000
Service Revenue – Operating Expenses = Net Income		Total Operating Expenses	116,000
		Net Income	\$ 14,000
Gross Profit – Operating Expenses = Net Income			

SERVICE COMPANY		MERCHANTISING COMPANY	
Balance Sheet (Partial)		Balance Sheet (Partial)	
December 31, 2018		December 31, 2018	
Assets		Assets	
Current Assets:		Current Assets:	
Cash	\$ 34,000	Cash	\$ 34,000
Accounts Receivable	10,800	Accounts Receivable	10,800
Office Supplies	800	Merchandise Inventory	60,000
Prepaid Rent	2,100	Office Supplies	800
Total Current Assets	\$ 47,700	Prepaid Rent	2,100
		Total Current Assets	\$ 107,700
Merchandise Inventory is included in a merchandising company's current assets.			

**Gross Profit**

Excess of Net Sales Revenue over Cost of Goods Sold.

Operating Expenses

Expenses, other than Cost of Goods Sold, that are incurred in the entity's major ongoing operations.

gross profit, is determined before calculating net income. **Gross profit** (also called *gross margin*) is calculated as Net Sales Revenue minus Cost of Goods Sold and represents the markup on the merchandise inventory. Gross profit is the extra amount the company receives from the customer (for the merchandise sold) over what the company paid to the vendor. After calculating gross profit, operating expenses are then deducted to determine net income. **Operating expenses** are expenses, other than Cost of Goods Sold, that occur in the entity's major ongoing operations.

On the balance sheet, a merchandiser includes Merchandise Inventory in the current assets section representing the value of inventory that the business has on hand to sell to customers. Remember that the assets in the current asset section are listed in the order of liquidity; therefore, Merchandise Inventory is usually listed below Accounts Receivable but before the prepaid assets.

Merchandise Inventory Systems: Perpetual and Periodic Inventory Systems

Businesses must have a way to determine the value of merchandise inventory on hand and also the value of the merchandise inventory sold. There are two main types of inventory accounting systems that are used:

- Periodic inventory system
- Perpetual inventory system

Periodic Inventory System

An inventory system that requires businesses to obtain a physical count of inventory to determine quantities on hand.

Perpetual Inventory System

An inventory system that keeps a running computerized record of merchandise inventory.

The **periodic inventory system** requires businesses to obtain a physical count of inventory to determine the quantities on hand. The system is normally used for relatively inexpensive goods, such as in a small, local store without optical-scanning cash registers that does not keep a running record of every loaf of bread and every key chain that it sells. Restaurants and small retail stores often use the periodic inventory system. Appendix 5B covers the periodic inventory system, which is becoming less and less popular because most accounting is done using computerized methods.

The **perpetual inventory system** keeps a running computerized record of merchandise inventory—that is, the number of inventory units and the dollar amounts associated with the inventory are perpetually (constantly) updated. This system achieves better control over the inventory. A modern perpetual inventory system records the following:

- Units purchased and cost amounts.
- Units sold and sales and cost amounts.
- The quantity of merchandise inventory on hand and its cost.

In a perpetual inventory system, merchandise inventory and purchasing systems are integrated with the records for Accounts Receivable and Sales Revenue. For example, major department stores' computers use bar codes to keep up-to-the-minute records and show the current inventory at any time.

In a perpetual inventory system, the “cash register” at the store is a computer terminal that records sales and updates inventory records. **Bar codes are scanned by a laser. The bar coding is linked to merchandise inventory and cost data that are used to keep track of each unique inventory item.** However, note that even in a perpetual inventory system, the business must count inventory at least once a year. The physical count captures inventory transactions that are not recorded by the electronic system (such as misplaced, stolen, or damaged inventory). The count establishes the correct amount of ending inventory for the financial statements and also serves as a check on the perpetual records.

Are the bar codes I see on goods I purchase used to track inventory in the accounting system?





Try It!

Match the accounting terminology to the definitions.

- | | |
|-------------------------------|--|
| 1. Cost of Goods Sold | a. An inventory system that requires businesses to obtain a physical count of inventory to determine quantities on hand. |
| 2. Perpetual inventory system | b. Expenses, other than Cost of Goods Sold, that are incurred in the entity's major ongoing operations. |
| 3. Vendor | c. Excess of Net Sales Revenue over Cost of Goods Sold. |
| 4. Periodic inventory system | d. The cost of merchandise inventory that the business has sold to customers. |
| 5. Operating expenses | e. The individual or business from whom a company purchases goods. |
| 6. Gross profit | f. An inventory system that keeps a running computerized record of merchandise inventory. |

Check your answers online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercise S5-1. [Pearson MyLab Accounting](#)

HOW ARE PURCHASES OF MERCHANDISE INVENTORY RECORDED IN A PERPETUAL INVENTORY SYSTEM?

As noted previously, the cycle of a merchandising entity begins with the purchase of merchandise inventory. We will continue to use our fictitious company, Smart Touch Learning, which has now decided to discontinue its service business and instead plans to sell touch screen tablet computers that are preloaded with its e-learning software programs. Smart Touch Learning will purchase these tablets from a vendor. We assume Smart Touch Learning uses a perpetual inventory system.

The vendor (Southwest Electronics Direct) ships the tablet computers to Smart Touch Learning and sends an invoice the same day. The **invoice** is the seller's (Southwest Electronics Direct) request for payment from the buyer (Smart Touch Learning). An invoice is also called a **bill**. Exhibit 5-3 (on the next page) is the bill that Smart Touch Learning receives from Southwest Electronics Direct. After the merchandise inventory is received, Smart Touch Learning pays the vendor.

Learning Objective 2

Account for the purchase of merchandise inventory using a perpetual inventory system

Invoice

A seller's request for payment from the purchaser.

For Southwest Electronics Direct, the **seller**, the invoice is called a **sales** invoice. For Smart Touch Learning, the **purchaser**, the invoice is called a **purchase** invoice.

**Exhibit 5-3 | Purchase Invoice**

<p>1</p> <p>Southwest Electronics Direct P.O. BOX 101010 HOUSTON, TX 77212</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: center;">Invoice</th> </tr> <tr> <th style="text-align: center;">Date</th> <th style="text-align: center;">Number</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">6/1/19</td> <td style="text-align: center;">410</td> </tr> </tbody> </table>	Invoice		Date	Number	6/1/19	410	<p>3</p> <p>2</p> <p>Shipped To: SMART TOUCH LEARNING 227 LAKE STREET POMPTON PLAINS, NJ 07444</p>	<p>6 <i>Pd. 6/15/19</i></p>	<p>4</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: left;">Credit Terms</th> </tr> <tr> <td colspan="2" style="text-align: left;">3/15, NET 30 DAYS</td> </tr> </thead> <tbody> <tr> <td style="width: 10%;"> </td> <td style="width: 90%;">Description</td> </tr> <tr> <td> </td> <td>Touch Screen Tablet Computers</td> </tr> <tr> <td> </td> <td style="text-align: right;">100</td> </tr> <tr> <td> </td> <td style="text-align: right;">\$ 350</td> </tr> <tr> <td> </td> <td style="text-align: right;">\$35,000</td> </tr> </tbody> </table>	Credit Terms		3/15, NET 30 DAYS			Description		Touch Screen Tablet Computers		100		\$ 350		\$35,000	<p>5</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="3" style="text-align: left;">Due Date & Due Amount</th> </tr> <tr> <td style="width: 33%;">06/16/19</td> <td style="width: 33%;">07/01/2019</td> <td style="width: 34%;"> </td> </tr> <tr> <td>\$33,950</td> <td>\$35,000</td> <td> </td> </tr> </thead> </table>	Due Date & Due Amount			06/16/19	07/01/2019		\$33,950	\$35,000		<p>7</p>	<p>5</p>
Invoice																																				
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	\$35,000																																			
Due Date & Due Amount																																				
06/16/19	07/01/2019																																			
\$33,950	\$35,000																																			

Explanations:

- 1** The seller is Southwest Electronics Direct.
- 2** The purchaser is Smart Touch Learning.
- 3** The invoice date is needed to determine whether the purchaser gets a discount for prompt payment (see 4).
- 4** Credit terms: If Smart Touch Learning pays within 15 days of the invoice date, it can deduct a 3% discount. Otherwise, the full amount—NET—is due in 30 days.
- 5** Total invoice amount is \$35,000.
- 6** Smart Touch Learning's payment date. How much did Smart Touch Learning pay? (see 7).
- 7** Payment occurred 14 days after the invoice date—within the discount period—so Smart Touch Learning paid \$33,950 (\$35,000–3% discount).

Purchase of Merchandise Inventory

Here we use the actual invoice in Exhibit 5-3 to illustrate the purchasing process. Suppose Smart Touch Learning receives the goods on June 3, 2019, and makes payment on that date (ignore the credit terms on the invoice at this point). Smart Touch Learning records this purchase as follows:

$$\begin{array}{c} A \uparrow \\ \text{Merchandise} \\ \text{Inventory} \uparrow \\ \text{Cash} \downarrow \end{array} = \left\{ \begin{array}{c} L \quad + \quad E \end{array} \right.$$

Date	Accounts and Explanation		Debit	Credit
Jun. 3	Merchandise Inventory			35,000
	Cash			35,000
	<i>Purchased inventory for cash.</i>			

The Merchandise Inventory account, an asset, is used only for goods purchased that the business owns and intends to resell to customers. Office Supplies, Equipment, and other assets are recorded in their own accounts.



Assume that on June 3, instead of paying cash, Smart Touch Learning receives the merchandise inventory on account. The purchase of inventory on account is recorded as follows:

Date	Accounts and Explanation	Debit	Credit
Jun. 3	Merchandise Inventory	35,000	
	Accounts Payable		35,000
<i>Purchased inventory on account.</i>			

$$\begin{array}{c} \text{A}\uparrow \\ \text{Merchandise} \\ \text{Inventory}\uparrow \end{array} = \left\{ \begin{array}{c} \text{L}\uparrow \\ + \\ \text{E} \end{array} \right. \\ \text{Accounts} \\ \text{Payable}\uparrow \end{math>$$

Purchase Discounts

Many businesses offer purchasers a discount for early payment. This is called a **purchase discount** from the purchaser's perspective. Southwest Electronics Direct's **credit terms** of "3/15, NET 30 DAYS" mean that Smart Touch Learning can deduct 3% from the total bill (excluding freight charges, if any) if the company pays within 15 days of the invoice date. Otherwise, the full amount—NET—is due in 30 days. These credit terms can also be expressed as "3/15, n/30."

Terms of "n/30" mean that no discount is offered and payment is due 30 days after the invoice date. Most credit terms express the discount, the discount time period, and the final due date. Occasionally, the credit terms are expressed as EOM, which means payment is due at the end of the current month.

If Smart Touch Learning pays on June 15, 2019, which is within the discount period, the cash payment entry would be as follows:

Date	Accounts and Explanation	Debit	Credit
Jun. 15	Accounts Payable	35,000	
	Cash (\$35,000 – \$1,050)		33,950
	Merchandise Inventory (\$35,000 × 0.03)		1,050
<i>Paid within discount period.</i>			

$$\begin{array}{c} \text{A}\downarrow \\ \text{Cash}\downarrow \\ \text{Merchandise} \\ \text{Inventory}\downarrow \end{array} = \left\{ \begin{array}{c} \text{L}\downarrow \\ + \\ \text{E} \end{array} \right. \\ \text{Accounts} \\ \text{Payable}\downarrow \end{math>$$

When making payment within a discount period, always debit Accounts Payable for the full amount of the invoice; otherwise there will be a balance remaining in the payable account even though the invoice has been paid in full.

The purchase discount is credited to the Merchandise Inventory account because the discount for early payment decreases the actual cost paid for Merchandise Inventory, as shown in the T-account:

Merchandise Inventory		Accounts Payable	
June 3	35,000	June 15	35,000
Bal.	1,050	Bal.	35,000

June 15	35,000	June 3
Bal.	0	

Notice that the balance in the Merchandise Inventory account, \$33,950, is exactly what was paid for the Merchandise Inventory on June 15, 2019. Also notice that the Accounts Payable account shows that the invoice was paid in full with no remaining balance.

What if Smart Touch Learning pays this invoice on June 24, 2019, after the discount period ends? Smart Touch Learning must pay the full \$35,000.

Purchase Discount

A discount that businesses offer to purchasers as an incentive for early payment.

Credit Terms

The payment terms of purchase or sale as stated on the invoice.

What if a purchaser does not pay for the invoice within the discount period?





In that case, the payment entry is as follows:

$$\begin{array}{c} A \downarrow \\ \text{Cash} \downarrow \end{array} = \left\{ \begin{array}{c} L \downarrow \\ \text{Accounts} \\ \text{Payable} \downarrow \end{array} + E \right.$$

Date	Accounts and Explanation	Debit	Credit
Jun. 24	Accounts Payable	35,000	
	Cash		35,000
<i>Paid after discount period.</i>			

Purchase Returns and Allowances

Purchase Allowance

An amount granted to the purchaser as an incentive to keep goods that are not "as ordered."

Purchase Return

A situation in which sellers allow purchasers to return merchandise that is defective, damaged, or otherwise unsuitable.

Sellers allow purchasers to return merchandise that is defective, damaged, or otherwise unsuitable. This is called a **purchase return** from the purchaser's perspective. Alternatively, the seller may deduct an allowance from the amount the buyer owes. **Purchase allowances** are granted to the purchaser as an incentive to keep goods that are not "as ordered." Together, purchase returns and allowances decrease the buyer's cost of the merchandise inventory.

Assume that Smart Touch Learning has not yet paid the original bill of June 1. Suppose 20 of the tablets purchased on that invoice (Exhibit 5-3) were damaged in shipment. On June 4, Smart Touch Learning returns the goods (tablets, in this case) valued at \$7,000 to the vendor (Southwest Electronics Direct) and records the purchase return as follows:

$$\begin{array}{c} A \downarrow \\ \text{Merchandise} \\ \text{Inventory} \downarrow \end{array} = \left\{ \begin{array}{c} L \downarrow \\ \text{Accounts} \\ \text{Payable} \downarrow \end{array} + E \right.$$

Date	Accounts and Explanation	Debit	Credit
Jun. 4	Accounts Payable	7,000	
	Merchandise Inventory (20 tablets × \$350 per tablet)		7,000
<i>Returned inventory to seller (vendor).</i>			

ETHICS

How should you handle gifts from vendors?

Anthony Jackson works as a buyer for a large department store that has decided to expand into selling seasonal home decor. Anthony has been charged with the responsibility of selecting the vendor for the new inventory that the store will sell. His purchasing manager has provided him with two possible vendors to choose from. One vendor, Abbey's Wholesalers, has a long-standing relationship with the department store and can be counted on to provide high-quality goods on a timely basis. The other vendor, Zeta Wholesalers, is a new company that doesn't have much of a track record and is just getting established as a home decor wholesaler. Anthony has contacted both vendors to set up meetings to discuss the new inventory and possible credit terms available. The day before the meeting with the potential vendors, Anthony receives a pair of football tickets to a major NFL game in the mail from Abbey's

Wholesalers thanking him for his continued relationship with the wholesaler. What should Anthony do?

Solution

Anthony should contact his purchasing manager and explain the situation to him or her. By accepting the football tickets, Anthony might unknowingly be violating the code of ethics of the business. Most businesses have a code of ethics that relates to inventory management and purchasing specifically discussing conflicts of interest. Conflicts of interest occur when a vendor is selected above another vendor because of possible personal financial gain such as receiving gifts or entertainment from the selected vendor. Anthony should carefully discuss the situation with his manager before accepting the tickets.



The exact same entry is made for a purchase allowance granted to the buyer from the seller (vendor). The only difference between a purchase return and a purchase allowance is that, in the case of the allowance, Smart Touch Learning keeps the inventory.

Occasionally, a business will return merchandise inventory or receive an allowance before payment has been made. In this scenario, if the payment of the invoice is made within the discount period, the discount should be calculated net of the return or allowance. Let's look at another example. Suppose that on June 10, Smart Touch Learning purchased 15 tablets from Southwest Electronics Direct on account with credit terms of 3/15, n/30 at a cost of \$5,250. Five days later, Smart Touch Learning returned five tablets to the vendor because of damages and received a purchase return of \$1,750. When Smart Touch Learning makes payment on June 20 (within the discount period), it will calculate the discount on the amount due less the return or \$3,500 ($\$5,250 - \$1,750$). Smart Touch Learning's discount will be \$105 ($\$3,500 \times 0.03$). The entries that Smart Touch Learning would record for these transactions follow:

Date	Accounts and Explanation	Debit	Credit
Jun. 10	Merchandise Inventory Accounts Payable	5,250	5,250
	<i>Purchased inventory on account.</i>		
15	Accounts Payable Merchandise Inventory	1,750	1,750
	<i>Returned inventory to the seller (vendor).</i>		
20	Accounts Payable ($\$5,250 - \$1,750$) Cash ($\$3,500 - \105) Merchandise Inventory ($\$3,500 \times 0.03$)	3,500	3,395 105
	<i>Paid within discount period net of return.</i>		

$$\begin{array}{l}
 \frac{A\uparrow}{\text{Merchandise Inventory}\uparrow} = \left\{ \begin{array}{l} \frac{L\uparrow}{\text{Accounts Payable}\uparrow} + \text{E} \end{array} \right. \\
 \\
 \frac{A\downarrow}{\text{Merchandise Inventory}\downarrow} = \left\{ \begin{array}{l} \frac{L\downarrow}{\text{Accounts Payable}\downarrow} + \text{E} \end{array} \right. \\
 \\
 \frac{A\downarrow}{\text{Cash}\downarrow \text{Merchandise Inventory}\downarrow} = \left\{ \begin{array}{l} \frac{L\downarrow}{\text{Accounts Payable}\downarrow} + \text{E} \end{array} \right. \\
 \end{array}$$

TYING IT ALL TOGETHER

Macy's, Inc. was established in 1858 and sells an assortment of major brands such as Calvin Klein, Michael Kors, Ralph Lauren, and Tommy Hilfiger. Macy's purchases its inventory from third-party suppliers and for the year ending January 30, 2016, Macy's reported cost of sales of \$16,496 million. Companies, such as Macy's, often have the opportunity to pay for their purchases within a discount period in order to receive a discount on the amount due.

How does a company decide if they should pay within the discount period?

Companies make decisions to pay within a discount period based on many factors. First, companies must evaluate if they have the excess cash flow to pay early or if the cash will be needed to pay

other vendors. Second, the company should evaluate if the cash could be used for other more profitable purposes during the discount period. For example, some companies are able to invest the cash and earn more during the discount period than the available discount.

Should a company borrow money to make payment within the discount period?

Companies should borrow the money only if the amount of interest expense paid on the loan will be less than the discount received. It does not make sense for companies to borrow money to make an early payment if in the long run the company will end up paying more in interest expense than the discount received.



FOB Shipping Point

Situation in which the buyer takes ownership (title) to the goods after the goods leave the seller's place of business (shipping point) and the buyer typically pays the freight.

FOB Destination

Situation in which the buyer takes ownership (title) to the goods at the delivery destination point and the seller typically pays the freight.

Freight In

The transportation cost to ship goods into the purchaser's warehouse; therefore, it is freight on purchased goods.

Freight Out

The transportation cost to ship goods out of the seller's warehouse; therefore, it is freight on goods sold to a customer.

Transportation Costs

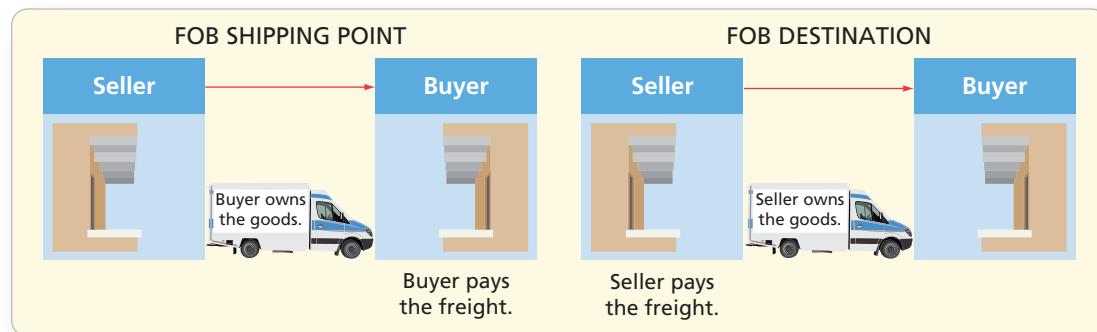
Either the seller or the buyer must pay the transportation cost of shipping merchandise inventory. The purchase agreement specifies FOB (free on board) terms to determine when title to the goods transfers to the purchaser and who pays the freight. Exhibit 5-4 shows that:

- **FOB shipping point** means the buyer takes ownership (title) to the goods after the goods leave the seller's place of business (shipping point). In most cases, the buyer (owner of the goods while in transit) also pays the freight.
- **FOB destination** means the buyer takes ownership (title) to the goods at the delivery destination point. In most cases, the seller (owner of the goods while in transit) also pays the freight.

When merchandisers are required to pay for shipping costs, those costs are classified as either freight in or freight out as follows:

- **Freight in** is the transportation cost to ship goods into the purchaser's warehouse; thus, it is freight on purchased goods.
- **Freight out** is the transportation cost to ship goods out of the seller's warehouse and to the customer; thus, it is freight on goods sold to a customer.

Exhibit 5-4 | FOB Terms Determine Who Pays the Freight



Freight In

With the terms FOB shipping point, the buyer owns the goods while they are in transit, so the buyer pays the freight. Because the freight is a cost that must be paid to acquire the inventory, freight in becomes part of the cost of merchandise inventory. As a result, freight in costs are debited to the Merchandise Inventory account. Suppose Smart Touch Learning pays a \$60 freight charge on June 3 for a purchase with FOB shipping point, and makes the following entry:

$$\begin{array}{c} \text{A} \uparrow \\ \text{Merchandise} \\ \text{Inventory} \uparrow \\ \text{Cash} \downarrow \end{array} = \left\{ \begin{array}{c} \text{L} \quad + \quad \text{E} \end{array} \right\}$$

Date	Accounts and Explanation	Debit	Credit
Jun. 3	Merchandise Inventory	60	
	Cash		60
<i>Paid a freight bill.</i>			



Freight In Within Discount Period

Discounts are computed only on the merchandise purchased from the seller. Discounts are not computed on the transportation costs because there is no discount on freight.

Under FOB shipping point, the seller sometimes prepays the transportation cost as a convenience and lists this cost on the invoice. Assume, for example, Smart Touch Learning makes a \$5,000 purchase of goods, coupled with a related freight charge of \$400, on June 20 on account with terms of 3/5, n/30. The terms of shipment are FOB shipping point. The seller prepays the freight charge. The purchase would be recorded as follows:

Date	Accounts and Explanation	Debit	Credit
Jun. 20	Merchandise Inventory (\$5,000 + \$400)	5,400	
	Accounts Payable		5,400
<i>Purchased inventory on account, including freight.</i>			

$$\left. \begin{array}{c} A \uparrow \\ \text{Merchandise} \\ \text{Inventory} \uparrow \end{array} \right\} = \left. \begin{array}{c} L \uparrow \\ \text{Accounts} \\ \text{Payable} \uparrow \end{array} \right\} + E$$

If Smart Touch Learning pays within the discount period, the discount will be computed only on the \$5,000 merchandise cost, not on the total invoice of \$5,400. The \$400 freight is not eligible for the discount. So, the 3% discount would be \$150 ($\$5,000 \times 0.03$). The entry to record the early payment on June 25 follows:

Date	Accounts and Explanation	Debit	Credit
Jun. 25	Accounts Payable	5,400	
	Cash (\$5,400 - \$150)		5,250
	Merchandise Inventory (\$5,000 × 0.03)		150
<i>Paid within discount period, including freight.</i>			

$$\left. \begin{array}{c} A \downarrow \\ \text{Cash} \downarrow \\ \text{Merchandise} \\ \text{Inventory} \downarrow \end{array} \right\} = \left. \begin{array}{c} L \downarrow \\ \text{Accounts} \\ \text{Payable} \downarrow \end{array} \right\} + E$$

Cost of Inventory Purchased

The net cost of merchandise inventory purchased includes the purchase cost of inventory, less purchase returns and allowances, less purchase discounts, plus freight in. Knowing the net cost of inventory allows a business to determine the actual cost of the merchandise purchased and is calculated as follows:

$$\begin{aligned} \text{Net Cost of Inventory Purchased} &= \text{Purchase cost of inventory} - \text{Purchase returns and allowances} \\ &\quad - \text{Purchase discounts} + \text{Freight in} \end{aligned}$$

Suppose that during the year, Smart Touch Learning buys \$281,750 of inventory, returns \$61,250 of the goods, and takes a \$4,410 early payment discount. The company also pays \$14,700 of freight in. The following summary shows Smart Touch Learning's net cost of this merchandise inventory purchased.

Purchases	\$ 281,750
Less: Purchase Returns and Allowances	61,250
Purchase Discounts	4,410
Plus: Freight In	14,700
Net Cost of Inventory Purchased	<u><u>\$ 230,790</u></u>



Try It!

7. Click Computers has the following transactions in July related to the purchase of merchandise inventory.

July 1 Purchase of \$20,500 worth of computers on account, terms of 2/10, n/30.
 3 Return of \$4,000 of the computers to the vendor.
 9 Payment made on account.

Journalize the purchase transactions for Click Computers assuming the company uses the perpetual inventory system.

Check your answers online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercises S5-2 and S5-3. **Pearson MyLab Accounting**

HOW ARE SALES OF MERCHANDISE INVENTORY RECORDED IN A PERPETUAL INVENTORY SYSTEM?

Learning Objective 3

Account for the sale of merchandise inventory using a perpetual inventory system

Cash and Credit Card Sales

Sales of retailers, such as Smart Touch Learning, are often made for cash or credit card. Credit card sales are recorded as cash sales and the fees associated with credit card sales will be discussed in Chapter 7. Suppose Smart Touch Learning sold two tablets for cash on June 19, 2019, to a customer and issued the sales invoice in Exhibit 5-5. To the seller, a sales invoice is a bill showing what amount the customer must pay.

Exhibit 5-5 | Sales Invoice

Date: June 19, 2019

Invoice #582



Quantity	Item	Unit Price	Total
2	Touch Screen Tablet Computers	\$500	\$1,000
Total			\$1,000



The amount a business earns from selling merchandise inventory is called **Sales Revenue** (also called *Sales*). At the time of the sale, two entries must be recorded in the perpetual inventory system. One entry records the Sales Revenue and the Cash (or Accounts Receivable) at the time of the sale. The second entry records Cost of Goods Sold (debit the expense) and reduces the Merchandise Inventory (credit the asset). Remember, Cost of Goods Sold is an expense account and represents the cost of inventory that has been sold to customers.

To record the sale by Smart Touch Learning, two journal entries must be recorded. The first journal entry records the cash sale of \$1,000 by debiting Cash and crediting Sales Revenue. A second journal entry must also be made to record the expense and decrease the Merchandise Inventory balance. Suppose these goods sold by Smart Touch Learning cost \$700. The second journal entry would transfer the \$700 from the Merchandise Inventory account to the Cost of Goods Sold account, as follows:

Date	Accounts and Explanation	Debit	Credit
Jun. 19	Cash Sales Revenue <i>Cash sale.</i>	1,000	1,000
19	Cost of Goods Sold Merchandise Inventory <i>Recorded the cost of goods sold.</i>	700	700

This entry records the Sales Revenue.

This entry records the expense and the reduction of Merchandise Inventory.

$$\begin{array}{l} \text{A}\uparrow \\ \text{Cash}\uparrow \end{array} = \left\{ \begin{array}{l} \text{L} + \text{E}\uparrow \\ \text{Sales Revenue}\uparrow \end{array} \right.$$

$$\begin{array}{l} \text{A}\downarrow \\ \text{Merchandise Inventory}\downarrow \end{array} = \left\{ \begin{array}{l} \text{L} + \text{E}\downarrow \\ \text{Cost of Goods Sold}\uparrow \end{array} \right.$$

The Cost of Goods Sold account keeps a current balance throughout the period in a perpetual inventory system of the cost of merchandise inventory sold. In this example, Cost of Goods Sold is \$700 (the cost to Smart Touch Learning) rather than \$1,000, the sales price (retail price) of the goods. Cost of Goods Sold is always based on the company's cost, not the retail price.

Merchandise Inventory			Cost of Goods Sold		
Bal.	xx,xxx	700	June 19	June 19	700

Sales on Account

Many sales are made on account (on credit) instead of with cash or a credit card. Now let's assume that Smart Touch Learning sold 5 tablets for \$500 each, making a \$2,500 (5 tablets \times \$500 per tablet) sale on account on June 15. The goods cost \$1,750. Smart Touch Learning would record the sale on account as follows:

Date	Accounts and Explanation	Debit	Credit
Jun. 15	Accounts Receivable Sales Revenue <i>Sale on account.</i>	2,500	2,500
15	Cost of Goods Sold Merchandise Inventory <i>Recorded the cost of goods sold.</i>	1,750	1,750

A \uparrow	
Accounts Receivable \uparrow	= $\left\{ \begin{array}{l} \text{L} + \text{E}\uparrow \\ \text{Sales Revenue}\uparrow \end{array} \right.$
Merchandise Inventory \downarrow	= $\left\{ \begin{array}{l} \text{L} + \text{E}\downarrow \\ \text{Cost of Goods Sold}\uparrow \end{array} \right.$



Sales Discounts

Sales Discounts

Reduction in the amount of revenue earned on sales for early payment.

Many sellers offer customers a discount for early payment. We saw that purchase discounts decrease the cost of inventory purchases. In the same way, **sales discounts** decrease the net amount of revenue earned on sales. Under the new revenue recognition standards (introduced in Chapter 3), sales are recorded at the net amount or the amount of the sale less any sales discounts.¹

For example, assume on June 21, Smart Touch Learning sold 10 tablets for \$500 each on account with terms of 2/10, n/30. The goods cost \$3,500. In this case, Smart Touch Learning will record the sale at the net amount of \$4,900—the \$5,000 less the 2% discount, \$100 ($\$5,000 \times 0.02$). The entries to record the sale and cost of goods sold follow:

$$\begin{array}{c} A \uparrow \\ \hline \text{Accounts} \\ \text{Receivable} \uparrow \end{array} = \left\{ \begin{array}{c} L + E \uparrow \\ \text{Sales} \\ \text{Revenue} \uparrow \end{array} \right.$$

$$\begin{array}{c} A \downarrow \\ \hline \text{Merchandise} \\ \text{Inventory} \downarrow \end{array} = \left\{ \begin{array}{c} L + E \downarrow \\ \text{Cost of Goods} \\ \text{Sold} \uparrow \end{array} \right.$$

Date	Accounts and Explanation	Debit	Credit
Jun. 21	Accounts Receivable	4,900	
	Sales Revenue ($\$5,000 - (\$5,000 \times 0.02)$)		4,900
	<i>Sale on account less discount.</i>		
21	Cost of Goods Sold	3,500	
	Merchandise Inventory		3,500
	<i>Recorded the cost of goods sold.</i>		

When the customer makes payment within the discount period, Smart Touch Learning will record the receipt of cash and decrease the Accounts Receivable for \$4,900 as follows:

$$\begin{array}{c} A \downarrow \\ \hline \text{Cash} \uparrow \\ \text{Accounts} \\ \text{Receivable} \downarrow \end{array} = \left\{ \begin{array}{c} L + E \\ \text{ } \end{array} \right.$$

Date	Accounts and Explanation	Debit	Credit
Jun. 30	Cash	4,900	
	Accounts Receivable		4,900
	<i>Cash collection within the discount period.</i>		

If for some reason the customer does not pay within the discount period, the customer will no longer receive the \$100 discount and the customer must pay the full \$5,000 amount. Smart Touch Learning would record the discount lost using the account Sales Discounts Forfeited. The account, Sales Discounts Forfeited, increases Other Income and Expenses on the income statement.

$$\begin{array}{c} A \downarrow \\ \hline \text{Cash} \uparrow \\ \text{Accounts} \\ \text{Receivable} \downarrow \end{array} = \left\{ \begin{array}{c} L + E \uparrow \\ \text{Sales} \\ \text{Discounts} \\ \text{Forfeited} \uparrow \end{array} \right.$$

Date	Accounts and Explanation	Debit	Credit
Jul. 10	Cash	5,000	
	Accounts Receivable		4,900
	Sales Discounts Forfeited		100
	<i>Cash collection outside the discount period.</i>		

¹ This presentation is consistent with *Revenue from Contracts with Customers (Topic 606)*.



Notice that in either scenario, if the customer paid within the discount period or outside of the discount period, Smart Touch Learning credited the Accounts Receivable for the net amount of the invoice. As shown in the following T-account, by doing this, Smart Touch Learning has shown that the invoice was paid in full with no remaining balance.

Accounts Receivable			
June 21	4,900	4,900	Payment
Bal.	0		

Sales Returns and Allowances

After making a sale, Smart Touch Learning may have customers that return goods, asking for a refund or credit to the customer's account. Or the company may instead grant a sales allowance to encourage the customer to accept the nonstandard goods. Such an allowance reduces the future cash collected from the customer or requires a refund. The return of goods or granting of an allowance on sales is called **Sales Returns and Allowances**.

Estimating Sales Returns

Under the new revenue recognition standard, companies should only record sales revenue in the amount they expect to eventually realize. Therefore, companies must decrease sales revenue by an estimated amount of sales returns. Using historical data, companies will estimate the amount of sales returns related to the sales for that period. For example, assume that Smart Touch Learning had sales of \$1,000,000 for the period ending December 31, 2019. The cost of goods sold related to those sales was \$600,000. Smart Touch Learning estimates that approximately 4% of the merchandise sold will be returned, or \$40,000 ($\$1,000,000 \times 4\%$) of sales revenue and \$24,000 ($\$600,000 \times 4\%$) of merchandise inventory. Smart Touch Learning will need to record two adjusting entries on December 31 to account for the estimated returns as follows:

Sales Returns and Allowances

Customer's return of merchandise or an allowance granted to the customer.

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Sales Revenue Refunds Payable <i>To record estimated refunds for the year.</i>	40,000	40,000
31	Estimated Returns Inventory Cost of Goods Sold <i>To record cost of estimated returns for the year.</i>	24,000	24,000

$$\begin{aligned}
 A &= \left\{ \begin{array}{l} L \uparrow + E \downarrow \\ \text{Refunds Payable} \uparrow \quad \text{Sales Revenue} \downarrow \end{array} \right. \\
 A \uparrow &= \left\{ \begin{array}{l} L \uparrow + E \uparrow \\ \text{Estimated Returns Inventory} \uparrow \quad \text{Cost of Goods Sold} \downarrow \end{array} \right.
 \end{aligned}$$

The first adjusting entry involves a debit to Sales Revenue that reduces sales for the year by the expected amount of the returns, thereby recording sales revenue at the net amount the company expects to eventually collect. The Refunds Payable account is a liability account and is reported on the balance sheet.

In the second adjusting entry, Smart Touch Learning debits an asset account, Estimated Returns Inventory, that represents the cost of the inventory the company believes it will receive in returns. The corresponding credit to Cost of Goods Sold decreases the expense.



Actual Return of Inventory

When a customer actually returns the inventory, the company will need to record the refund of cash to the customer (or credit of Accounts Receivable), and also the return of merchandise inventory. For example, assume that on January 20, 2020, a customer returned merchandise purchased with cash with a sales price of \$2,000. The cost of the goods was \$800. Smart Touch Learning refunded the cash to the customer and would record the following entries:

$A \downarrow$	$Cash \downarrow$	$=$	$L \downarrow + E$
			$Refunds \downarrow$
			$Payable \downarrow$
$A \uparrow$	$Merchandise \uparrow$	$=$	$L + E$
	$Inventory \uparrow$		
$Estimated \uparrow$			
$Returns \uparrow$			
$Inventory \downarrow$			

Date	Accounts and Explanation	Debit	Credit
Jan. 20	Refunds Payable	2,000	
	Cash		2,000
	<i>To record refund.</i>		
20	Merchandise Inventory	800	
	Estimated Returns Inventory		800
	<i>To record cost of inventory returned.</i>		

In recording the previous entries, Smart Touch Learning decreases the payable associated with the amount of estimated refunds. In addition, the Merchandise Inventory account has increased because the company received the returned inventory. To offset this, the Estimated Returns Inventory account decreases.

Sales Allowance

In situations of a sales allowance, a customer requests a refund of some portion owed but the customer does not return the inventory. When a seller grants a sales allowance, the company issues a credit memo indicating that the company will reduce the customer's Accounts Receivable or issue a cash refund. The company also reduces the estimated refunds payable. Because there is no return of goods, the company does not need to record a second entry to adjust the Merchandise Inventory account. Suppose that on January 28, 2020, Smart Touch Learning grants a \$100 sales allowance for goods damaged in transit. The goods were sold on account and remain unpaid. A sales allowance is recorded as follows:

$A \downarrow$	$Accounts \downarrow$	$=$	$L \downarrow + E$
	$Receivable \downarrow$		$Refunds \downarrow$
			$Payable \downarrow$

Date	Accounts and Explanation	Debit	Credit
Jan. 28	Refunds Payable	100	
	Accounts Receivable		100
	<i>Granted a sales allowance for damaged goods.</i>		

Transportation Costs—Freight Out

Remember that a freight out expense is one in which the seller pays freight charges to ship goods to customers. Freight out is a delivery expense to the seller. Delivery expense is an operating expense and is debited to the Delivery Expense account. For example, assume Smart Touch Learning paid \$30 to ship goods to a customer on June 21, 2019. The entry to record that payment is as follows:



Date	Accounts and Explanation	Debit	Credit
Jun. 21	Delivery Expense	30	
	Cash		30
	<i>Paid a freight bill.</i>		

$$\begin{array}{c} \text{A} \downarrow \\ \text{Cash} \downarrow \end{array} = \left\{ \begin{array}{c} \text{L} + \text{E} \downarrow \\ \text{Delivery} \\ \text{Expense} \uparrow \end{array} \right.$$

Try It!

8. Click Computers has the following transactions in July related to the sale of merchandise inventory.

July 12 Sold computers on account for \$8,000 to a customer, terms 3/15, n/30.
The cost of the computers is \$4,800.

26 Received payment from the customer on balance due.

Journalize the sales transactions for Click Computers assuming the company uses the perpetual inventory system.

Check your answers online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercises S5-4 through S5-7. **Pearson MyLab Accounting**

WHAT ARE THE ADJUSTING AND CLOSING ENTRIES FOR A MERCHANTISER?

A merchandiser adjusts and closes accounts the same way a service entity does. If a worksheet is used, the unadjusted trial balance is entered, and the worksheet is completed to determine net income or net loss. In addition to adjusting for estimated sales returns as illustrated earlier in the chapter, merchandisers must also adjust for inventory shrinkage.

Adjusting Merchandise Inventory Based on a Physical Count

The Merchandise Inventory account should stay current at all times in a perpetual inventory system. However, the actual amount of inventory on hand may differ from what the books show. This difference can occur because of theft, damage, and errors and is referred to as **inventory shrinkage**. For this reason, businesses take a physical count of inventory *at least* once a year. The most common time to count inventory is at the end of the fiscal year. The business then adjusts the Merchandise Inventory account based on the physical count. Smart Touch Learning must record an adjusting entry to account for this lost inventory.

Smart Touch Learning's Merchandise Inventory account shows an unadjusted balance of \$31,530. With no shrinkage—due to theft or error—the business should have inventory costing \$31,530. But on December 31, Smart Touch Learning counts the inventory on hand, and the total cost comes to only \$30,000.

Learning Objective 4

Adjust and close the accounts of a merchandising business

Inventory Shrinkage

The loss of inventory that occurs because of theft, damage, and errors.



$$\begin{aligned}
 \text{Adjusting entry} &= \text{Merchandise inventory balance before adjustment} - \text{Actual merchandise inventory on hand} \\
 &= \$31,530 - \$30,000 \\
 &= \$1,530
 \end{aligned}$$

Smart Touch Learning records this adjusting entry for inventory shrinkage:

$$\left. \begin{array}{c} A \downarrow \\ \text{Merchandise} \\ \text{Inventory} \downarrow \end{array} \right\} = \left. \begin{array}{c} L \\ + \\ E \downarrow \\ \text{Cost of Goods} \\ \text{Sold} \uparrow \end{array} \right\}$$

Date	Accounts and Explanation		Debit	Credit
Dec. 31	Cost of Goods Sold		1,530	
	Merchandise Inventory			1,530
	<i>Adjustment for inventory shrinkage.</i>			

This entry brings Merchandise Inventory to its correct balance and increases Cost of Goods Sold for the cost of the lost inventory.

Merchandise Inventory				
Unadj. Bal.	31,530	1,530	Adj.	Dec. 31
Bal.	30,000			

Closing the Accounts of a Merchandiser

Exhibit 5-6 presents Smart Touch Learning's adjusted trial balance and closing entries for the year, which are similar to those you have already learned, except for the new accounts (highlighted in blue). Closing still means to zero out all temporary accounts (accounts that aren't on the balance sheet).

The four-step closing process for a merchandising company follows:

Step 1: Make the revenue accounts equal zero via the Income Summary account.

Step 2: Make expense accounts equal zero via the Income Summary account.

Step 3: Make the Income Summary account equal zero via the Retained Earnings account. This closing entry transfers net income (or net loss) to Retained Earnings.

Step 4: Make the Dividends account equal zero via the Retained Earnings account.


Exhibit 5-6 | Adjusted Trial Balance and Closing Entries

SMART TOUCH LEARNING Adjusted Trial Balance December 31, 2019		
Account Title	Balance	
	Debit	Credit
Cash	\$ 88,810	
Accounts Receivable	4,400	
Merchandise Inventory	30,000	
Estimated Returns Inventory	1,290	
Office Supplies	100	
Prepaid Rent	4,000	
Land	20,000	
Building	60,000	
Accumulated Depreciation—Building		\$ 1,750
Furniture	18,000	
Accumulated Depreciation—Furniture		2,100
Accounts Payable		10,000
Refunds Payable		800
Utilities Payable		2,500
Salaries Payable		1,500
Interest Payable		300
Unearned Revenue		900
Income Tax Payable		3,780
Notes Payable		60,000
Common Stock		48,000
Retained Earnings		3,550
Dividends	10,000	
Sales Revenue		920,000
Sales Discounts Forfeited		2,000
Cost of Goods Sold		540,000
Salaries Expense	73,600	
Rent Expense	63,800	
Utilities Expense	55,500	
Insurance Expense	31,900	
Depreciation Expense—Building	1,500	
Depreciation Expense—Furniture	1,800	
Advertising Expense	11,800	
Interest Expense	11,000	
Delivery Expense		7,800
Supplies Expense		2,900
Income Tax Expense		18,980
Total	<u><u>\$ 1,057,180</u></u>	<u><u>\$ 1,057,180</u></u>

Temporary accounts that are closed.

**Exhibit 5-6 | (Continued)**

A	=	$L + E \downarrow$	Sales Revenue ↓ Sales Discounts Forfeited ↓ Income Summary↑
A	=	$L + E \downarrow$	Income Summary↓ Expenses↓
A	=	$L + E \downarrow$	Income Summary↓ Retained Earnings↑
A	=	$L + E \downarrow$	Retained Earnings↓ Dividends↓

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Sales Revenue	920,000	
	Sales Discounts Forfeited	2,000	
	Income Summary		922,000
	<i>To close revenue.</i>		
31	Income Summary	820,580	
	Cost of Goods Sold		540,000
	Salaries Expense		73,600
	Rent Expense		63,800
	Utilities Expense		55,500
	Insurance Expense		31,900
	Depreciation Expense—Building		1,500
	Depreciation Expense—Furniture		1,800
	Advertising Expense		11,800
	Interest Expense		11,000
	Delivery Expense		7,800
	Supplies Expense		2,900
	Income Tax Expense		18,980
	<i>To close expenses.</i>		
31	Income Summary	101,420	
	Retained Earnings		101,420
	<i>To close Income Summary.</i>		
31	Retained Earnings	10,000	
	Dividends		10,000
	<i>To close Dividends.</i>		

Income Summary			
Clos. 2	820,580	922,000	Clos. 1
		101,420	Bal.
Clos. 3	101,420		
		0	Bal.

Dividends			
Adj. Bal.	10,000		
		10,000	Clos. 4

Bal.	0
------	---

Retained Earnings			
	3,550	Adj. Bal.	
Clos. 4	10,000	101,420	Clos. 3
		94,970	Bal.

Try It!

9. Click Computers's Merchandise Inventory account at year-end is showing a balance of \$43,000. The physical count of inventory came up with \$42,500. Journalize the adjusting entry needed to account for the inventory shrinkage. The company uses the perpetual inventory system.

Check your answer online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.



HOW ARE A MERCHANTISER'S FINANCIAL STATEMENTS PREPARED?

The financial statements that you have learned for a service business are also used by a merchandiser. However, the merchandiser's financial statements will contain the new accounts that have been introduced in this chapter. Let's take a look at some of the differences for a merchandising business.

Income Statement

In previous chapters, you learned how to prepare the income statement using what we now call the single-step format. In this chapter, we will introduce a new format: the multi-step format.

Single-Step Income Statement

The **single-step income statement** groups all revenues together and all expenses together without calculating other subtotals. Many companies use this format. The single-step format clearly distinguishes revenues from expenses and works well for service entities because they have no gross profit to report. Exhibit 5-7 shows a single-step income statement for Smart Touch Learning.

Exhibit 5-7 | Single-Step Income Statement

SMART TOUCH LEARNING Income Statement Year Ended December 31, 2019		
Revenues:		
Net Sales Revenue	\$ 920,000	
Sales Discounts Forfeited	2,000	
Total Revenues	922,000	
Expenses:		
Cost of Goods Sold	\$ 540,000	
Salaries Expense	73,600	
Rent Expense	63,800	
Utilities Expense	55,500	
Insurance Expense	31,900	
Depreciation Expense—Building	1,500	
Depreciation Expense—Furniture	1,800	
Advertising Expense	11,800	
Interest Expense	11,000	
Delivery Expense	7,800	
Supplies Expense	2,900	
Income Tax Expense	18,980	
Total Expenses	820,580	
Net Income	\$ 101,420	

Sales Revenue is recorded net of sales discounts, so it is labeled Net Sales Revenue on the income statement.

Learning Objective 5

Prepare a merchandiser's financial statements

Single-Step Income Statement

Income statement format that groups all revenues together and then lists and deducts all expenses together without calculating any subtotals.



Cost of Goods Sold represents a *functional* expense. Such expenses explain the purpose of the cost incurred. IFRS allows companies to present expenses according to their function or nature. For example, expenses are described as salaries, utilities, or advertising expenses.



Multi-Step Income Statement

Income statement format that contains subtotals to highlight significant relationships. In addition to net income, it reports gross profit and operating income.

Multi-Step Income Statement

A **multi-step income statement** is different than a single-step income statement because it lists several important subtotals. In addition to net income (the bottom line), it also reports subtotals for gross profit, operating income (also called *income from operations*), and income before income tax expense. The multi-step income statement for Smart Touch Learning appears in Exhibit 5-8.

The income statement begins by calculating gross profit. Gross profit is the markup on the merchandise inventory and is calculated as net sales revenue minus cost of goods sold. Net sales revenue is sales revenue less discounts, and estimated returns and allowances. Gross profit, along with net income, is a measure of a business's success. A sufficiently high gross profit is vital to a merchandiser. Next, the operating expenses, those expenses other than cost of goods sold, are listed.

Exhibit 5-8 | Multi-Step Income Statement

SMART TOUCH LEARNING Income Statement Year Ended December 31, 2019	
Net Sales Revenue	\$ 920,000
Cost of Goods Sold	540,000
Gross Profit	380,000
Operating Expenses:	
Selling Expenses:	
Salaries Expense	\$ 44,160
Rent Expense	38,280
Advertising Expense	11,800
Depreciation Expense—Building	1,500
Delivery Expense	7,800
Total Selling Expenses	103,540
Administrative Expenses:	
Utilities Expense	55,500
Salaries Expense	29,440
Insurance Expense	31,900
Rent Expense	25,520
Depreciation Expense—Furniture	1,800
Supplies Expense	2,900
Total Administrative Expenses	147,060
Total Operating Expenses	250,600
Operating Income	129,400
Other Income and (Expenses):	
Sales Discounts Forfeited	2,000
Interest Expense	(11,000)
Total Other Income and (Expenses)	(9,000)
Income Before Income Tax Expense	120,400
Income Tax Expense	18,980
Net Income	\$ 101,420



Both merchandisers and service companies report operating expenses in two categories:

- **Selling expenses** are expenses related to marketing and selling the company's goods and services. These include sales salaries, sales commissions, advertising, depreciation on store buildings and equipment, store rent, utilities on store buildings, property taxes on store buildings, and delivery expense.
- **Administrative expenses** include expenses *not* related to marketing the company's goods and services. These include office expenses, such as the salaries of the executives and office employees; depreciation on office buildings and equipment; rent other than on stores (for example, rent on the administrative office); utilities other than on stores (for example, utilities on the administrative office); and property taxes on the administrative office building.

Gross profit minus operating expenses equals **operating income** (also called *income from operations*). Operating income measures the results of the entity's major ongoing activities (normal operations).

The next section of the income statement is **other income and expenses**. This category reports revenues and expenses that fall outside the business's main, day-to-day, regular operations. Examples include interest revenue, sales discounts forfeited, interest expense, and gains and losses on the sale of plant assets. These examples have nothing to do with the business's "normal" operations. As a result, they are classified as "other" items.

Lastly, corporations are required to pay income tax. Therefore, the last section of the income statement is the **income tax expense** section. This section reports the federal and state income taxes that are incurred by the corporation. The calculation of income tax expense is complicated and will be covered in later accounting courses and is only presented here for informational purposes.

Statement of Retained Earnings and the Balance Sheet

A merchandiser's statement of retained earnings looks exactly like that of a service business. The balance sheet will also look the same as for a service business, except merchandisers have additional current asset accounts, Merchandise Inventory and Estimated Returns Inventory. In addition, merchandisers will have an additional current liability account, Refunds Payable, to represent the estimated amount of refunds that are due.

Try It!

10. Capital City Motorcycle's selected accounts as of December 31, 2018, follow:

Selling Expenses	\$ 10,500
Interest Revenue	1,000
Net Sales Revenue	113,500
Cost of Goods Sold	85,000
Administrative Expenses	8,000

Prepare the multi-step income statement for the year ended December 31, 2018.

Check your answers online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.



HOW DO WE USE THE GROSS PROFIT PERCENTAGE TO EVALUATE BUSINESS PERFORMANCE?

Learning Objective 6

Use the gross profit percentage to evaluate business performance

Gross Profit Percentage

Measures the profitability of each sales dollar above the cost of goods sold. Gross profit / Net sales revenue.

$$\text{Gross profit percentage} = \text{Gross profit} / \text{Net sales revenue}$$

The gross profit percentage is one of the most carefully watched measures of profitability. It reflects a business's ability to earn a profit on its merchandise inventory. The gross profit earned on merchandise inventory must be high enough to cover the remaining operating expenses and to earn net income. A small increase in the gross profit percentage from last year to this year may signal an important rise in income. Conversely, a small decrease from last year to this year may signal trouble. Gross profit percentages vary among industries, but in general, a high gross profit percentage is desired.

Returning to **Kohl's Corporation** we can now calculate the gross profit percentage. Kohl's Corporation had the following net sales and cost of merchandise sold (cost of goods sold), found on the income statement for the fiscal year ending January 30, 2016. Visit <http://www.pearsonglobaleditions.com/Sitemap/Horngren/> to view a link to Kohl's Corporation's annual report.

	For year ended Jan. 30, 2016 (in millions)	For year ended Jan. 31, 2015 (in millions)
Net sales	\$ 19,204	\$ 19,023
Cost of merchandise sold	12,265	12,098

Gross profit is calculated as net sales less cost of merchandise sold. To determine the gross profit percentage, the gross profit is then divided by net sales. The gross profit percentage for the year ending January 30, 2016, follows (amounts in millions):

$$\text{Gross profit percentage} = (\$19,204 - \$12,265) / \$19,204 = 0.361 = 36.1\%$$

In comparison, the gross profit percentage for the year ending January 31, 2015, was:

$$\text{Gross profit percentage} = (\$19,023 - \$12,098) / \$19,023 = 0.364 = 36.4\%$$

The gross profit percentage decreased slightly from fiscal year 2014 to 2015, signifying that the percentage of gross profit on sales is decreasing. However, when compared with the industry average for gross profit percentage, 35%, Kohl's is slightly higher than average. Kohl's should monitor the amount of profit it is earning on its merchandise inventory and take action if the percentage continues to drop.

Try It!

11. Capital City Motorcycle's selected accounts as of December 31, 2018, follow:

Selling Expenses	\$ 10,500
Interest Revenue	1,000
Net Sales Revenue	113,500
Cost of Goods Sold	85,000
Administrative Expenses	8,000

Determine the gross profit percentage for the year ended December 31, 2018.

Check your answer online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercise S5-12. [Pearson MyLab Accounting](#)

APPENDIX 5A: Accounting for Multiple Performance Obligations

HOW ARE MULTIPLE PERFORMANCE OBLIGATIONS RECORDED IN A PERPETUAL INVENTORY SYSTEM?

Under the new revenue recognition standards, companies are required to identify the performance obligations associated with each contract. Remember, a performance obligation is a contractual promise with a customer to transfer a distinct good or service. Some contracts with customers might have multiple performance obligations. For example, assume that Smart Touch Learning often provides its customers with a two-year service contract when it sells its tablets. In this case, there are two distinct performance obligations: the two-year service contract and the tablet.

When contracts involve multiple performance obligations, the company is required to allocate the transaction price to each performance obligation separately. For example, assume on November 1 Smart Touch Learning sells one tablet (cost of \$350) along with a two-year service contract to a customer for \$620. The customer pays cash at the time of the sale. The \$620 sales price must be allocated among each performance obligation. Smart Touch Learning allocates the sales price of \$620 as follows: \$500 for the tablet and \$120 for the two-year service contract.

In recording the transaction, Smart Touch Learning should only recognize revenue when, or as, it satisfies each performance obligation. The \$500 associated with tablet would be recognized as Sales Revenue because the tablet has been delivered to the customer. The \$120 for the two-year service contract would be recorded as Unearned Revenue because the company has not satisfied the obligation of servicing or fulfilling the service contract.

Learning Objective 7

Account for multiple performance obligations using a perpetual inventory system

Smart Touch Learning would record the transaction on November 1 as follows:

$$\begin{array}{c} \text{A} \\ \hline \text{Cash} \end{array} \uparrow \quad \left\{ \begin{array}{l} = \frac{\text{L} \uparrow}{\text{Unearned Revenue} \uparrow} + \frac{\text{E} \uparrow}{\text{Sales Revenue} \uparrow} \\ \hline \text{Merchandise Inventory} \downarrow \end{array} \right. \quad \left\{ \begin{array}{l} = \frac{\text{L}}{\text{Cost of Goods Sold} \uparrow} + \frac{\text{E} \downarrow}{\text{Cost of Goods Sold} \uparrow} \end{array} \right.$$

Date	Accounts and Explanation	Debit	Credit
Nov. 1	Cash	620	
	Sales Revenue		500
	Unearned Revenue		120
	<i>Cash sale including two-year service contract.</i>		
Nov. 1	Cost of Goods Sold	350	
	Merchandise Inventory		350
	<i>Recorded the cost of goods sold.</i>		

As Smart Touch Learning satisfies the service contract, the company would recognize the revenue. For example, at December 31, Smart Touch Learning has provided two months of service for the tablet. Smart Touch Learning would record \$10 of Service Revenue ($\$120 / 24 \text{ months} \times 2 \text{ months}$).

$$\begin{array}{c} \text{A} \\ \hline \text{Unearned Revenue} \end{array} \downarrow \quad \left\{ \begin{array}{l} = \frac{\text{L} \downarrow}{\text{Service Revenue} \downarrow} + \frac{\text{E} \uparrow}{\text{Service Revenue} \uparrow} \end{array} \right.$$

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Unearned Revenue	10	
	Service Revenue		10
	<i>Service revenue earned.</i>		

Try It!

- 12A. Click Computers has the following transactions related to the sale of merchandise inventory.

Mar. 1 Sold a computer (cost of \$3,000) for \$8,000 to a customer. The customer paid cash. The sales price included a one-year service contract valued at \$168.

Dec. 31 Recorded the amount of service contract earned.

Journalize the transactions for Click Computers assuming that the company uses the perpetual inventory system.

Check your answers online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercise S5A-13. **Pearson MyLab Accounting**

APPENDIX 5B: Accounting for Merchandise Inventory in a Periodic Inventory System

HOW ARE MERCHANDISE INVENTORY TRANSACTIONS RECORDED IN A PERIODIC INVENTORY SYSTEM?

Some smaller businesses find it too expensive to invest in a perpetual inventory system. These businesses use a periodic inventory system. In a periodic inventory system, businesses must obtain a physical count of inventory to determine quantities on hand.

Purchases of Merchandise Inventory

All inventory systems use the Merchandise Inventory account. But in a periodic inventory system, purchases, purchase discounts, purchase returns and allowances, and freight in costs are recorded in separate accounts during the year and then the Merchandise Inventory account is updated in the closing process. Let's account for Smart Touch Learning's purchase of the tablet computers from Southwest Electronics Direct as shown in Exhibit 5-3.

The following entries record the receipt of goods on account on June 3 and payment on June 15 (within the discount period) using the periodic inventory system.

Date	Accounts and Explanation	Debit	Credit
Jun. 3	Purchases	35,000	
	Accounts Payable		35,000
	<i>Purchased inventory on account.</i>		
15	Accounts Payable	35,000	
	Cash (\$35,000 – \$1,050)		33,950
	Purchase Discounts (\$35,000 × 0.03)		1,050
	<i>Paid within discount period.</i>		

Learning Objective 8

Account for the purchase and sale of merchandise inventory using a periodic inventory system

$$A = \left\{ \begin{array}{l} L \uparrow + E \downarrow \\ \hline \end{array} \right. \begin{array}{l} \uparrow \\ \uparrow \\ \uparrow \\ \uparrow \\ \uparrow \end{array} \begin{array}{l} \uparrow \\ \uparrow \\ \uparrow \\ \uparrow \\ \uparrow \end{array}$$

Accounts Payable
Purchases
Payable↑

$$A \downarrow = \left\{ \begin{array}{l} L \downarrow + E \uparrow \\ \hline \end{array} \right. \begin{array}{l} \downarrow \\ \downarrow \\ \downarrow \\ \downarrow \\ \downarrow \end{array} \begin{array}{l} \uparrow \\ \uparrow \\ \uparrow \\ \uparrow \\ \uparrow \end{array}$$

Cash↓
Accounts Payable↓
Purchase Discounts↑

When using the periodic inventory system, the Merchandise Inventory account is not updated during the period. Therefore, it will never be used when recording purchases, discounts, returns, or sales of inventory.

Notice that the purchase of merchandise inventory is not recorded directly into the Merchandise Inventory account. Instead, it is recorded in a separate account called *Purchases* (an expense account). Likewise, when Smart Touch Learning makes payment for the merchandise, the purchase discount is recorded in a separate account called *Purchase Discounts* (a contra expense account).

Recording Purchase Returns and Allowances

Suppose that, prior to payment, on June 4, Smart Touch Learning returned 20 tablets to the vendor costing \$7,000. The company would record this return as follows:

$$A = \left\{ \begin{array}{c} L \downarrow \\ \text{Accounts Payable} \downarrow \end{array} + \left\{ \begin{array}{c} E \uparrow \\ \text{Purchase Returns and Allowances} \uparrow \end{array} \right. \right\}$$

Date	Accounts and Explanation	Debit	Credit
Jun. 4	Accounts Payable	7,000	
	Purchase Returns and Allowances		7,000
<i>Returned inventory to seller (vendor).</i>			

In the periodic inventory system, instead of recording the return to Merchandise Inventory, a separate account, Purchase Returns and Allowances, is used. Both Purchase Discounts and Purchase Returns and Allowances are contra expense accounts. They are contra accounts to the Purchases account.

During the period, the business records the cost of all inventory bought in the Purchases account. The balance of Purchases is a *gross* amount because it does not include subtractions for discounts, returns, or allowances. **Net purchases** is the remainder after subtracting the contra accounts from Purchases:

Purchases
 — Purchase Returns and Allowances
 — Purchase Discounts
 = Net Purchases

Net Purchases

Purchases less purchase returns and allowances less purchase discounts.

Recording Transportation Costs

Under the periodic inventory system, freight in is debited to a separate Freight In account (an adjunct expense account) as opposed to debiting the Merchandise Inventory account. For example, suppose Smart Touch Learning pays a \$60 freight charge on June 3. The company would make the following entry:

$$A \downarrow \left\{ \begin{array}{c} L \downarrow \\ \text{Cash} \downarrow \end{array} + \left\{ \begin{array}{c} E \downarrow \\ \text{Freight In} \uparrow \end{array} \right. \right\}$$

Date	Accounts and Explanation	Debit	Credit
Jun. 3	Freight In	60	
	Cash		60
<i>Paid a freight bill.</i>			

Sale of Merchandise Inventory

Recording sales of merchandise inventory is streamlined in the periodic inventory system. With no running record of merchandise inventory to maintain, there is no need to record an entry to Merchandise Inventory and Cost of Goods Sold. Instead, a sale of inventory involves recording only the Sales Revenue portion. Suppose that on June 21, Smart Touch

Learning sold 10 tablets for a total sale of \$5,000 on account with terms of 2/10, n/30. The company would record the sale as follows:

Date	Accounts and Explanation	Debit	Credit
Jun. 21	Accounts Receivable	4,900	
	Sales Revenue (\$5,000 - (\$5,000 × 0.02))		4,900
	<i>Sale on account less discount.</i>		

$$\begin{array}{c} \text{A}\uparrow \\ \text{Accounts} \\ \text{Receivable}\uparrow \end{array} = \left\{ \begin{array}{c} \text{L} + \text{E}\uparrow \\ \text{Sales} \\ \text{Revenue}\uparrow \end{array} \right\}$$

Accounting for sales discounts and sales returns and allowances is the same as in a perpetual inventory system, except that there are no entries for merchandise inventory.

Preparing Financial Statements

The financial statements under the perpetual and periodic inventory systems are similar. However, the periodic inventory system requires an additional calculation—the cost of goods sold. As we have seen under the perpetual inventory system, cost of goods sold is simply the sum of the amounts posted to that account. Cost of goods sold must be computed separately under the periodic inventory system. At the end of each period, the company combines a number of accounts to compute cost of goods sold for the period, and this calculation is shown on the income statement. Cost of goods sold is calculated as follows for Smart Touch Learning:

Beginning Merchandise Inventory	\$ 0
Purchases	\$ 695,000
Less: Purchase Returns and Allowances	150,600
Purchase Discounts	9,510
Net Purchases	534,890
Plus: Freight In	36,400
Net Cost of Purchases	571,290
Cost of Goods Available for Sale	571,290
Less: Ending Inventory*	31,290
Cost of Goods Sold	\$ 540,000

* (Includes \$1,290 of Estimated Returns Inventory)

Adjusting and Closing Entries

When using the periodic inventory system, there is no need to record an adjusting entry for inventory shrinkage. This is because there is no perpetual running balance of the Merchandise Inventory account. Instead, the business determines the ending Merchandise Inventory amount by taking a physical count of inventory. The amount of the physical count is \$30,000 and is recorded as ending Merchandise Inventory. The Estimated Returns Inventory is also recorded for an amount of \$1,290.

The process of recording the ending Merchandise Inventory is completed through the closing entry process. Let's take a look at Smart Touch Learning's adjusted trial balance and closing entries for the year under the periodic inventory system shown in Exhibit 5B-1 (on the next page). The accounts that are used in the periodic inventory system are highlighted in blue.

Exhibit 5B-1 | Adjusted Trial Balance and Closing Entries

SMART TOUCH LEARNING Adjusted Trial Balance December 31, 2019		
Account Title	Balance	
	Debit	Credit
Cash	\$ 88,810	
Accounts Receivable	4,400	
Merchandise Inventory (beginning)	0	
Office Supplies	100	
Prepaid Rent	4,000	
Land	20,000	
Building	60,000	
Accumulated Depreciation—Building	\$ 1,750	
Furniture	18,000	
Accumulated Depreciation—Furniture	2,100	
Accounts Payable	10,000	
Refunds Payable	800	
Utilities Payable	2,500	
Salaries Payable	1,500	
Interest Payable	300	
Unearned Revenue	900	
Income Tax Payable	3,780	
Notes Payable	60,000	
Common Stock	48,000	
Retained Earnings	3,550	
Dividends	10,000	
Sales Revenue	920,000	
Sales Discounts Forfeited	2,000	
Purchases	695,000	
Purchase Returns and Allowances	150,600	
Purchase Discounts	9,510	
Freight In	36,400	
Salaries Expense	73,600	
Rent Expense	63,800	
Utilities Expense	55,500	
Insurance Expense	31,900	
Depreciation Expense—Building	1,500	
Depreciation Expense—Furniture	1,800	
Advertising Expense	11,800	
Interest Expense	11,000	
Delivery Expense	7,800	
Supplies Expense	2,900	
Income Tax Expense	18,980	
Total	\$ 1,217,290	\$ 1,217,290

Temporary accounts that are closed.

Exhibit 5B-1 | (Continued)

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Sales Revenue	920,000	
	Sales Discounts Forfeited	2,000	
	Purchase Returns and Allowances	150,600	
	Purchase Discounts	9,510	
	Merchandise Inventory (ending)	30,000	
	Estimated Returns Inventory	1,290	
	Income Summary		1,113,400
	<i>To close revenue and other credit accounts and record ending merchandise inventory.</i>		
31	Income Summary	1,011,980	
	Purchases		695,000
	Freight In		36,400
	Merchandise Inventory (beginning)		0
	Salaries Expense		73,600
	Rent Expense		63,800
	Utilities Expense		55,500
	Insurance Expense		31,900
	Depreciation Expense—Building		1,500
	Depreciation Expense—Furniture		1,800
	Advertising Expense		11,800
	Interest Expense		11,000
	Delivery Expense		7,800
	Supplies Expense		2,900
	Income Tax Expense		18,980
	<i>To close expenses and other debit accounts and remove beginning merchandise inventory.</i>		
31	Income Summary	101,420	
	Retained Earnings		101,420
	<i>To close Income Summary.</i>		
31	Retained Earnings	10,000	
	Dividends		10,000
	<i>To close Dividends.</i>		

Income Summary		
Clos. 2	1,011,980	1,113,400 Clos. 1
		101,420 Bal.
Clos. 3	101,420	
		0 Bal.
Dividends		
Adj. Bal.	10,000	10,000 Clos. 4
Bal.	0	

Retained Earnings		
		3,550 Adj. Bal.
Clos. 4	10,000	101,420 Clos. 3
		94,970 Bal.

$$\left. \begin{array}{l} A \uparrow \\ \text{Merchandise} \\ \text{Inventory} \uparrow \\ \text{Estimated} \\ \text{Returns} \\ \text{Inventory} \uparrow \end{array} \right\} = \left. \begin{array}{l} L \\ + \\ E \uparrow \\ \text{Sales Revenue} \downarrow \\ \text{Sales Discounts} \\ \text{Forfeited} \downarrow \\ \text{Purchase Returns} \\ \text{and Allowances} \downarrow \\ \text{Purchase Discounts} \downarrow \\ \text{Income Summary} \uparrow \end{array} \right\}$$

$$\left. \begin{array}{l} A \downarrow \\ \text{Merchandise} \\ \text{Inventory} \downarrow \end{array} \right\} = \left. \begin{array}{l} L \\ + \\ E \downarrow \\ \text{Income} \\ \text{Summary} \downarrow \\ \text{Expenses} \downarrow \end{array} \right\}$$

$$\left. \begin{array}{l} A \\ = \\ L \\ + \\ E \uparrow \end{array} \right\} \left. \begin{array}{l} \text{Income} \\ \text{Summary} \downarrow \\ \text{Retained} \\ \text{Earnings} \uparrow \end{array} \right\}$$

$$\left. \begin{array}{l} A \\ = \\ L \\ + \\ E \uparrow \end{array} \right\} \left. \begin{array}{l} \text{Retained} \\ \text{Earnings} \downarrow \\ \text{Dividends} \downarrow \end{array} \right\}$$

The four-step closing process under the periodic inventory system is similar to the perpetual inventory system, but let's take a moment to highlight the differences:

Step 1: Using the periodic inventory system, Sales Revenue and Sales Discounts Forfeited are still closed with a debit via the Income Summary account, but in addition, all other temporary accounts with credit balances (Purchase Returns and Allowances and Purchase Discounts) are also closed. The ending Merchandise Inventory (determined from the physical count) and Estimated Returns Inventory are recorded as debits.

Step 2: Expense accounts and other temporary accounts with debit balances are still closed via the Income Summary account. In addition, the beginning Merchandise Inventory, Purchases, and Freight In are also closed via the Income Summary account. Notice in the Merchandise Inventory T-account shown below that the ending inventory is recorded with a debit entry and the beginning inventory is removed with a credit entry during the closing process.

Merchandise Inventory		
Adj. Bal.	0	
Clos. 1	30,000	0 Clos. 2
Bal.	30,000	

The key difference in the closing process under the periodic inventory system is how merchandise inventory is handled. In the periodic inventory system, the ending merchandise inventory balance must be recorded as a debit during closing and the beginning merchandise inventory balance must be recorded as a credit during closing. The additional Purchases and related contra and adjunct accounts must also be closed.

Step 3 and Step 4: These steps, closing the Income Summary and Dividends accounts, are the same under both methods.

Try It!

13B. Click Computers has the following transactions in July related to purchase and sale of merchandise inventory.

-
- July 1 Purchase of \$20,500 worth of computers on account, terms of 2/10, n/30.
 - 3 Return of \$4,000 of the computers to the vendor.
 - 9 Payment made on account.
 - 12 Sold computers on account for \$8,000 to a customer, terms 3/15, n/30.
 - 26 Received payment from customer on balance due.
-

Journalize the transactions for Click Computers assuming that the company uses the periodic inventory system.

Check your answers online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

REVIEW

> Things You Should Know

1. What are merchandising operations?

- A merchandiser is a business that sells merchandise, or goods, to customers.
- There are two main types of inventory accounting systems that are used by merchandisers:
 - Periodic inventory system—requires businesses to obtain a physical count of inventory to determine quantities on hand
 - Perpetual inventory system—keeps a running computerized record of merchandise inventory

2. How are purchases of merchandise inventory recorded in a perpetual inventory system?

- Purchase of merchandise inventory

Date	Accounts and Explanation	Debit	Credit
	Merchandise Inventory	XXX	
	Cash or Accounts Payable		XXX

- Purchase return

Date	Accounts and Explanation	Debit	Credit
	Cash or Accounts Payable	XXX	
	Merchandise Inventory		XXX

- Payment of freight in

Date	Accounts and Explanation	Debit	Credit
	Merchandise Inventory	XXX	
	Cash		XXX

- Payment of merchandise inventory within discount period

Date	Accounts and Explanation	Debit	Credit
	Accounts Payable	XXX	
	Cash		XXX
	Merchandise Inventory		XXX

- Payment of merchandise inventory after discount period

Date	Accounts and Explanation	Debit	Credit
	Accounts Payable	XXX	
	Cash		XXX

3. How are sales of merchandise inventory recorded in a perpetual inventory system?

- Sales of merchandise inventory are recorded at the net amount (sales price less any discount)

Date	Accounts and Explanation	Debit	Credit
	Cash or Accounts Receivable	XXX	
	Sales Revenue		XXX
	Cost of Goods Sold	XXX	
	Merchandise Inventory		XXX

- Companies must estimate the amount of merchandise inventory that will be returned

Date	Accounts and Explanation	Debit	Credit
	Sales Revenue	XXX	
	Refunds Payable		XXX
	Estimated Returns Inventory	XXX	
	Cost of Goods Sold		XXX

- Return of merchandise inventory by customer

Date	Accounts and Explanation	Debit	Credit
	Refunds Payable	XXX	
	Cash or Accounts Receivable		XXX
	Merchandise Inventory	XXX	
	Estimated Returns Inventory		XXX

- Sales allowance

Date	Accounts and Explanation	Debit	Credit
	Refunds Payable	XXX	
	Cash or Accounts Receivable		XXX

- Payment of freight out

Date	Accounts and Explanation	Debit	Credit
	Delivery Expense	XXX	
	Cash		XXX

- Collection of cash during discount period

Date	Accounts and Explanation	Debit	Credit
	Cash	XXX	
	Accounts Receivable		XXX

- Collection of cash after discount period

Date	Accounts and Explanation	Debit	Credit
	Cash	XXX	
	Accounts Receivable		XXX
	Sales Discounts Forfeited		XXX

4. What are the adjusting and closing entries for a merchandiser?

- An adjusting entry must be made for inventory shrinkage, the loss of inventory that occurs because of theft, damage, and errors.
- The closing entries are similar to those already learned, except for including the new accounts (Sales Revenue, Sales Discounts Forfeited, Delivery Expense, and Cost of Goods Sold).

5. How are a merchandiser's financial statements prepared?

- There are two formats for the income statement:
 - Single-step income statement—groups all revenues together and all expenses together without calculating other subtotals
 - Multi-step income statement—lists several important subtotals including gross profit, operating income, and income before income tax expense
- A merchandiser's statement of retained earnings looks exactly like that of a service business.
- The balance sheet will also look the same, except merchandisers have additional current asset accounts, such as Merchandise Inventory and Estimated Returns Inventory. In addition, a merchandiser's balance sheet also includes the current liability Refunds Payable.

6. How do we use the gross profit percentage to evaluate business performance?

- The gross profit percentage measures the profitability of each sales dollar above the cost of goods sold.
- Gross profit percentage = Gross profit / Net sales revenue.

7. How are multiple performance obligations recorded in a perpetual inventory system? (Appendix 5A)

- The sales price of contracts involving multiple performance obligations must be allocated among each distinct performance obligation.
- Revenue is recognized when, or as, the company satisfies each performance obligation.

8. How are merchandise inventory transactions recorded in a periodic inventory system? (Appendix 5B)

- The Merchandise Inventory account is not used when recording purchase transactions. Instead Purchases, Purchase Discounts, Purchase Returns and Allowances, and Freight In are used.
- Sales transactions only involve recording the Sales Revenue. The Merchandise Inventory account is not used.
- An adjustment for inventory shrinkage is not needed.
- Closing entries are similar to the perpetual inventory system with the addition of closing the new accounts discussed. Ending Merchandise Inventory must be recorded, and beginning Merchandise Inventory must be removed.

> Check Your Understanding 5-1

Check your understanding of the chapter by completing this problem and then looking at the solution. Use this practice to help identify which sections of the chapter you need to study more.

Suppose Heat Miser Air Conditioner Company engaged in the following transactions during June of the current year:

-
- Jun. 3 Purchased inventory on account with credit terms of 1/10, n/EOM, \$1,600.
 - 9 Returned 40% of the inventory purchased on June 3. It was defective.
 - 12 Sold goods for cash, \$920 (cost, \$550).
 - 15 Purchased goods for \$5,000 on account. Credit terms were 3/15, n/30.
 - 16 Paid a \$260 freight bill on goods purchased.
 - 17 Sold inventory for \$4,000 cash (cost, \$2,360).
 - 18 Sold inventory for \$2,000 on account with credit terms of 2/10, n/30 (cost, \$1,180).
 - 22 Received returned goods from the customer of the June 17 sale, \$800 (cost, \$480).
 - 24 Paid supplier for goods purchased on June 15.
 - 28 Received cash in full settlement of the account from the customer who purchased inventory on June 18.
 - 29 Paid the amount owed on account from the purchase of June 3.
 - 30 The company estimated that \$400 of merchandise sold will be returned with a cost of \$240.
-

Requirement

Journalize the preceding transactions. Assume Heat Miser uses a perpetual inventory system. The company estimates sales returns at the end of each month. (See Learning Objectives 2 and 3.)

> Solution

Date	Accounts and Explanation	Debit	Credit
Jun. 3	Merchandise Inventory Accounts Payable <i>Purchased inventory on account.</i>	1,600	1,600
9	Accounts Payable ($\$1,600 \times 0.40$) Merchandise Inventory <i>Returned inventory to seller (vendor).</i>	640	640
12	Cash Sales Revenue <i>Cash sale.</i>	920	920
12	Cost of Goods Sold Merchandise Inventory <i>Recorded the cost of goods sold.</i>	550	550
15	Merchandise Inventory Accounts Payable <i>Purchased inventory on account.</i>	5,000	5,000
16	Merchandise Inventory Cash <i>Paid a freight bill.</i>	260	260
17	Cash Sales Revenue <i>Cash sale.</i>	4,000	4,000
17	Cost of Goods Sold Merchandise Inventory <i>Recorded the cost of goods sold.</i>	2,360	2,360

Date	Accounts and Explanation	Debit	Credit
Jun. 18	Accounts Receivable Sales Revenue ($\$2,000 - (\$2,000 \times 0.02)$) <i>Sale on account less discount.</i>	1,960	1,960
18	Cost of Goods Sold Merchandise Inventory <i>Recorded the cost of goods sold.</i>	1,180	1,180
22	Refunds Payable Cash <i>To record refund.</i>	800	800
22	Merchandise Inventory Estimated Returns Inventory <i>To record cost of inventory returned.</i>	480	480
24	Accounts Payable Cash ($\$5,000 - \150) Merchandise Inventory ($\$5,000 \times 0.03$) <i>Paid within discount period.</i>	5,000 4,850 150	
28	Cash Accounts Receivable <i>Cash collection within discount period.</i>	1,960	1,960
29	Accounts Payable ($\$1,600 - \640) Cash <i>Paid after discount period net of return.</i>	960	960
30	Sales Revenue Refunds Payable <i>To record estimated refunds.</i>	400	400
30	Estimated Returns Inventory Cost of Goods Sold <i>To record cost of estimated returns.</i>	240	240

> Check Your Understanding 5-2

Check your understanding of the chapter by completing this problem and then looking at the solution. Use this practice to help identify which sections of the chapter you need to study more.

King Cornelius Company uses a perpetual inventory system. The adjusted trial balance of King Cornelius Company follows:

KING CORNELIUS COMPANY Adjusted Trial Balance December 31, 2018		
Account Title	Balance	
	Debit	Credit
Cash	\$ 5,600	
Accounts Receivable	37,100	
Merchandise Inventory	25,800	
Office Supplies	1,300	
Prepaid Rent	1,000	
Furniture	26,500	
Accumulated Depreciation—Furniture	\$ 23,800	
Accounts Payable		6,300
Salaries Payable		2,000
Interest Payable		600
Unearned Revenue		2,400
Notes Payable, long-term		35,000
Common Stock		20,000
Retained Earnings		2,200
Dividends	48,000	
Sales Revenue		226,000
Interest Revenue		2,000
Cost of Goods Sold	81,000	
Salaries Expense	72,700	
Rent Expense	7,700	
Utilities Expense	5,800	
Depreciation Expense—Furniture	2,700	
Supplies Expense	2,200	
Interest Expense	2,900	
Total	<u><u>\$ 320,300</u></u>	<u><u>\$ 320,300</u></u>

Requirements

1. Prepare the company's multi-step income statement, statement of retained earnings, and balance sheet in report form for year ended December 31, 2018. Note: King Cornelius doesn't separate its operating expenses as either selling or administrative. (See Learning Objective 5.)
2. Journalize the closing entries at December 31, 2018. Post to the Income Summary account as an accuracy check on net income. Recall that the credit balance closed out of Income Summary should equal net income as computed on the income statement. Also post to Retained Earnings, whose balance should agree with the amount reported on the balance sheet. (See Learning Objective 4.)
3. Compute the gross profit percentage for 2018. (See Learning Objective 6.)

> Solution

Requirement 1

KING CORNELIUS COMPANY	
Income Statement	
Year Ended December 31, 2018	
Net Sales Revenue	\$ 226,000
Cost of Goods Sold	81,000
Gross Profit	145,000
Operating Expenses:	
Salaries Expense	\$ 72,700
Rent Expense	7,700
Utilities Expense	5,800
Depreciation Expense—Furniture	2,700
Supplies Expense	2,200
Total Operating Expenses	91,100
Operating Income	53,900
Other Income and (Expenses):	
Interest Revenue	2,000
Interest Expense	(2,900)
Total Other Income and (Expenses)	(900)
Net Income	\$ 53,000

KING CORNELIUS COMPANY	
Statement of Retained Earnings	
Year Ended December 31, 2018	
Retained Earnings, January 1, 2018	\$ 2,200
Net income for the year	53,000
	55,200
Dividends	(48,000)
Retained Earnings, December 31, 2018	\$ 7,200

KING CORNELIUS COMPANY	
Balance Sheet	
December 31, 2018	
Assets	
Current Assets:	
Cash	\$ 5,600
Accounts Receivable	37,100
Merchandise Inventory	25,800
Office Supplies	1,300
Prepaid Rent	1,000
Total Current Assets	<u>\$ 70,800</u>
Property, Plant, and Equipment:	
Furniture	26,500
Less: Accumulated Depreciation—Furniture	(23,800)
Total Property, Plant, and Equipment	<u>2,700</u>
Total Assets	<u>\$ 73,500</u>
Liabilities	
Current Liabilities:	
Accounts Payable	\$ 6,300
Salaries Payable	2,000
Interest Payable	600
Unearned Revenue	2,400
Total Current Liabilities	<u>\$ 11,300</u>
Long-term Liabilities:	
Notes Payable	35,000
Total Liabilities	46,300
Stockholders' Equity	
Common Stock	20,000
Retained Earnings	7,200
Total Stockholders' Equity	27,200
Total Liabilities and Stockholders' Equity	<u>\$ 73,500</u>

Requirement 2

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Sales Revenue	226,000	
	Interest Revenue	2,000	
	Income Summary		228,000
	<i>To close revenue accounts.</i>		
31	Income Summary	175,000	
	Cost of Goods Sold		81,000
	Salaries Expense		72,700
	Rent Expense		7,700
	Utilities Expense		5,800
	Depreciation Expense—Furniture		2,700
	Supplies Expense		2,200
	Interest Expense		2,900
	<i>To close expenses.</i>		
31	Income Summary	53,000	
	Retained Earnings		53,000
	<i>To close Income Summary.</i>		
31	Retained Earnings	48,000	
	Dividends		48,000
	<i>To close Dividends.</i>		

Income Summary			
Clos. 2	175,000	228,000	Clos. 1
		53,000	Bal.
Clos. 3	53,000		
		0	Bal.

Retained Earnings			
		2,200	Adj. Bal.
Clos. 4	48,000	53,000	Clos. 3
		7,200	Bal.

Dividends			
Adj. Bal.	48,000		
		48,000	Clos. 4
Bal.	0		

Requirement 3

Gross profit percentage = Gross profit / Net sales revenue = \$145,000 / \$226,000 = 0.642 = 64.2%

> Key Terms

Administrative Expenses (p. 297)
Cost of Goods Sold (COGS)
(p. 277)
Credit Terms (p. 281)
FOB Destination (p. 284)
FOB Shipping Point (p. 284)
Freight In (p. 284)
Freight Out (p. 284)
Gross Profit (p. 278)
Gross Profit Percentage (p. 298)
Income Tax Expense (p. 297)
Inventory Shrinkage (p. 291)

Invoice (p. 279)
Merchandise Inventory (p. 276)
Merchandiser (p. 276)
Multi-Step Income Statement (p. 296)
Net Purchases (p. 302)
(Appendix 5B)
Operating Expenses (p. 278)
Operating Income (p. 297)
Other Income and Expenses (p. 297)
Periodic Inventory System (p. 278)
Perpetual Inventory System (p. 278)
Purchase Allowance (p. 282)

Purchase Discount (p. 281)
Purchase Return (p. 282)
Retailer (p. 276)
Sales Discounts (p. 288)
Sales Returns and Allowances
(p. 289)
Sales Revenue (p. 287)
Selling Expenses (p. 297)
Single-Step Income Statement
(p. 295)
Vendor (p. 277)
Wholesaler (p. 276)

> Quick Check

1. Which account does a merchandiser use that a service company does not use?
 - a. Cost of Goods Sold
 - b. Merchandise Inventory
 - c. Sales Revenue
 - d. All of the above

2. The two main inventory accounting systems are the
 - a. perpetual and periodic.
 - b. purchase and sale.
 - c. returns and allowances.
 - d. cash and accrual.

3. The journal entry for the purchase of inventory on account using the perpetual inventory system is

Date	Accounts and Explanation	Debit	Credit
a.	Merchandise Inventory Accounts Receivable	XXX	XXX
b.	Accounts Payable Merchandise Inventory	XXX	XXX
c.	Merchandise Inventory Accounts Payable	XXX	XXX
d.	Merchandise Inventory Cash	XXX	XXX

4. Downtown Market purchased inventory for \$4,200 and also paid a \$390 freight bill. Downtown Market returned 25% of the goods to the seller and later took a 1% purchase discount. Assume Downtown Market uses a perpetual inventory system. What is Downtown Market's final cost of the inventory that it kept? (Round your answer to the nearest whole number.)
 - a. \$3,509
 - b. \$3,408
 - c. \$3,119
 - d. \$1,040

Learning Objective 1

Learning Objective 1

Learning Objective 2

Learning Objective 2

Learning Objective 3

5. Austin Sound sold inventory for \$300,000, terms 2/10, n/30. Cost of goods sold was \$152,000. How much sales revenue will Austin Sound report from the sale?
- \$152,000
 - \$294,000
 - \$148,960
 - \$300,000

Learning Objective 4

6. Suppose Dave's Discount's Merchandise Inventory account showed a balance of \$8,000 before the year-end adjustments. The physical count of goods on hand totaled \$7,400. Dave uses a perpetual inventory system. To adjust the accounts, which entry would the company make?

Date	Accounts and Explanation	Debit	Credit
a.	Cost of Goods Sold Merchandise Inventory	600	600
b.	Merchandise Inventory Accounts Receivable	600	600
c.	Accounts Payable Merchandise Inventory	600	600
d.	Merchandise Inventory Cost of Goods Sold	600	600

Learning Objective 4

7. Which of the following accounts would be closed at the end of the year using the perpetual inventory system?
- Cost of Goods Sold
 - Merchandise Inventory
 - Accounts Receivable
 - Accounts Payable

Learning Objective 5

8. What is the order of the subtotals that appear on a multi-step income statement?
- Gross Profit, Operating Income, Net Income, Total Other Income and Expenses
 - Operating Income, Gross Profit, Net Income, Total Other Income and Expenses
 - Total Other Income and Expenses, Operating Income, Gross Profit, Net Income
 - Gross Profit, Operating Income, Total Other Income and Expenses, Net Income

Learning Objective 6

9. Assume Juniper Natural Dyes made Net Sales Revenue of \$90,000 and Cost of Goods Sold totaled \$58,000. What was Juniper Natural Dyes's gross profit percentage for this period? (Round your answer to the nearest whole percent.)
- 36%
 - 3.4 times
 - 64%
 - 17%

Learning Objective 3

5. Austin Sound sold inventory for \$300,000, terms 2/10, n/30. Cost of goods sold was \$152,000. How much sales revenue will Austin Sound report from the sale?
- \$152,000
 - \$294,000
 - \$148,960
 - \$300,000

Learning Objective 4

6. Suppose Dave's Discount's Merchandise Inventory account showed a balance of \$8,000 before the year-end adjustments. The physical count of goods on hand totaled \$7,400. Dave uses a perpetual inventory system. To adjust the accounts, which entry would the company make?

Date	Accounts and Explanation	Debit	Credit
a.	Cost of Goods Sold Merchandise Inventory	600	600
b.	Merchandise Inventory Accounts Receivable	600	600
c.	Accounts Payable Merchandise Inventory	600	600
d.	Merchandise Inventory Cost of Goods Sold	600	600

Learning Objective 4

7. Which of the following accounts would be closed at the end of the year using the perpetual inventory system?
- Cost of Goods Sold
 - Merchandise Inventory
 - Accounts Receivable
 - Accounts Payable

Learning Objective 5

8. What is the order of the subtotals that appear on a multi-step income statement?
- Gross Profit, Operating Income, Net Income, Total Other Income and Expenses
 - Operating Income, Gross Profit, Net Income, Total Other Income and Expenses
 - Total Other Income and Expenses, Operating Income, Gross Profit, Net Income
 - Gross Profit, Operating Income, Total Other Income and Expenses, Net Income

Learning Objective 6

9. Assume Juniper Natural Dyes made Net Sales Revenue of \$90,000 and Cost of Goods Sold totaled \$58,000. What was Juniper Natural Dyes's gross profit percentage for this period? (Round your answer to the nearest whole percent.)
- 36%
 - 3.4 times
 - 64%
 - 17%

- 10A.** Anderson Automobiles sold an automobile for \$26,000 on account. The cost of the automobile was \$14,420. The sale of the automobile came with one year of free oil changes valued at \$330. What would be the journal entry to record the sale?

Date	Accounts and Explanation	Debit	Credit
a.	Accounts Receivable	26,000	
	Sales Revenue		25,670
	Service Revenue		330
	Cost of Goods Sold	14,420	
	Merchandise Inventory		14,420
b.	Accounts Receivable	26,000	
	Sales Revenue		26,000
	Cost of Goods Sold	14,420	
	Merchandise Inventory		14,420
c.	Accounts Receivable	26,000	
	Sales Revenue		25,670
	Unearned Revenue		330
	Cost of Goods Sold	14,420	
d.	Merchandise Inventory		14,420
	Accounts Receivable	26,330	
	Sales Revenue		26,000
	Unearned Revenue		330
	Cost of Goods Sold	14,420	
	Merchandise Inventory		14,420

- 11B.** The journal entry for the purchase of inventory on account using the periodic inventory system is

Learning Objective 7
Appendix 5A

Learning Objective 8
Appendix 5B

Date	Accounts and Explanation	Debit	Credit
a.	Purchases	XXX	
	Accounts Receivable		XXX
b.	Accounts Payable	XXX	
	Merchandise Inventory		XXX
c.	Merchandise Inventory	XXX	
	Accounts Payable		XXX
d.	Purchases	XXX	
	Accounts Payable		XXX

Check your answers at the end of the chapter.

ASSESS YOUR PROGRESS

> Review Questions

1. What is a merchandiser, and what is the name of the merchandise that it sells?
2. What are the two types of merchandisers? How do they differ?
3. Describe the operating cycle of a merchandiser.
4. What is Cost of Goods Sold (COGS), and where is it reported?
5. How is gross profit calculated, and what does it represent?
6. What are the two types of inventory accounting systems? Briefly describe each.
7. What is an invoice?
8. What account is debited when recording a purchase of inventory when using the perpetual inventory system?
9. What would the credit terms of “2/10, n/EOM” mean?
10. What is a purchase return? How does a purchase allowance differ from a purchase return?
11. Describe FOB shipping point and FOB destination. When does the buyer take ownership of the goods, and who typically pays the freight?
12. How is the net cost of inventory calculated?
13. What are the two journal entries involved when recording the sale of inventory when using the perpetual inventory system?
14. Under the new revenue recognition standard, how is the sale of inventory recorded?
15. Under the new revenue recognition standard, what must companies do at the end of the period related to sales returns? Describe the journal entries that would be recorded.
16. When granting a sales allowance is there a return of merchandise inventory from the customer? Describe the journal entry(ies) that would be recorded.
17. What is freight out and how is it recorded by the seller?
18. What is inventory shrinkage? Describe the adjusting entry that would be recorded to account for inventory shrinkage.
19. What are the four steps involved in the closing process for a merchandising company?
20. Describe the single-step income statement.
21. Describe the multi-step income statement.
22. What financial statement is merchandise inventory reported on, and in what section?
23. What does the gross profit percentage measure, and how is it calculated?
- 24A. When a company has a contract involving multiple performance obligations, how must the company recognize revenue?
- 25B. What account is debited when recording a purchase of inventory when using a periodic inventory system?
- 26B. When recording purchase returns and purchase allowances under the periodic inventory system, what account is used?

- 27B.** What account is debited when recording the payment of freight in when using the periodic inventory system?
- 28B.** Describe the journal entry(ies) when recording a sale of inventory using the periodic inventory system.
- 29B.** Is an adjusting entry needed for inventory shrinkage when using the periodic inventory system? Explain.
- 30B** Highlight the differences in the closing process when using the periodic inventory system rather than the perpetual inventory system.
- 31B.** Describe the calculation of cost of goods sold when using the periodic inventory system.

> Short Exercises

For all short exercises, assume the perpetual inventory system is used unless stated otherwise. Round all numbers to the nearest whole dollar unless stated otherwise.

S5-1 Comparing periodic and perpetual inventory systems

For each statement below, identify whether the statement applies to the periodic inventory system, the perpetual inventory system, or both.

- Normally used for relatively inexpensive goods.
- Keeps a running computerized record of merchandise inventory.
- Achieves better control over merchandise inventory.
- Requires a physical count of inventory to determine the quantities on hand.
- Uses bar codes to keep up-to-the-minute records of inventory.

Learning Objective 1

S5-2 Journalizing purchase transactions

Consider the following transactions for Wonderland Toys:

-
- Aug. 7 Wonderland Toys buys \$101,300 worth of MegoBlock toys on account with credit terms of 2/10, n/60.
- 13 Wonderland Toys returns \$10,050 of the merchandise to MegoBlock due to damage during shipment.
- 14 Wonderland Toys paid the amount due, less the return and discount.
-

Learning Objective 2

Requirements

- Journalize the purchase transactions. Explanations are not required.
- In the final analysis, how much did the inventory cost Wonderland Toys?

S5-3 Journalizing purchase transactions

Consider the following transactions for Green Drug Store:

-
- Feb. 2 Green buys \$21,200 worth of inventory on account with credit terms of 2/15, n/30, FOB shipping point.
- 4 Green pays a \$75 freight charge.
- 9 Green returns \$5,500 of the merchandise due to damage during shipment.
- 14 Green paid the amount due, less return and discount.
-

Learning Objective 2

Requirements

1. Journalize the purchase transactions. Explanations are not required.
2. In the final analysis, how much did the inventory cost Green Drug Store?

Learning Objective 3**S5-4 Journalizing sales transactions**

Journalize the following sales transactions for Paul Sportswear. Explanations are not required. The company estimates sales returns at the end of each month.

-
- | | |
|-------|---|
| May 1 | Paul sold \$24,000 of men's sportswear for cash. Cost of goods sold is \$10,000. |
| 3 | Paul sold \$63,000 of women's sportswear on account, credit terms are 3/10, n/45. Cost of goods is \$33,000. |
| 5 | Paul received a \$5,500 sales return on damaged goods from the customer on May 1. Cost of goods damaged is \$2,750. |
| 10 | Paul receives payment from the customer on the amount due, less discount. |
-

Learning Objective 3**S5-5 Estimating sales returns**

On December 31, Jack Photography Supplies estimated that approximately 2% of merchandise sold will be returned. Sales Revenue for the year was \$80,000 with a cost of \$48,000. Journalize the adjusting entries needed to account for the estimated returns.

Learning Objectives 2, 3**S5-6 Journalizing purchase and sales transactions**

Suppose Piranha.com sells 3,500 books on account for \$17 each (cost of these books is \$35,700) on October 10, 2018 to The Textbook Store. One hundred of these books (cost \$1,020) were damaged in shipment, so Piranha.com later received the damaged goods from The Textbook Store as sales returns on October 13, 2018.

Requirements

1. Journalize The Textbook Store's October 2018 transactions.
2. Journalize Piranha.com's October 2018 transactions. The company estimates sales returns at the end of each month.

Learning Objectives 2, 3**S5-7 Journalizing purchase and sales transactions**

On November 4, 2018, Cain Company sold merchandise inventory on account to Tarin Wholesalers, \$12,000, that cost \$4,800. Terms 3/10, n/30. On November 5, 2018, Tarin Wholesalers paid shipping of \$30. Tarin Wholesalers paid the balance to Cain Company on November 13, 2018.

Requirements

1. Journalize Tarin Wholesalers' November transactions.
2. Journalize Cain Company's November transactions.

Learning Objective 4**S5-8 Adjusting for inventory shrinkage**

Jane's Furniture's unadjusted Merchandise Inventory account at year-end is \$69,000. The physical count of inventory came up with a total of \$67,700. Journalize the adjusting entry needed to account for inventory shrinkage.

S5-9 Journalizing closing entries

Rodney RV Center's accounting records include the following accounts at December 31, 2018.

Cost of Goods Sold	\$ 369,000	Accumulated Depreciation—Building	\$ 40,000
Accounts Payable	21,000	Cash	54,000
Rent Expense	22,000	Sales Revenue	685,000
Building	117,000	Depreciation Expense—Building	8,000
Common Stock	122,000	Dividends	60,000
Retained Earnings	5,600	Interest Revenue	15,000
Merchandise Inventory	229,600		
Notes Receivable	29,000		

Requirements

1. Journalize the required closing entries for Rodney.
2. Determine the ending balance in the Retained Earnings account.

Use the following information to answer Short Exercises S5-10 and S5-11.

Camilia Communications reported the following figures from its adjusted trial balance for its first year of business, which ended on July 31, 2018:

Cash	\$ 2,900	Cost of Goods Sold	\$ 18,700
Selling Expenses	1,400	Equipment, net	9,500
Accounts Payable	4,300	Accrued Liabilities	1,800
Common Stock	4,365	Net Sales Revenue	29,200
Notes Payable, long-term	500	Accounts Receivable	3,200
Merchandise Inventory	1,100	Interest Expense	65
Administrative Expenses	3,300		

S5-10 Preparing a merchandiser's income statement

Prepare Camilia Communications's multi-step income statement for the year ended July 31, 2018.

S5-11 Preparing a merchandiser's statement of retained earnings and balance sheet**Requirements**

1. Prepare Camilia Communications's statement of retained earnings for the year ended July 31, 2018. Assume that there were no dividends declared during the year and that the business began on August 1, 2017.
2. Prepare Camilia Communications's classified balance sheet at July 31, 2018. Use the report format.

Learning Objective 4**Learning Objective 5****Learning Objective 5**

Learning Objective 6**S5-12 Computing the gross profit percentage**

Malden Landscape Supply's selected accounts as of December 31, 2018, follow. Compute the gross profit percentage for 2018.

Selling Expenses	\$ 13,300
Interest Revenue	800
Net Sales Revenue	138,000
Cost of Goods Sold	115,000
Administrative Expenses	10,300

Learning Objective 7
Appendix 5A**S5A-13 Journalizing multiple performance obligations**

Journalize the following sales transactions for Price Company. Explanations are not required. (Assume the company uses a perpetual inventory system.)

- | | |
|--------|---|
| Apr. 1 | Price Company sold merchandise inventory for \$190. The cost of the inventory was \$100. The customer paid cash. Price Company was running a promotion and the customer received a \$35 award at the time of sale that can be used at a future date on any Price Company merchandise. |
| May 15 | The customer uses the \$35 award when purchasing merchandise inventory for \$40. The cost of the inventory was \$22. The customer paid cash. |

Learning Objective 8
Appendix 5B**S5B-14 Journalizing purchase transactions—periodic inventory system**

Consider the following transactions for Garman Packing Supplies:

- | | |
|---------|---|
| Apr. 10 | Garman Packing Supplies buys \$175,000 worth of merchandise inventory on account with credit terms of 1/10, n/30. |
| 12 | Garman returns \$15,200 of the merchandise to the vendor due to damage during shipment. |
| 19 | Garman paid the amount due, less the return and discount. |

Requirements

1. Journalize the purchase transactions assuming Garman Packing Supplies uses the periodic inventory system. Explanations are not required.
2. What is the amount of net purchases?

Learning Objective 8
Appendix 5B**S5B-15 Journalizing sales transactions—periodic inventory system**

Journalize the following sales transactions for Sandman Camera Store using the periodic inventory system. Explanations are not required. (Record debits first, then credits. Exclude explanations from journal entries.)

- | | |
|--------|---|
| Dec. 3 | Sandman sold \$45,100 of camera equipment on account, credit terms are 2/15, n/EOM. |
| 17 | Sandman receives payment from the customer on the amount due less the discount. |

S5B-16 Journalizing closing entries—periodic inventory system

D & B Printing Supplies's accounting records include the following accounts at December 31, 2018.

Purchases	\$ 193,200	Accumulated Depreciation—Building	\$ 22,000
Accounts Payable	7,800	Cash	21,700
Rent Expense	8,500	Sales Revenue	296,100
Building	44,100	Depreciation Expense—Building	4,500
Common Stock	58,000	Dividends	29,400
Retained Earnings	4,100	Interest Expense	2,600
Merchandise Inventory, Beginning	120,000	Merchandise Inventory, Ending	103,100
Notes Payable	12,100	Purchase Returns and Allowances	21,200
Purchase Discounts	2,700		

Requirements

1. Journalize the required closing entries for D & B Printing Supplies assuming that D & B uses the periodic inventory system.
2. Determine the ending balance in the Retained Earnings account.

S5B-17 Computing cost of goods sold in a periodic inventory system

N Wholesale Company began the year with merchandise inventory of \$8,000. During the year, N purchased \$93,000 of goods and returned \$6,300 due to damage. N also paid freight charges of \$1,300 on inventory purchases. At year-end, N's ending merchandise inventory balance stood at \$17,600. Assume that N uses the periodic inventory system. Compute N's cost of goods sold for the year.

Learning Objective 8
Appendix 5B**> Exercises**

For all exercises, assume the perpetual inventory system is used unless stated otherwise. Round all numbers to the nearest whole dollar unless stated otherwise.

E5-18 Using accounting vocabulary

Match the accounting terms with the corresponding definitions.

- | | |
|-----------------------|---|
| 1. Credit Terms | a. The cost of the merchandise inventory that the business has sold to customers. |
| 2. FOB Destination | b. An amount granted to the purchaser as an incentive to keep goods that are not "as ordered." |
| 3. Invoice | c. A type of merchandiser that buys merchandise either from a manufacturer or a wholesaler and then sells those goods to consumers. |
| 4. Cost of Goods Sold | d. A situation in which the buyer takes ownership (title) at the delivery destination point. |
| 5. Purchase Allowance | e. A type of merchandiser that buys goods from manufacturers and then sells them to retailers. |
| 6. FOB Shipping Point | f. A discount that businesses offer to purchasers as an incentive for early payment. |
| 7. Wholesaler | g. A situation in which the buyer takes title to the goods after the goods leave the seller's place of business. |
| 8. Purchase Discount | h. The terms of purchase or sale as stated on the invoice. |
| 9. Retailer | i. A seller's request for cash from the purchaser. |

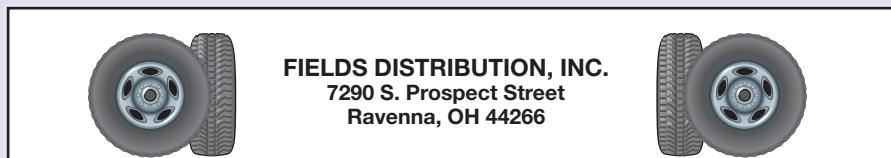
Learning Objectives 1, 2, 3

Learning Objective 2

3. Oct. 1 Cash \$769.35

E5-19 Journalizing purchase transactions from an invoice

Kingston Tires received the following invoice from a supplier (Fields Distribution, Inc.):



FIELDS DISTRIBUTION, INC.
7290 S. Prospect Street
Ravenna, OH 44266

Invoice date: September 23, 2018

Sold to: Kingston Tires
6678 Diamond Avenue
Ravenna, OH 44266

Payment terms: 1/10, n/30

Description	Quantity Shipped	Price	Amount
D39-X4 Radials	4	\$38.12	\$152.48
M223 Belted-bias	10	42.84	428.40
Q92 Truck tires	6	58.12	348.72
Total			\$929.60
Due date:	Amount:		
October 3, 2018	\$920.30		
October 4 through October 23, 2018	\$929.60		

Requirements

1. Journalize the transaction required by Kingston Tires on September 23, 2018. Do not round numbers to the nearest whole dollar. Assume tires are purchased on account.
2. Journalize the return on Kingston's books on September 28, 2018, of the D39–X4 Radials, which were ordered by mistake. Do not round numbers to the nearest whole dollar.
3. Journalize the payment on October 1, 2018, to Fields Distribution, Inc. Do not round numbers to the nearest whole dollar.

Learning Objective 2

July 24 Merch. Inv. \$64 CR

E5-20 Journalizing purchase transactions

Hajjar Jewelers uses a perpetual inventory system and had the following purchase transactions. Journalize all necessary transactions. Explanations are not required.

- | | |
|---------|--|
| Jun. 20 | Purchased inventory of \$5,900 on account from Silk Diamonds, a jewelry importer. Terms were 3/15, n/45, FOB shipping point. |
| 20 | Paid freight charges, \$400. |
| Jul. 4 | Returned \$900 of inventory to Silk. |
| 14 | Paid Silk Diamonds, less return. |
| 16 | Purchased inventory of \$3,600 on account from Sandra Diamonds, a jewelry importer. Terms were 3/10, n/EOM, FOB destination. |
| 18 | Received a \$300 allowance from Sandra Diamonds for damaged but usable goods. |
| 24 | Paid Sandra Diamonds, less allowance and discount. |

E5-21 Journalizing sales transactions

Journalize the following sales transactions for Antique Mall. Explanations are not required. The company estimates sales returns at the end of each month.

-
- Jan. 4 Sold \$16,000 of antiques on account, credit terms are n/30. Cost of goods is \$8,000.
 - 8 Received a \$300 sales return on damaged goods from the customer. Cost of goods damaged is \$150.
 - 13 Antique Mall received payment from the customer on the amount due from Jan. 4, less the return.
 - 20 Sold \$4,900 of antiques on account, credit terms are 1/10, n/45, FOB destination. Cost of goods is \$2,450.
 - 20 Antique Mall paid \$70 on freight out.
 - 29 Received payment from the customer on the amount due from Jan. 20, less the discount.
-

E5-22 Journalizing purchase and sales transactions

Journalize the following transactions for Soul Art Gift Shop. Explanations are not required.

-
- Feb. 3 Purchased \$3,300 of merchandise inventory on account under terms 3/10, n/EOM and FOB shipping point.
 - 7 Returned \$900 of defective merchandise purchased on February 3.
 - 9 Paid freight bill of \$400 on February 3 purchase.
 - 10 Sold merchandise inventory on account for \$4,700. Payment terms were 2/15, n/30. These goods cost the company \$2,350.
 - 12 Paid amount owed on credit purchase of February 3, less the return and the discount.
 - 28 Received cash from February 10 customer in full settlement of their debt.
-

Learning Objective 3**Learning Objectives 2, 3**

Use the following information to answer Exercises E5-23 through E5-25.

The adjusted trial balance of Beauty Cosmetics at September 30, 2018, follows:

BEAUTY COSMETICS Adjusted Trial Balance September 30, 2018		
Account Title	Balance	
	Debit	Credit
Cash	\$ 24,500	
Accounts Receivable	18,700	
Merchandise Inventory	52,300	
Office Supplies	3,200	
Equipment	78,000	
Accumulated Depreciation—Equipment		\$ 13,000
Accounts Payable		10,300
Salaries Payable		1,200
Notes Payable, long-term		9,200
Common Stock		18,000
Retained Earnings		15,900
Dividends	3,200	
Sales Revenue		320,300
Cost of Goods Sold	153,200	
Selling Expense	34,000	
Administrative Expense	20,200	
Interest Expense	600	
Total	<u>\$ 387,900</u>	<u>\$ 387,900</u>

Learning Objective 4

2. Ending Retained Earnings
Balance \$47,200

Learning Objective 5

Net Income \$83,750

Learning Objective 5

Gross Profit \$128,150

E5-23 Journalizing closing entries

Requirements

1. Journalize the required closing entries at September 30, 2018.
2. Set up T-accounts for Income Summary; Retained Earnings; and Dividends. Post the closing entries to the T-accounts, and calculate their ending balances.
3. How much was Beauty Cosmetics' net income or net loss?

E5-24 Preparing a single-step income statement

Prepare Beauty Cosmetics' single-step income statement for the year ended September 30, 2018.

E5-25 Preparing a multi-step income statement

Prepare Beauty Cosmetics' multi-step income statement for the year ended September 30, 2018.

E5-26 Journalizing adjusting entries including estimating sales returns

Emerson St. Book Shop's unadjusted Merchandise Inventory at June 30, 2018 was \$5,200. The cost associated with the physical count of inventory on hand on June 30, 2018, was \$4,900. In addition, Emerson St. Book Shop estimated approximately \$1,000 of merchandise sold will be returned with a cost of \$400.

Requirements

1. Journalize the adjustment for inventory shrinkage.
2. Journalize the adjustment for estimated sales returns.

E5-27 Computing the gross profit percentage

Router Software earned net sales revenue of \$65,000,000 in 2018. Cost of goods sold was \$42,900,000, and net income reached \$9,000,000, the company's highest ever. Compute the company's gross profit percentage for 2018.

E5A-28 Journalizing multiple performance obligations and sales transactions

Journalize the following sales transactions for Masco Supply. Explanations are not required. (Record debits first, then credits. Exclude explanations from journal entries. Assume the perpetual inventory method is used.)

-
- | | |
|---------|--|
| Mar. 1 | Masco Supply sold merchandise inventory for \$3,200. The cost of the inventory was \$1,280. The customer paid cash. Masco Supply was running a promotion and the customer received a \$50 award at the time of sale that can be used at a future date on any Masco Supply merchandise. |
| 3 | Sold \$7,000 of supplies on account. Credit terms are 1/10, n/45, FOB destination. Cost of goods is \$2,800. |
| 10 | Received payment from the customer on the amount due from March 3, less the discount. |
| Apr. 15 | The customer used the \$50 award when purchasing merchandise inventory for \$350, the cost of the inventory was \$140. The customer paid cash. |
-

E5B-29 Journalizing purchase transactions—periodic inventory system

Lowell Appliances had the following purchase transactions. Journalize all necessary transactions using the periodic inventory system. Explanations are not required.

-
- | | |
|--------|---|
| Sep. 4 | Purchased inventory of \$6,300 on account from Max Appliance Wholesale, an appliance wholesaler. Terms were 2/15, n/30, FOB shipping point. |
| 4 | Paid freight charges, \$410. |
| 10 | Returned \$600 of inventory to Max. |
| 17 | Paid Max Appliance Wholesale, less return and discount. |
| 20 | Purchased inventory of \$4,000 on account from MX Appliance, an appliance wholesaler. Terms were 3/10, n/45, FOB destination. |
| 22 | Received a \$700 allowance from MX Appliance for damaged but usable goods. |
| 29 | Paid MX Appliance, less allowance and discount. |
-

Learning Objectives 3, 4**Learning Objective 6****Learning Objectives 3, 7
Appendix 5A****Learning Objective 8
Appendix 5B**

Learning Objective 8
Appendix 5B**E5B-30 Journalizing sales transactions—periodic inventory system**

Journalize the following sales transactions for Bulls Eye Archery using the periodic inventory system. Explanations are not required. The company estimates sales returns and allowances at the end of each month. (Record debits first, then credits. Exclude explanations from journal entries. Round all numbers to the nearest whole dollar.)

-
- | | |
|--------|--|
| Aug. 1 | Sold \$7,100 of equipment on account, credit terms are 1/10, n/30. |
| 8 | Bulls Eye received payment from the customer on the amount due from August 1, less the discount. |
| 15 | Sold \$2,200 of equipment on account, credit terms are n/45, FOB destination. |
| 15 | Bulls Eye paid \$140 on freight out. |
| 20 | Bulls Eye negotiated a \$200 allowance on the goods sold on August 15. |
| 24 | Received payment from the customer on the amount due from August 15, less the allowance. |
-

Learning Objective 8
Appendix 5B**E5B-31 Journalizing purchase and sales transactions—periodic inventory system**

Journalize the following transactions for Master Bicycles using the periodic inventory system. Explanations are not required.

-
- | | |
|--------|---|
| Nov. 2 | Purchased \$3,400 of merchandise inventory on account under terms 2/10, n/EOM and FOB shipping point. |
| 6 | Returned \$800 of defective merchandise purchased on November 2. |
| 8 | Paid freight bill of \$100 on November 2 purchase. |
| 10 | Sold merchandise inventory on account for \$6,100. Payment terms were 3/15, n/45. |
| 11 | Paid amount owed on credit purchase of November 2, less the return and the discount. |
| 22 | Received cash from November 10 customer in full settlement of their debt, less the discount. |
-

E5B-32 Journalizing closing entries—periodic inventory system

Sweet Sailing Boat Supply uses the periodic inventory method. The adjusted trial balance of Sweet Sailing Boat Supply at December 31, 2018, follows:

Sweet Sailing Boat Supply Adjusted Trial Balance December 31, 2018		
Account Title	Balance	
	Debit	Credit
Cash	\$ 3,300	
Accounts Receivable	15,200	
Merchandise Inventory (beginning)	44,100	
Office Supplies	8,700	
Equipment	59,600	
Accumulated Depreciation—Equipment		\$ 19,500
Accounts Payable		12,500
Salaries Payable		1,100
Notes Payable, long-term		11,200
Common Stock		26,000
Retained Earnings		36,900
Dividends	60,700	
Sales Revenue		310,000
Interest Revenue		4,200
Purchases	274,400	
Purchase Returns and Allowances		94,800
Purchase Discounts		8,900
Selling Expense	38,400	
Administrative Expense	20,700	
Total	<u><u>\$ 525,100</u></u>	<u><u>\$ 525,100</u></u>

Learning Objective 8
Appendix 5B

2. Ending Retained Earnings
Balance \$71,100

Requirements

1. Journalize the required closing entries at December 31, 2018. Assume ending Merchandise Inventory is \$53,500.
2. T-accounts for Income Summary; Retained Earnings; and Dividends have been set up. Post the closing entries to the T-accounts, and calculate their ending balances.
3. How much was Sweet Sailing's net income or net loss?

Learning Objective 8
Appendix 5B
E5B-33 Computing cost of goods sold in a periodic inventory system

Think Electric uses the periodic inventory system. Think reported the following selected amounts at May 31, 2018:

Merchandise Inventory, June 1, 2017	\$ 17,500	Freight In	\$ 5,000
Merchandise Inventory, May 31, 2018	23,000	Net Sales Revenue	174,000
Purchases	88,000	Common Stock	24,000
Purchase Discounts	5,500	Retained Earnings	14,000
Purchase Returns and Allowances	6,000		

Compute the following for Think:

- Cost of goods sold.
- Gross profit.

> Problems Group A

For all problems, assume the perpetual inventory system is used unless stated otherwise. Round all numbers to the nearest whole dollar unless stated otherwise.

Learning Objectives 2, 3
P5-34A Journalizing purchase and sale transactions

Journalize the following transactions that occurred in September 2018 for Aquamarines. No explanations are needed. Identify each accounts payable and accounts receivable with the vendor or customer name. Aquamarines estimates sales returns at the end of each month.

- Sep. 3 Purchased merchandise inventory on account from Sharpner Wholesalers, \$5,500. Terms 2/15, n/EOM, FOB shipping point.
- 4 Paid freight bill of \$85 on September 3 purchase.
- 4 Purchased merchandise inventory for cash of \$1,600.
- 6 Returned \$1,300 of inventory from September 3 purchase.
- 8 Sold merchandise inventory to Herman Company, \$5,700, on account. Terms 2/15, n/35. Cost of goods, \$2,565.
- 9 Purchased merchandise inventory on account from Tucker Wholesalers, \$6,000. Terms 3/10, n/30, FOB destination.
- 10 Made payment to Sharpner Wholesalers for goods purchased on September 3, less return and discount.
- 12 Received payment from Herman Company, less discount.
- 13 After negotiations, received a \$500 allowance from Tucker Wholesalers.
- 15 Sold merchandise inventory to Jerome Company, \$2,800, on account. Terms n/EOM. Cost of goods, \$1,200.
- 22 Made payment, less allowance, to Tucker Wholesalers for goods purchased on September 9.
- 23 Jerome Company returned \$200 of the merchandise sold on September 15. Cost of goods, \$80.
- 25 Sold merchandise inventory to Small for \$1,800 on account that cost \$738. Terms of 3/10, n/30 was offered, FOB shipping point. As a courtesy to Small, \$40 of freight was added to the invoice for which cash was paid by Aquamarines.
- 29 Received payment from Small, less discount.
- 30 Received payment from Jerome Company, less return.

P5-35A Journalizing purchase and sale transactions

Journalize the following transactions that occurred in November 2018 for Sarah's Special Place, assuming the perpetual inventory system is being used. No explanations are needed. Identify each accounts payable and accounts receivable with the vendor or customer name. Sarah's Special Place estimates sales returns at the end of each month. (Record debits first, then credits. Exclude explanations from journal entries.)

-
- Nov. 4 Purchased merchandise inventory on account from Vancouver Company, \$11,000. Terms 1/10, n/EOM, FOB shipping point.
 - 6 Paid freight bill of \$150 on November 4 purchase.
 - 8 Returned half of the inventory purchased on November 4 from Vancouver Company.
 - 10 Sold merchandise inventory for cash, \$2,000. Cost of goods, \$800. FOB destination.
 - 11 Sold merchandise inventory to Garrett Corporation, \$10,500, on account, terms 1/10, n/EOM. Cost of goods, \$5,775. FOB shipping point.
 - 12 Paid freight bill of \$60 on November 10 sale.
 - 13 Sold merchandise inventory to Cabato Company, \$8,500 on account, terms of n/45. Cost of goods, \$4,675. FOB shipping point.
 - 14 Paid the amount owed on account from November 4, less return and discount.
 - 17 Received defective inventory as a sales return from the November 13 sale, \$300. Cost of goods, \$165.
 - 18 Purchased inventory of \$3,500 on account from Russo Corporation. Payment terms were 2/10, n/30, FOB destination.
 - 20 Received cash from Garrett Corporation, less discount.
 - 26 Paid amount owed on account from November 18, less discount.
 - 28 Received cash from Cabato Company, less return.
 - 29 Purchased inventory from Sully Corporation for cash, \$11,900, FOB shipping point. Freight in paid to shipping company, \$180.
-

Learning Objectives 2, 3

Learning Objectives 4, 5

1. Operating Income \$67,900

P5-36A Preparing a multi-step income statement, journalizing closing entries, and preparing a post-closing trial balance

The adjusted trial balance of Rachael Rey Music Company at June 30, 2018, follows:

RACHAEL REY MUSIC COMPANY Adjusted Trial Balance June 30, 2018		
Account Title	Balance	
	Debit	Credit
Cash	\$ 4,000	
Accounts Receivable	38,400	
Merchandise Inventory	18,100	
Office Supplies	300	
Furniture	39,900	
Accumulated Depreciation—Furniture		\$ 8,200
Accounts Payable		13,800
Salaries Payable		850
Unearned Revenue		7,500
Notes Payable, long-term		17,000
Common Stock		6,000
Retained Earnings		21,350
Dividends	40,000	
Sales Revenue		184,000
Cost of Goods Sold	85,500	
Selling Expense	18,600	
Administrative Expense	12,000	
Interest Expense	1,900	
Total	<u>\$ 258,700</u>	<u>\$ 258,700</u>

Requirements

1. Prepare Rachael Rey's multi-step income statement for the year ended June 30, 2018.
2. Journalize Rachael Rey's closing entries.
3. Prepare a post-closing trial balance as of June 30, 2018.

P5-37A Journalizing adjusting entries, preparing adjusted trial balance, and preparing multi-step income statement

The unadjusted trial balance for Trudel Electronics Company at March 31, 2018, follows:

TRUDEL ELECTRONICS COMPANY Unadjusted Trial Balance March 31, 2018		
Account Title	Balance	
	Debit	Credit
Cash	\$ 4,000	
Accounts Receivable	38,800	
Merchandise Inventory	45,500	
Office Supplies	6,500	
Equipment	130,000	
Accumulated Depreciation—Equipment	\$ 36,800	
Accounts Payable	17,400	
Unearned Revenue	13,200	
Notes Payable, long-term	48,000	
Common Stock	60,000	
Retained Earnings	100	
Dividends	20,000	
Sales Revenue		282,500
Cost of Goods Sold	160,600	
Salaries Expense (Selling)	20,000	
Rent Expense (Selling)	15,800	
Salaries Expense (Administrative)	5,700	
Utilities Expense (Administrative)	11,100	
Total	\$ 458,000	\$ 458,000

Requirements

1. Journalize the adjusting entries using the following data:
 - a. Interest revenue accrued, \$200.
 - b. Salaries (Selling) accrued, \$2,300.
 - c. Depreciation Expense—Equipment (Administrative), \$1,300.
 - d. Interest expense accrued, \$1,500.
 - e. A physical count of inventory was completed. The ending Merchandise Inventory should have a balance of \$45,200.
 - f. Trudel estimates that approximately \$6,000 of merchandise sold will be returned with a cost of \$1,200.
2. Prepare Trudel Electronics's adjusted trial balance as of March 31, 2018.
3. Prepare Trudel Electronics's multi-step income statement for year ended March 31, 2018.

Learning Objectives 4, 5

2. Total Credits \$463,300

Learning Objectives 5, 6

2. Operating Income \$93,120

P5-38A Preparing a single-step income statement, preparing a multi-step income statement, and computing the gross profit percentage

The records of Farm Quality Steak Company list the following selected accounts for the quarter ended April 30, 2018:

Interest Revenue	\$ 400	Accounts Payable	\$ 17,700
Merchandise Inventory	45,000	Accounts Receivable	38,200
Notes Payable, long-term	54,000	Accumulated Depreciation—Equipment	37,700
Salaries Payable	2,800	Common Stock	30,000
Net Sales Revenue	298,000	Retained Earnings	5,380
Rent Expense (Selling)	15,100	Dividends	25,000
Salaries Expense (Administrative)	2,000	Cash	7,100
Office Supplies	6,500	Cost of Goods Sold	154,960
Unearned Revenue	13,100	Equipment	132,000
Interest Expense	2,100	Interest Payable	1,700
Depreciation Expense—Equipment (Administrative)	1,320	Rent Expense (Administrative)	7,100
Utilities Expense (Administrative)	4,600	Salaries Expense (Selling)	6,000
Delivery Expense (Selling)	3,800	Utilities Expense (Selling)	10,000

Requirements

1. Prepare a single-step income statement.
2. Prepare a multi-step income statement.
3. M. Doherty, manager of the company, strives to earn a gross profit percentage of at least 50%. Did Farm Quality achieve this goal? Show your calculations.

**Learning Objective 8
Appendix 5B****P5B-39A Journalizing purchase and sale transactions—periodic inventory system**

Journalize the following transactions that occurred in March 2018 for Double Company. Assume Double uses the periodic inventory system. No explanations are needed. Identify each accounts payable and accounts receivable with the vendor or customer name. Double estimates sales returns at the end of each month.

- Mar. 3 Purchased merchandise inventory on account from Sidecki Wholesalers, \$5,500. Terms 2/15, n/EOM, FOB shipping point.
- 4 Paid freight bill of \$70 on March 3 purchase.
- 4 Purchased merchandise inventory for cash of \$1,100.
- 6 Returned \$900 of inventory from March 3 purchase.
- 8 Sold merchandise inventory to Herrick Company, \$3,400, on account. Terms 1/15, n/35.
- 9 Purchased merchandise inventory on account from Tex Wholesalers, \$5,600. Terms 2/10, n/30, FOB destination.
- 10 Made payment to Sidecki Wholesalers for goods purchased on March 3, less return and discount.
- 12 Received payment from Herrick Company, less discount.
- 13 After negotiations, received a \$500 allowance from Tex Wholesalers.
- 15 Sold merchandise inventory to Jesper Company, \$1,700, on account. Terms n/EOM.
- 22 Made payment, less allowance, to Tex Wholesalers for goods purchased on March 9.
- 23 Jesper Company returned \$300 of the merchandise sold on March 15.
- 25 Sold merchandise inventory to Salter for \$1,000 on account. Terms of 1/10, n/30 was offered, FOB shipping point.
- 29 Received payment from Salter, less discount.
- 30 Received payment from Jesper Company, less return.

P5B-40A Preparing a multi-step income statement and journalizing closing entries

Triton Department Store uses a periodic inventory system. The adjusted trial balance of Triton Department Store at December 31, 2018, follows:

TRITON DEPARTMENT STORE Adjusted Trial Balance December 31, 2018		
Account Title	Balance	
	Debit	Credit
Cash	\$ 8,200	
Accounts Receivable	84,600	
Merchandise Inventory (beginning)	37,800	
Office Supplies	850	
Furniture	86,000	
Accumulated Depreciation—Furniture	\$ 18,500	
Accounts Payable		29,400
Salaries Payable		2,300
Unearned Revenue		14,900
Notes Payable, long-term		36,000
Common Stock		60,000
Retained Earnings		22,850
Dividends	88,600	
Sales Revenue		374,000
Purchases	295,000	
Purchase Returns and Allowances		109,000
Purchase Discounts		6,400
Freight In	300	
Selling Expense	41,700	
Administrative Expense	26,600	
Interest Expense	3,700	
Total	<u>\$ 673,350</u>	<u>\$ 673,350</u>

Learning Objective 8
Appendix 5B

1. Gross Profit \$192,600

> Problems Group B

For all problems, assume the perpetual inventory system is used unless stated otherwise. Round all numbers to the nearest whole dollar unless stated otherwise.

Learning Objectives 2, 3

P5-41B Journalizing purchase and sale transactions

Journalize the following transactions that occurred in September 2018 for Cardinal, assuming the perpetual inventory system is being used. No explanations are needed. Identify each accounts payable and accounts receivable with the vendor or customer name. Cardinal estimates sales returns at the end of each month. (Record debits first, then credits. Exclude explanations from journal entries.).

-
- | | |
|--------|---|
| Sep. 3 | Purchased merchandise inventory on account from Sharp Wholesalers, \$6,000. Terms 2/15, n/EOM, FOB shipping point. |
| 4 | Paid freight bill of \$60 on September 3 purchase. |
| 4 | Purchase merchandise inventory for cash of \$2,400. |
| 6 | Returned \$1,200 of inventory from September 3 purchase. |
| 8 | Sold merchandise inventory to Hollingshead Company, \$5,900, on account. Terms 3/15, n/35. Cost of goods, \$2,655. |
| 9 | Purchased merchandise inventory on account from Tarin Wholesalers, \$10,000. Terms 1/10, n/30, FOB destination. |
| 10 | Made payment to Sharp Wholesalers for goods purchased on September 3, less return and discount. |
| 12 | Received payment from Hollingshead Company, less discount. |
| 13 | After negotiations, received a \$300 allowance from Tarin Wholesalers. |
| 15 | Sold merchandise inventory to Jex Company, \$3,300, on account. Terms n/EOM. Cost of goods, \$1,518. |
| 22 | Made payment, less allowance, to Tarin Wholesalers for goods purchased on September 9. |
| 23 | Jex Company returned \$400 of the merchandise sold on September 15. Cost of goods, \$184. |
| 25 | Sold merchandise inventory to Secker for \$1,900 on account that cost \$798. Terms of 2/10, n/30 were offered, FOB shipping point. As a courtesy to Secker, \$70 of freight was added to the invoice for which cash was paid by Cardinal. |
| 29 | Received payment from Secker, less discount. |
| 30 | Received payment from Jex Company, less return. |
-

P5-42B Journalizing purchase and sale transactions

Journalize the following transactions that occurred in January 2018 for Sylvia's Amusements. No explanations are needed. Identify each accounts payable and accounts receivable with the vendor or customer name. Sylvia estimates sales returns at the end of each month.

-
- Jan. 4 Purchased merchandise inventory on account from Vanderbilt Company, \$7,000. Terms 1/10, n/EOM, FOB shipping point.
 - 6 Paid freight bill of \$100 on January 4 purchase.
 - 8 Returned half the inventory purchased on January 4 from Vanderbilt Company.
 - 10 Sold merchandise inventory for cash, \$1,600. Cost of goods, \$640. FOB destination.
 - 11 Sold merchandise inventory to Graceland Corporation, \$10,800, on account, terms of 1/10, n/EOM. Cost of goods, \$5,400. FOB shipping point.
 - 12 Paid freight bill of \$60 on January 10 sale.
 - 13 Sold merchandise inventory to Cabbell Company, \$9,500, on account, terms of n/45. Cost of goods, \$5,225. FOB shipping point.
 - 14 Paid the amount owed on account from January 4, less return and discount.
 - 17 Received defective inventory as a sales return from the January 13 sale, \$600. Cost of goods, \$300.
 - 18 Purchased inventory of \$4,600 on account from Roberts Corporation. Payment terms were 3/10, n/30, FOB destination.
 - 20 Received cash from Graceland Corporation, less discount.
 - 26 Paid amount owed on account from January 18, less discount.
 - 28 Received cash from Cabbell Company, less return.
 - 29 Purchased inventory from Sandra Corporation for cash, \$11,600, FOB shipping point. Freight in paid to shipping company, \$240.
-

Learning Objectives 2, 3

Learning Objectives 4, 5

1. Operating Income \$59,800

P5-43B Preparing a multi-step income statement, journalizing closing entries, and preparing a post-closing trial balance

Terry Tighe Theatre Company uses a perpetual inventory system. The adjusted trial balance of Terry Tighe Theater Company at June 30, 2018, follows:

TERRY TIGHE THEATRE COMPANY Adjusted Trial Balance June 30, 2018		
Account Title	Balance	
	Debit	Credit
Cash	\$ 4,400	
Accounts Receivable	38,600	
Merchandise Inventory	17,200	
Office Supplies	700	
Furniture	40,100	
Accumulated Depreciation—Furniture		\$ 8,500
Accounts Payable		13,600
Salaries Payable		600
Unearned Revenue		7,300
Notes Payable, long-term		13,500
Common Stock		16,000
Retained Earnings		7,500
Dividends	39,000	
Sales Revenue		180,000
Cost of Goods Sold	72,000	
Selling Expense	18,500	
Administrative Expense	14,500	
Interest Expense	2,000	
Total	<u>\$ 247,000</u>	<u>\$ 247,000</u>

Requirements

1. Prepare Terry Tighe's multi-step income statement for the year ended June 30, 2018.
2. Journalize Terry Tighe's closing entries.
3. Prepare a post-closing trial balance as of June 30, 2018.

P5-44B Journalizing adjusting entries, preparing adjusted trial balance, and preparing multi-step income statement

The unadjusted trial balance for Tuttle Electronics Company follows:

Learning Objectives 4, 5

2. Total Credits \$480,345

TUTTLE ELECTRONICS COMPANY		
Unadjusted Trial Balance		
October 31, 2018		
Account Title	Balance	
	Debit	Credit
Cash	\$ 4,200	
Accounts Receivable	33,800	
Merchandise Inventory	45,700	
Office Supplies	5,700	
Equipment	129,500	
Accumulated Depreciation—Equipment	\$ 37,200	
Accounts Payable	15,600	
Unearned Revenue	13,400	
Notes Payable, long-term	53,000	
Common Stock	48,000	
Retained Earnings	6,700	
Dividends	27,000	
Sales Revenue		300,300
Cost of Goods Sold	171,600	
Salaries Expense (Selling)	26,000	
Rent Expense (Selling)	15,400	
Salaries Expense (Administrative)	4,800	
Utilities Expense (Administrative)	10,500	
Total	<u><u>\$ 474,200</u></u>	<u><u>\$ 474,200</u></u>

Requirements

- Journalize the adjusting entries using the following data:
 - Interest revenue accrued, \$550.
 - Salaries (Selling) accrued, \$2,800.
 - Depreciation Expense—Equipment (Administrative), \$1,295.
 - Interest expense accrued, \$1,500.
 - A physical count of inventory was completed. The ending Merchandise Inventory should have a balance of \$45,300.
 - Tuttle estimates that approximately \$6,200 of merchandise sold will be returned with a cost of \$2,480.
- Prepare Tuttle Electronics's adjusted trial balance as of October 31, 2018.
- Prepare Tuttle Electronics's multi-step income statement for year ended October 31, 2018.

Learning Objectives 5, 6

2. Operating Income \$80,890

P5-45B Preparing a single-step income statement, preparing a multi-step income statement, and computing the gross profit percentage

Culinary Creations Beef Company uses a perpetual inventory system. The records of Culinary Creations Beef Company list the following selected accounts for the quarter ended April 30, 2018:

Interest Revenue	\$ 300	Accounts Payable	\$ 16,900
Merchandise Inventory	45,300	Accounts Receivable	33,400
Notes Payable, long-term	42,000	Accumulated Depreciation—Equipment	37,900
Salaries Payable	2,200	Common Stock	34,000
Net Sales Revenue	295,000	Retained Earnings	19,690
Rent Expense (Selling)	21,900	Dividends	17,500
Salaries Expense (Administrative)	2,400	Cash	7,500
Office Supplies	6,400	Cost of Goods Sold	159,300
Unearned Revenue	13,400	Equipment	129,000
Interest Expense	2,300	Interest Payable	1,300
Depreciation Expense—Equipment (Administrative)	1,290	Rent Expense (Administrative)	9,200
Utilities Expense (Administrative)	4,800	Salaries Expense (Selling)	5,900
Delivery Expense (Selling)	3,200	Utilities Expense (Selling)	10,100

Requirements

1. Prepare a single-step income statement.
2. Prepare a multi-step income statement.
3. M. Dupont, manager of the company, strives to earn a gross profit percentage of at least 50%. Did Culinary Creations achieve this goal? Show your calculations.

P5-46B Journalizing purchase and sale transactions—periodic inventory system

Journalize the following transactions that occurred in March 2018 for Dawson Company. Assume Dawson uses the periodic inventory system. No explanations are needed. Identify each accounts payable and accounts receivable with the vendor or customer name. Dawson estimates sales returns at the end of each month. (Record debits first, then credits. Exclude explanations from journal entries.)

-
- Mar. 3 Purchased merchandise inventory on account from Sharp Wholesalers, \$5,000. Terms 3/15, n/EOM, FOB shipping point.
 - 4 Paid freight bill of \$90 on March 3 purchase.
 - 4 Purchased merchandise inventory for cash of \$2,200.
 - 6 Returned \$1,100 of inventory from March 3 purchase.
 - 8 Sold merchandise inventory to Hilton Company, \$3,800, on account. Terms 1/15, n/35.
 - 9 Purchased merchandise inventory on account from Tamara Wholesalers, \$5,500. Terms 1/0, n/30, FOB destination.
 - 10 Made payment to Sharp Wholesalers for goods purchased on March 3, less return and discount.
 - 12 Received payment from Hilton Company, less discount.
 - 13 After negotiations, received a \$300 allowance from Tamara Wholesalers.
 - 15 Sold merchandise inventory to Jeeves Company, \$2,500, on account. Terms n/EOM.
 - 22 Made payment, less allowance, to Tamara Wholesalers for goods purchased on March 9.
 - 23 Jeeves Company returned \$300 of the merchandise sold on March 15.
 - 25 Sold merchandise inventory to Small for \$1,050 on account. Terms of 3/10, n/30 were offered, FOB shipping point.
 - 29 Received payment from Small, less discount.
 - 30 Received payment from Jeeves Company, less return.
-

**Learning Objective 8
Appendix 5B**

Learning Objective 8
Appendix 5B

1. Gross Profit \$212,800

P5-47B Preparing a multi-step income statement and journalizing closing entries

Taylor Department Store uses a periodic inventory system. The adjusted trial balance of Taylor Department Store at December 31, 2018, follows:

TAYLOR DEPARTMENT STORE Adjusted Trial Balance December 31, 2018		
	Balance	
Account Title	Debit	Credit
Cash	\$ 7,900	
Accounts Receivable	85,300	
Merchandise Inventory (beginning)	37,600	
Office Supplies	300	
Furniture	83,000	
Accumulated Depreciation—Furniture		\$ 18,500
Accounts Payable		28,500
Salaries Payable		2,900
Unearned Revenue		14,500
Notes Payable, long-term		32,000
Common Stock		20,000
Retained Earnings		45,400
Dividends	89,000	
Sales Revenue		380,800
Purchases	284,000	
Purchase Returns and Allowances		110,000
Purchase Discounts		7,000
Freight In	100	
Selling Expense		42,900
Administrative Expense		26,300
Interest Expense		3,200
Total	\$ 659,600	\$ 659,600

Requirements

1. Prepare Taylor Department Store's multi-step income statement for the year ended December 31, 2018. Assume ending Merchandise Inventory is \$36,700.
2. Journalize Taylor Department Store's closing entries.

CRITICAL THINKING

> Using Excel

P5-48 Using Excel to prepare a multi-step income statement

Download an Excel template for this problem online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

Cougar Mountain Sports has prepared an adjusted trial balance for the fiscal year ended June 30, 2018. Notes to the adjusted trial balance are located below the totals.

Use the blue shaded areas on the income statement worksheet for inputs.

Requirements:

1. Use Excel to prepare a multi-step income statement based on the adjusted trial balance.
 - a. Use formulas to link the balances on the adjusted trial balance to the amounts on the income statement. Note that some balances are split between two different areas of the Income Statement. For example, the Rent Expense is divided into two categories—Selling and Administrative.
 - b. Use a formula to add and subtract account amounts as indicated.
 - c. Format the numbers in the dollar columns with a comma and no decimal places (e.g. 5,460). Use a dollar sign at the top of each column and at the total (e.g. \$26,201). Make sure the decimal places align.
 - d. Double-underline the total.
2. Compute the gross profit margin percentage. Format percentages to two decimal places (e.g. 22.74%).

> Continuing Problem Part 1

P5-49 Journalizing and posting purchase and sale transactions

This problem continues the Let's Bike Company situation from Chapter 4. At the beginning of the new year, Let's Bike Company decided to carry and sell cycling backpacks with its logo printed on them. Let's Bike Company uses the perpetual inventory system to account for the inventory. During January 2019, Let's Bike Company completed the following merchandising transactions:

-
- | | |
|--------|---|
| Jan. 1 | Purchased 12 backpacks on account at \$30 each. Terms 3/10, n/30. |
| 4 | Sold 8 backpacks on account for \$40 each, total cost of \$240. Terms 5/10, n/45. |
| 5 | Purchased 10 backpacks at \$32 each and paid cash. |
| 11 | Paid the supplier for the backpacks purchased on January 1. |
| 12 | Realised 3 backpacks from the January 5 order were of wrong size and returned them for a cash refund. |
| 13 | Received payment for the backpacks sold on account on January 4, less discount. |
| 18 | Sold 10 backpacks for \$40 each, total cost of \$312. Received cash. |
| 19 | Purchased 40 backpacks on account at \$34 each. Terms 5/10, n/30, FOB shipping point. |
| 20 | Realised some of the backpacks from the January 19 order were damaged. Supplier offered a \$120 purchase allowance. |
| 21 | Paid freight associated with the January 19 purchase, \$40. |
| 22 | Paid the supplier for the backpacks purchased on January 19, less allowance and discount. |
| 23 | Sold 21 backpacks on account for \$40 each, total cost of \$641. Terms 5/5, n/30, FOB destination. |
| 24 | Paid freight associated with the January 23 sale, \$75. |
| 25 | Purchase 20 backpacks at \$35 each and paid cash. |
| 27 | Sold 25 backpacks for \$40 each, total cost of \$784. Term 2/15, n/30. |
| 30 | Received payment for the backpacks sold on account on January 23. |
| 31 | Sold 5 backpacks for \$40 each, total cost of \$175. Received cash. |
-

Requirements

1. Open the following T-accounts in the ledger, using the post-closing balances from Chapter 4: Cash, Accounts Receivable, Merchandise Inventory, Estimated Returns Inventory, Office Supplies, Prepaid Rent, Land, Building, Accumulated Depreciation—Building, Bikes, Accumulated Depreciation—Bikes, Accounts Payable, Utilities Payable, Telephone Payable, Wages Payable, Refunds Payable, Interest Payable, Unearned Revenue, Notes Payable, Common Stock, Retained Earnings, Income Summary, Sales Revenue, Bike Rental Revenue, Cost of Goods Sold, Rent Expense, Wages Expense, Utilities Expense, Telephone Expense, Supplies Expense, Depreciation Expense—Building, Depreciation Expense—Bikes, Interest Expense, Delivery Expense, Sales Discounts Forfeited.
2. Journalize and post the transactions. Compute each account balance, and denote the balance as *Balance*. Omit explanations.

> Continuing Problem Part 2

P5-50 Making adjusting and closing entries, preparing financial statements, and computing the gross profit percentage

This problem continues the Let's Bike Company situation and focuses on nonmerchandising transactions, adjusting and closing entries, and preparing financial statements. Let's Bike Company does not typically prepare adjusting and closing entries each month, but the company is surprised at how popular the backpacks are and wishes to know the net income for January and would also like to understand how to prepare the closing entries for a merchandising company.

During January 2019, Let's Bike Company completed the following nonmerchandising transactions:

-
- Jan. 2 Rented bikes to Paddington Limited on account, \$8,200.
 - 4 Paid utilities and telephone bills from December.
 - 15 Paid wages accrued in December.
 - 19 Collected cash from Paddington Limited (\$1,200) and other customers (\$4,200).
 - 27 Received bills for utilities (\$320) and telephone (\$420).
 - 28 Paid various accounts payable, \$420.
 - 30 Purchased supplies on account, \$150.
-

Requirements

1. Journalize and post the January transactions. Omit explanations. Use the ledger from the previous problem for posting.
2. Journalize and post the adjusting entries for the month of January. Omit explanations. Denote each adjustment as *Adj.* Compute each account balance, and denote the balance as *Balance*. In addition to the adjusting entries from the data from previous chapters, Let's Bike Company provides this data:
 - a. A physical count of the inventory at the end of the month revealed the cost was \$330.
 - b. The company estimated sales returns will be \$70 with a cost of \$35.
 - c. Office supplies on hand, \$180.
 - d. The Unearned Revenue has now been earned.
 - e. Interest expense accrued on the notes payable, \$25.
 - f. Employees worked for the rental booth earned \$1,900 in wages that will be paid in February.
3. Prepare the month ended January 31, 2019, single step income statement of Let's Bike Company.
4. Journalize and post the closing entries. Omit explanations. Denote each closing amount as *Clo.* and each balance as *Balance*. After posting all closing entries, prove the equality of debits and credits in the ledger by preparing a post-closing trial balance.
5. Compute the gross profit percentage for January for Let's Bike Company.

> Tying It All Together Case 5-1

Before you begin this assignment, review the *Tying It All Together* feature in the chapter. It will also be helpful if you review Macy's, Inc. 2015 annual report (<https://www.sec.gov/Archives/edgar/data/794367/000079436716000221/m-0130201610k.htm>).

Macy's, Inc. is a premier retailer in the United States, operating nearly 900 stores in 45 states. Macy's, Bloomingdale's, and Bloomingdale's Outlet are all brands that operate under Macy's, Inc. The company sells a wide range of merchandise including apparel and accessories, cosmetics, home furnishings, and other goods. Macy's, Inc. purchases its merchandise from many suppliers and also develops its own private label brands.

Requirements

1. Under the new revenue recognition rules, how will Macy's record and recognize sales revenue? Which financial statement is sales revenue reported on?
2. Macy's, Inc. reported cost of sales of \$16,496 million for the year ending January 30, 2016. Which financial statement is cost of sales (also known as cost of goods sold) reported on? What does cost of sales represent? What type of account is cost of sales?
3. Assume Macy's, Inc. purchases \$100,000 of inventory from one of its vendors. The terms of the purchase are FOB shipping point. Who pays the freight and how does the cost of the freight get recorded? Assume Macy's uses the perpetual inventory system.
4. On which financial statement will Macy's report its merchandise inventory?
5. Assume Macy's, Inc. prepares a multi-step income statement. What would the format of that income statement look like? What is one benefit of preparing a multi-step income statement for merchandising companies such as Macy's, Inc.?

> Decision Case 5-1

Party-Time T-Shirts sells T-shirts for parties at the local college. The company completed the first year of operations, and the shareholders are generally pleased with operating results as shown by the following income statement:

PARTY-TIME T-SHIRTS	
Income Statement	
Year Ended December 31, 2017	
Net Sales Revenue	\$ 350,000
Cost of Goods Sold	210,000
Gross Profit	140,000
Operating Expenses:	
Selling Expense	40,000
Administrative Expense	25,000
Net Income	\$ 75,000

Bill Hildebrand, the controller, is considering how to expand the business. He proposes two ways to increase profits to \$100,000 during 2018.

- a. Hildebrand believes he should advertise more heavily. He believes additional advertising costing \$20,000 will increase net sales by 30% and leave administrative expense unchanged. Assume that Cost of Goods Sold will remain at the same percentage of net sales as in 2017, so if net sales increase in 2018, Cost of Goods Sold will increase proportionately.
- b. Hildebrand proposes selling higher-margin merchandise, such as party dresses, in addition to the existing product line. An importer can supply a minimum of 1,000 dresses for \$40 each; Party-Time can mark these dresses up 100% and sell them for \$80. Hildebrand realizes he will have to advertise the new merchandise, and this advertising will cost \$5,000. Party-Time can expect to sell only 80% of these dresses during the coming year.

Help Hildebrand determine which plan to pursue. Prepare a multi-step income statement for 2018 to show the expected net income under each plan.

> Ethical Issue 5-1

Dobbs Wholesale Antiques makes all sales under terms of FOB shipping point. The company usually ships inventory to customers approximately one week after receiving the order. For orders received late in December, Kathy Dobbs, the owner, decides when to ship the goods. If profits are already at an acceptable level, Dobbs delays shipment until January. If profits for the current year are lagging behind expectations, Dobbs ships the goods during December.

Requirements

1. Under Dobbs's FOB policy, when should the company record a sale?
2. Do you approve or disapprove of Dobbs's manner of deciding when to ship goods to customers and record the sales revenue? If you approve, give your reason. If you disapprove, identify a better way to decide when to ship goods. (There is no accounting rule against Dobbs's practice.)

> Fraud Case 5-1

Rae Philippe was a warehouse manager for Atkins Oilfield Supply, a business that operated across eight Western states. She was an old pro and had known most of the other warehouse managers for many years. Around December each year, auditors would come to do a physical count of the inventory at each warehouse. Recently, Rae's brother started his own drilling company and persuaded Rae to "loan" him 80 joints of 5-inch drill pipe to use for his first well. He promised to have it back to Rae by December, but the well encountered problems and the pipe was still in the ground. Rae knew the auditors were on the way, so she called her friend Andy, who ran another Atkins warehouse. "Send me over 80 joints of 5-inch pipe tomorrow, and I'll get them back to you ASAP," said Rae. When the auditors came, all the pipe on the books was accounted for, and they filed a "no-exception" report.

Requirements

1. Is there anything the company or the auditors could do in the future to detect this kind of fraudulent practice?
2. How would this kind of action affect the financial performance of the company?

> Financial Statement Case 5-1

This case uses both the income statement (consolidated statements of operations) and the balance sheet (consolidated statements of financial position) of **Target Corporation**. Visit <http://www.pearsonglobaleditions.com/Sitemap/Horngren/> to view a link to the Target Corporation Fiscal 2015 Annual Report, for the fiscal year ending on January 30, 2016.

Requirements

1. What was the value of the company's inventory at January 30, 2016, and January 31, 2015?
2. Review Note 12 (specifically Inventories) in the Notes to Consolidated Financial Statements. What does Target include in the cost of inventory?
3. What was the amount of Target's cost of goods sold (cost of sales) for the year ending January 30, 2016, and the year ending January 31, 2015?
4. What income statement format does Target use? Explain.
5. Compute Target's gross profit percentage for the year ending January 30, 2016, and the year ending January 31, 2015. Did the gross profit percentage improve, worsen, or hold steady? Assuming the industry average for gross profit percentage is 35%, how does Target compare in the industry?

Pearson MyLabAccounting

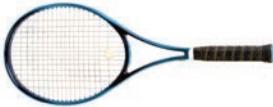
For a wealth of online resources, including exercises, problems, media, and immediate tutorial help, please visit <http://www.myaccountinglab.com>.

> Quick Check Answers

1. d 2. a 3. c 4. a 5. b 6. a 7. a 8. d 9. a 10A. d 11B. d

6

Merchandise Inventory



What Is the Cost of This Merchandise Inventory?

Jorell was excited about the most recent shipment of merchandise inventory that he received today. As the controller of a successful sporting goods store, he has decided to expand the merchandise inventory line by offering outdoor cooking items, such as grills, cookers, and accessories. He believes that this new merchandise inventory will draw new customers to the store and eventually bring more profits to the business.

As Jorell prepares the merchandise inventory for sale, he must decide how the business will track the cost of each product sold. For example, if the business sells 500 identical outdoor grills that were purchased at different times and at different costs, how will the business determine the cost of each grill sold? Should the business keep

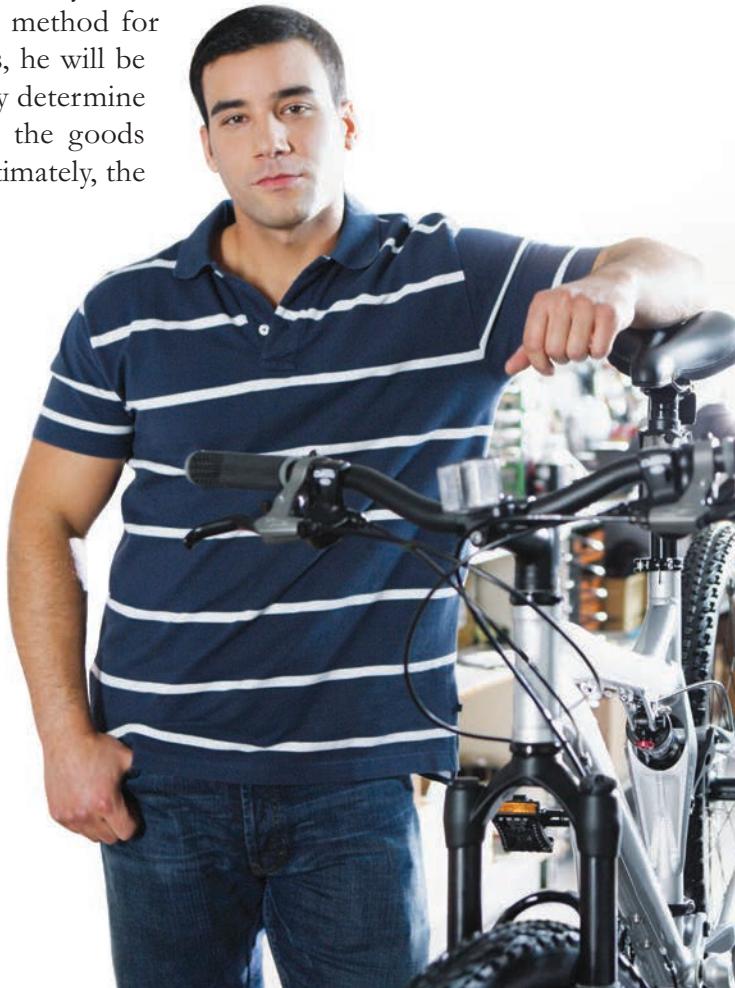
detailed cost records for each specific grill sold? Or should the business use an inventory costing method that will approximate the flow of inventory costs? For example, the business might decide to assign the costs of the first grills purchased to the first grills sold rather than tracking the cost of each grill individually. Or it might decide, instead, to assign the costs of the last grills purchased to the first grills sold.

Jorell understands that he has several options when it comes to selecting an inventory costing method. He wants to select a method that will be relatively easy to implement and maintain. He knows that by selecting the best method for the business, he will be able to easily determine the cost of the goods sold and, ultimately, the gross profit.



What Is the Cost of Merchandise Inventory?

In this chapter, we expand our discussion on merchandise inventory by learning how to account for the cost of inventory. When **Dick's Sporting Goods, Inc.**, a retail chain that sells sporting goods, apparel, and footwear, purchases and sells inventory, the business must account for the inventory appropriately. Dick's must determine the cost of the inventory that is sold in order to calculate gross profit. If a business had only a small amount of inventory, identifying the cost of one particular item would be simple. However, large businesses, such as Dick's, have millions of items of inventory, which makes tracking costs very difficult. In this chapter, you learn that every business must select an inventory costing method that allows it to track costs and determine the cost of goods sold, gross profit, and value of ending merchandise inventory.





Chapter 6 Learning Objectives



- | | |
|---|--|
| 1 Identify accounting principles and controls related to merchandise inventory | 5 Measure the effects of merchandise inventory errors on the financial statements |
| 2 Account for merchandise inventory costs under a perpetual inventory system | 6 Use inventory turnover and days' sales in inventory to evaluate business performance |
| 3 Compare the effects on the financial statements when using the different inventory costing methods | 7 Account for merchandise inventory costs under a periodic inventory system (Appendix 6A) |
| 4 Apply the lower-of-cost-or-market rule to merchandise inventory | |

WHAT ARE THE ACCOUNTING PRINCIPLES AND CONTROLS THAT RELATE TO MERCHANDISE INVENTORY?

Chapter 5 introduced accounting for merchandise inventory. It showed how Smart Touch Learning, a fictitious merchandiser that sells tablet computers containing e-learning software programs, recorded the purchase and sale of its inventory. The current chapter completes the accounting for merchandise inventory.

Accounting Principles

Let's begin by learning about several accounting principles that affect merchandise inventories. Among them are consistency, disclosure, materiality, and accounting conservatism.

Consistency Principle

The **consistency principle** states that businesses should use the same accounting methods and procedures from period to period. Consistency helps investors and creditors compare a company's financial statements from one period to the next.

Suppose you are analyzing a company's net income over a two-year period in which there was an increase in net income from the first year to the second. Analysis of the income statement shows Net Sales Revenue was almost the same for both years, but Cost of Goods Sold decreased significantly, which resulted in increases in gross profit and operating income. Without further information, you might conclude that the company was able to purchase its inventory at a lower cost in the second year and that profits will continue to increase in future years. However, changing inventory costing methods could have caused this one-time change, in which case future profits will not be affected. Therefore, companies must be consistent in the accounting methods they use. If changes are made in accounting methods, these changes must be reported. Investors and creditors need this information to make wise decisions about the company.

Disclosure Principle

The **disclosure principle** holds that a company should report enough information for outsiders to make knowledgeable decisions about the company. In short, the company should report information that is relevant and has faithful representation. This includes disclosing the method used to account for merchandise inventories. All major accounting methods and procedures are described in the footnotes to the financial statements.

Learning Objective 1

Identify accounting principles and controls related to merchandise inventory

Consistency Principle

A business should use the same accounting methods and procedures from period to period.

Disclosure Principle

A business's financial statements must report enough information for outsiders to make knowledgeable decisions about the company.



Suppose a banker is comparing two companies—one using inventory method A and the other using inventory method B. The B company reports higher net income but only because of the inventory method it selected. Without knowledge of these accounting methods, the banker could lend money to the wrong business.

Take a look at Kohl's Corporation's annual report which can be reviewed by visiting <http://www.pearsonhighered.com/Horngren>. After the financial statements, you will find the notes to the financial statements. These footnotes contain important information summarizing the accounting policies that Kohl's Corporation uses and ensure that the company is providing full disclosure to its investors and creditors

Materiality Concept

Materiality Concept

A company must perform strictly proper accounting only for items that are significant to the business's financial situation.

The **materiality concept** states that a company must perform strictly proper accounting *only* for significant items. Information is significant—or, in accounting terms, *material*—when it would cause someone to change a decision. The materiality concept frees accountants from having to report every last item in strict accordance with GAAP. For example, \$10,000 is material to a small business with annual sales of \$100,000. However, \$10,000 isn't material to a large company with annual sales of \$100,000,000. Therefore, the accounting principles followed for a \$10,000 cost in a small company may be different from the accounting principles followed for a \$10,000 cost in a large company.

Conservatism

Conservatism

A business should report the least favorable figures in the financial statements when two or more possible options are presented.

Conservatism in accounting means exercising caution in reporting items in the financial statements. Conservatism espouses the following ideas:

- Anticipate no gains, but provide for all probable losses.
- If in doubt, record an asset at the lowest reasonable amount and a liability at the highest reasonable amount.
- When there's a question, record an expense rather than an asset.
- When you are faced with a decision between two possible options, you must choose the option that undervalues, rather than overvalues, your business.

The goal of conservatism is to report realistic figures and never overstate assets or net income.

Control Over Merchandise Inventory

Maintaining good controls over merchandise inventory is very important for a merchandiser. Good controls ensure that inventory purchases and sales are properly authorized and accounted for by the accounting system. This can be accomplished by taking the following measures:

- Ensure merchandise inventory is not purchased without proper authorization, including purchasing only from approved vendors and within acceptable dollar ranges.
- After inventory is purchased, the order should be tracked and properly documented when received. At time of delivery, a count of inventory received should be completed and each item should be examined for damage.
- Damaged inventory should be properly recorded and then should either be used, disposed of, or returned to the vendor.



- A physical count of inventory should be completed at least once a year to track inventory shrinkage due to theft, damage, and errors.
- When sales are made, the inventory sold should be properly recorded and removed from the inventory count. This will prevent the company from running out of inventory, often called a *stockout*.

Try It!

Match the accounting terminology to the definitions.

- | | |
|---|--|
| <ol style="list-style-type: none">1. Conservatism2. Materiality concept3. Disclosure principle4. Consistency principle | <ol style="list-style-type: none">a. A business should report the least favorable figures in the financial statements when two or more possible options are presented.b. A business's financial statements must report enough information for outsiders to make knowledgeable decisions about the company.c. A business should use the same accounting methods and procedures from period to period.d. A company must perform strictly proper accounting only for items that are significant to the business's financial situation. |
|---|--|

Check your answers online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercise S6-1. [Pearson MyLab Accounting](#)

HOW ARE MERCHANDISE INVENTORY COSTS DETERMINED UNDER A PERPETUAL INVENTORY SYSTEM?

Previously you learned about merchandise inventory and cost of goods sold. Remember these key equations:

$$\begin{aligned} \text{Ending Merchandise Inventory} &= \text{Number of units } \textit{on hand} \times \text{Unit cost} \\ \text{Cost of Goods Sold} &= \text{Number of units } \textit{sold} \times \text{Unit cost} \end{aligned}$$

Learning Objective 2

Account for merchandise inventory costs under a perpetual inventory system

Companies determine the number of units on hand from perpetual inventory records backed up by a physical count. Exhibit 6-1 (on the next page) gives the inventory data for TAB0503, one model of tablets that Smart Touch Learning sells.

As shown in this exhibit, Smart Touch Learning began August with 2 TAB0503s in inventory. It purchased 4 more tablets on August 5, bringing the total quantity on hand to 6 ($2 + 4$). On August 15, it sold 4 tablets, leaving 2 remaining on hand ($6 - 4$). Smart Touch Learning then purchased 12 more on August 26 and sold 10 on August 31. It had 4 TAB0503s at the end of August ($2 + 12 - 10$). The company sold each tablet for \$500 to its customers.

**Exhibit 6-1 | Perpetual Inventory Record**

Item: TAB0503				
Date	Quantity Purchased	Quantity Sold	Cost per Unit	Quantity on Hand
Aug. 1			\$350	2
5	4		\$350	6
15		4		2
26	12		\$350	14
31		10		4
Totals	16	14		4

Measuring inventory cost is easy when prices do not change. For example, looking at Exhibit 6-1, you can see that Smart Touch Learning's cost per unit remained the same at \$350. Therefore, ending inventory and cost of goods sold can be calculated easily.

$$\begin{aligned}\text{Ending Merchandise Inventory} &= \text{Number of units on hand} \times \text{Unit cost} \\ &= 4 \text{ units} \times \$350 \text{ per unit} \\ &= \$1,400\end{aligned}$$

$$\begin{aligned}\text{Cost of Goods Sold} &= \text{Number of units sold} \times \text{Unit cost} \\ &= 14 \text{ units} \times \$350 \text{ per unit} \\ &= \$4,900\end{aligned}$$

But what if unit cost does change? For example, what if the cost per unit increased to \$360 on August 5 and \$380 on August 26, as shown in Exhibit 6-2? When inventory is sold on August 31, how many of the tablets sold cost \$350? How many cost \$360? And how many cost \$380? To compute ending inventory and cost of goods sold, Smart Touch Learning must assign a unit cost to each inventory item. This is done by using one of four inventory costing methods: **1.** Specific identification **2.** First-in, first-out (FIFO) **3.** Last-in, first-out (LIFO) **4.** Weighted-average.

Exhibit 6-2 | Perpetual Inventory Record—Changes in Cost per Unit

Item: TAB0503				
Date	Quantity Purchased	Quantity Sold	Cost per Unit	Quantity on Hand
Aug. 1			\$350	2
5	4		\$360	6
15		4		2
26	12		\$380	14
31		10		4
Totals	16	14		4



Each **inventory costing method** approximates the flow of inventory costs in a business (with the exception of the specific identification method) and is used to determine the amount of cost of goods sold and ending merchandise inventory.

Specific Identification Method

The **specific identification method** uses the specific cost of each unit of inventory to determine ending inventory and cost of goods sold. In the specific identification method, the company knows exactly which item was sold and exactly what the item cost. This costing method is best for businesses that sell unique, easily identified inventory items, such as automobiles (identified by the vehicle identification number [VIN]), jewels (a specific diamond ring), and real estate (identified by address). For instance, assume that of the 4 tablets sold on August 15, 1 had a cost of \$350 and 3 had a cost of \$360. As for the August 31 sale, 1 had a cost of \$350 and 9 had a cost of \$380. Cost of goods sold and ending merchandise inventory can be calculated as shown in Exhibit 6-3.

Inventory Costing Method

A method of approximating the flow of inventory costs in a business that is used to determine the amount of cost of goods sold and ending merchandise inventory.

Specific Identification Method

An inventory costing method based on the specific cost of particular units of inventory.

Exhibit 6-3 | Perpetual Inventory Record: Specific Identification

Date	Purchases			Cost of Goods Sold			Inventory on Hand					
	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost			
Aug. 1							2 units	× \$ 350	= \$ 700 } \$ 700			
5	4 units	× \$ 360	= \$ 1,440				2 units	× \$ 350	= \$ 700 }	4 units	× \$ 360	= \$ 1,440 } \$ 2,140
15				1 unit 3 units	× \$ 350 × \$ 360	= \$ 350 = \$ 1,080 } \$ 1,430	1 unit 1 unit	× \$ 350 × \$ 360	= \$ 350 = \$ 360 } \$ 710			
26	12 units	× \$ 380	= \$ 4,560				1 unit 1 unit 12 units	× \$ 350 × \$ 360 × \$ 380	= \$ 350 = \$ 360 = \$ 4,560 } \$ 5,270			
31				1 unit 9 units	× \$ 350 × \$ 380	= \$ 350 = \$ 3,420 } \$ 3,770	1 unit 3 units	× \$ 360 × \$ 380	= \$ 360 = \$ 1,140 } \$ 1,500			
Totals	16 units		\$ 6,000	14 units		\$ 5,200	4 units		\$ 1,500			

Notice that under the specific identification method, when inventory is sold, a specific cost is assigned to it. For example, on the August 15 sale, Smart Touch Learning knew that it had sold 1 unit costing \$350 and 3 units costing \$360. This left 1 unit ($2 - 1$) at \$350 and 1 unit ($4 - 3$) at \$360 in ending inventory. This method requires the business to keep detailed records of inventory sales and purchases and to also be able to carefully identify the inventory that is sold.



First-In, First-Out (FIFO) Method

First-In, First-Out (FIFO) Method

An inventory costing method in which the first costs into inventory are the first costs out to cost of goods sold. Ending inventory is based on the costs of the most recent purchases.

Under the **first-in, first-out (FIFO) method**, the cost of goods sold is based on the oldest purchases—that is, the first units to come in are assumed to be the first units to go out (sold). In Exhibit 6-4, this is illustrated by the cost of goods sold coming from the *first* goods purchased, which are from the August 1 beginning inventory. FIFO costing is consistent with the physical movement of inventory (for most companies). That is, under the FIFO inventory costing method, companies sell their oldest inventory first.

Exhibit 6-4 | Perpetual Inventory Record: First-In, First-Out (FIFO)

Date	Purchases			Cost of Goods Sold			Inventory on Hand		
	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost
Aug. 1							2 units	$\times \$350$	$= \$700 \}$ \$ 700
5	4 units	$\times \$360$	$= \$1,440$				2 units	$\times \$350$	$= \$700 \}$
							4 units	$\times \$360$	$= \$1,440 \}$ \$ 2,140
15				2 units	$\times \$350$	$= \$700 \}$	2 units	$\times \$360$	$= \$720 \}$ \$ 720
				2 units	$\times \$360$	$= \$720 \}$			
26	12 units	$\times \$380$	$= \$4,560$				2 units	$\times \$360$	$= \$720 \}$
							12 units	$\times \$380$	$= \$4,560 \}$ \$ 5,280
31				2 units	$\times \$360$	$= \$720 \}$	4 units	$\times \$380$	$= \$1,520 \}$ \$ 1,520
				8 units	$\times \$380$	$= \$3,040 \}$			
Totals	16 units		<u>\$ 6,000</u>	14 units		<u>\$ 5,180</u>	4 units		<u>\$ 1,520</u>

Smart Touch Learning began August with 2 TAB0503s that cost \$350 each. After the August 5 purchase, the inventory on hand consists of 6 units (2 + 4). On August 15, the company sold 4 units. Under FIFO, the first 2 units sold had the oldest cost (\$350 per unit). The next 2 units sold cost \$360 each. That leaves 2 units in inventory on August 15 at \$360 each. The remainder of the inventory record follows the same pattern. Consider the sale on August 31 of 10 units. The oldest cost is from August 5 (2 units @ \$360). The next oldest cost is from the August 26 purchase at \$380 each (8 units @ \$380). This leaves 4 units in inventory on August 31 at \$380 each.

The FIFO monthly summary at August 31 is as follows:

- Cost of goods sold: 14 units that cost a total of \$5,180.
- Ending inventory: 4 units that cost a total of \$1,520.

Notice the total cost of goods sold of \$5,180 plus the total ending inventory of \$1,520 equals the total **cost of goods available for sale** during August of \$6,700 [(2 units @ \$350) + (4 units @ \$360) + (12 units @ \$380)]. Cost of goods available for sale represents the total cost of merchandise inventory that is available for sale during the time period. Smart Touch Learning measures cost of goods sold and ending merchandise inventory in this manner to prepare its financial statements.

Cost of Goods Available for Sale

The total cost spent on inventory that was available to be sold during a period.



Journal Entries Under FIFO

The journal entries under FIFO are presented below. We assume all purchases and sales of inventory are on account. The amounts unique to FIFO are shown in blue for emphasis. All other amounts are the same for all four inventory methods.

Date	Accounts and Explanation	Debit	Credit
Aug. 5	Merchandise Inventory (4 × \$360)	1,440	
	Accounts Payable		1,440
	<i>Purchased inventory on account.</i>		
15	Accounts Receivable (4 × \$500)	2,000	
	Sales Revenue		2,000
	<i>Sale on account.</i>		
15	Cost of Goods Sold (2 × \$350) + (2 × \$360)	1,420	
	Merchandise Inventory		1,420
	<i>Recorded the cost of goods sold.</i>		
26	Merchandise Inventory (12 × \$380)	4,560	
	Accounts Payable		4,560
	<i>Purchased inventory on account.</i>		
31	Accounts Receivable (10 × \$500)	5,000	
	Sales Revenue		5,000
	<i>Sale on account.</i>		
31	Cost of Goods Sold (2 × \$360) + (8 × \$380)	3,760	
	Merchandise Inventory		3,760
	<i>Recorded the cost of goods sold.</i>		

$$\begin{aligned}
 \frac{\text{A} \uparrow}{\text{Merchandise Inventory} \uparrow} &= \left\{ \begin{array}{l} \frac{\text{L} \uparrow}{\text{Accounts Payable} \uparrow} + \text{E} \\ \end{array} \right. \\
 \frac{\text{A} \uparrow}{\text{Accounts Receivable} \uparrow} &= \left\{ \begin{array}{l} \text{L} + \frac{\text{E} \uparrow}{\text{Sales Revenue} \uparrow} \\ \end{array} \right. \\
 \frac{\text{A} \downarrow}{\text{Merchandise Inventory} \downarrow} &= \left\{ \begin{array}{l} \text{L} + \frac{\text{E} \downarrow}{\text{Cost of Goods Sold} \uparrow} \\ \end{array} \right. \\
 \frac{\text{A} \uparrow}{\text{Merchandise Inventory} \uparrow} &= \left\{ \begin{array}{l} \frac{\text{L} \uparrow}{\text{Accounts Payable} \uparrow} + \text{E} \\ \end{array} \right. \\
 \frac{\text{A} \uparrow}{\text{Accounts Receivable} \uparrow} &= \left\{ \begin{array}{l} \text{L} + \frac{\text{E} \uparrow}{\text{Sales Revenue} \uparrow} \\ \end{array} \right. \\
 \frac{\text{A} \downarrow}{\text{Merchandise Inventory} \downarrow} &= \left\{ \begin{array}{l} \text{L} + \frac{\text{E} \downarrow}{\text{Cost of Goods Sold} \uparrow} \\ \end{array} \right. \\
 \end{aligned}$$

For example, on August 5, Smart Touch Learning purchased \$1,440 of inventory and made the first journal entry. On August 15, the company sold 4 TAB0503s for the sales price of \$500 each. Smart Touch Learning recorded the sale, \$2,000, and the cost of goods sold, \$1,420 (calculated in Exhibit 6-4 as 2 units @ \$350 plus 2 units @ \$360). The remaining journal entries (August 26 and 31) follow the inventory data in Exhibit 6-4.

Last-In, First-Out (LIFO) Method

Last-in, first-out (LIFO) is the opposite of FIFO. Under the **last-in, first-out (LIFO) method**, ending inventory comes from the oldest costs (beginning inventory and earliest purchases) of the period. The cost of goods sold is based on the most recent purchases (new costs)—that is, the last units in are assumed to be the first units sold. This is illustrated by the cost of goods sold for the August 31 sale coming from the *last* goods in the

Last-In, First-Out (LIFO) Method

An inventory costing method in which the last costs into inventory are the first costs out to cost of goods sold. The method leaves the oldest costs—those of beginning inventory and the earliest purchases of the period—in ending inventory.



warehouse—the August 26 purchase in Exhibit 6-5. Under the LIFO inventory costing method, companies sell their newest inventory first.

Exhibit 6-5 | Perpetual Inventory Record: Last-In, First-Out (LIFO)

Date	Purchases			Cost of Goods Sold			Inventory on Hand		
	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost
Aug. 1							2 units	$\times \$ 350$	$= \$ 700$
5	4 units	$\times \$ 360$	$= \$ 1,440$				2 units	$\times \$ 350$	$= \$ 700$
							4 units	$\times \$ 360$	$= \$ 1,440$
15				4 units	$\times \$ 360$	$= \$ 1,440$	2 units	$\times \$ 350$	$= \$ 700$
26	12 units	$\times \$ 380$	$= \$ 4,560$				2 units	$\times \$ 350$	$= \$ 700$
							12 units	$\times \$ 380$	$= \$ 4,560$
31				10 units	$\times \$ 380$	$= \$ 3,800$	2 units	$\times \$ 350$	$= \$ 700$
							2 units	$\times \$ 380$	$= \$ 760$
Totals	16 units	<u>\$ 6,000</u>		14 units		<u>\$ 5,240</u>	4 units		<u>\$ 1,460</u>



LIFO is not permitted under International Financial Reporting Standards (IFRS). Under IFRS,

companies may only use the specific identification, FIFO, and weighted-average methods to cost inventory.

If LIFO were eliminated as an acceptable method under GAAP, those U.S. companies currently using the LIFO cost method would experience significant income statement and balance sheet effects. Approximately one-third of U.S. companies use the LIFO method to cost at least part of their inventory.

Again, Smart Touch Learning had 2 TAB0503s at the beginning. After the purchase on August 5, the company holds 6 units of inventory (2 units @ \$350 plus 4 units @ \$360). On August 15, Smart Touch Learning sells 4 units. Under LIFO, the cost of goods sold always comes from the most recent purchase (4 units @ \$360). That leaves 2 TAB0503s in inventory on August 15 (2 units @ \$350).

The purchase of 12 units on August 26 adds a new \$380 layer to inventory. Now inventory holds 14 units.

Then the sale of 10 units on August 31 peels back units in LIFO order (10 units @ \$380). The LIFO monthly summary at August 31 is as follows:

- Cost of goods sold: 14 units that cost a total of \$5,240.
- Ending inventory: 4 units that cost a total of \$1,460.

Under LIFO, Smart Touch Learning could measure cost of goods sold and ending inventory in this manner to prepare its financial statements.

Journal Entries Under LIFO

The journal entries under LIFO follow. We assume all purchases and sales of inventory are on account. Amounts unique to LIFO are shown in blue.



Date	Accounts and Explanation	Debit	Credit
Aug. 5	Merchandise Inventory ($4 \times \$360$) Accounts Payable <i>Purchased inventory on account.</i>	1,440	1,440
15	Accounts Receivable ($4 \times \$500$) Sales Revenue <i>Sale on account.</i>	2,000	2,000
15	Cost of Goods Sold ($4 \times \$360$) Merchandise Inventory <i>Recorded the cost of goods sold.</i>	1,440	1,440
26	Merchandise Inventory ($12 \times \$380$) Accounts Payable <i>Purchased inventory on account.</i>	4,560	4,560
31	Accounts Receivable ($10 \times \$500$) Sales Revenue <i>Sale on account.</i>	5,000	5,000
31	Cost of Goods Sold ($10 \times \$380$) Merchandise Inventory <i>Recorded the cost of goods sold.</i>	3,800	3,800

$$\begin{aligned}
 \frac{A\uparrow}{\text{Merchandise Inventory}\uparrow} &= \left\{ \begin{array}{l} \frac{L\uparrow}{\text{Accounts Payable}\uparrow} + \frac{E}{\text{}} \end{array} \right. \\
 \frac{A\uparrow}{\text{Accounts Receivable}\uparrow} &= \left\{ \begin{array}{l} \frac{L}{\text{}} + \frac{E\uparrow}{\text{Sales Revenue}\uparrow} \end{array} \right. \\
 \frac{A\downarrow}{\text{Merchandise Inventory}\downarrow} &= \left\{ \begin{array}{l} \frac{L}{\text{}} + \frac{E\downarrow}{\text{Cost of Goods Sold}\uparrow} \end{array} \right. \\
 \frac{A\uparrow}{\text{Merchandise Inventory}\uparrow} &= \left\{ \begin{array}{l} \frac{L\uparrow}{\text{Accounts Payable}\uparrow} + \frac{E}{\text{}} \end{array} \right. \\
 \frac{A\uparrow}{\text{Accounts Receivable}\uparrow} &= \left\{ \begin{array}{l} \frac{L}{\text{}} + \frac{E\uparrow}{\text{Sales Revenue}\uparrow} \end{array} \right. \\
 \frac{A\downarrow}{\text{Merchandise Inventory}\downarrow} &= \left\{ \begin{array}{l} \frac{L}{\text{}} + \frac{E\downarrow}{\text{Cost of Goods Sold}\uparrow} \end{array} \right.
 \end{aligned}$$

On August 5, Smart Touch Learning purchased inventory of \$1,440. The August 15 sale brought in sales revenue (4 units @ \$500 = \$2,000) and cost of goods sold (4 units @ \$360 = \$1,440). The August 26 and 31 entries also come from the data in Exhibit 6-5.

Think about going to the grocery store to buy a gallon of milk.

Which gallon is in front of the milk cooler: the older milk or the newer milk?

The older milk is in front. That's FIFO. Now visualize reaching all the way to the back of the cooler to get the newer milk. That's LIFO. It's important to understand that although this image represents the physical flow of goods, an inventory costing system may or may not match the physical flow. The costing system is only an assumption about how costs flow. The inventory does not have to actually be sold in the FIFO manner in order to record it as FIFO.

Weighted-Average Method

Under the **weighted-average method** (sometimes called *moving-average method*), the business computes a new weighted-average cost per unit after each purchase. Ending inventory and cost of goods sold are then based on the same weighted-average cost per unit. After the

Weighted-Average Method

An inventory costing method based on the weighted-average cost per unit of inventory that is calculated after each purchase. Weighted-average cost per unit is determined by dividing the cost of goods available for sale by the number of units available.



first purchase on August 5, the weighted-average cost per unit sold falls somewhere between the beginning inventory cost of \$350 and the most recent purchase cost of \$360.

Exhibit 6-6 shows a perpetual inventory record for the weighted-average method. We round average unit cost to the nearest cent and total cost to the nearest dollar.

Exhibit 6-6 | Perpetual Inventory Record: Weighted-Average

Date	Purchases			Cost of Goods Sold			Inventory on Hand		
	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost
Aug. 1							2 units	× \$ 350	= \$ 700
5	4 units	× \$ 360	= \$ 1,440				6 units	× \$ 356.67	= \$ 2,140 \$ 2,140 / 6 units = \$ 356.67
15				4 units	× \$ 356.67	= \$ 1,427	2 units	× \$ 356.67	= \$ 713
26	12 units	× \$ 380	= \$ 4,560				14 units	× \$ 376.64	= \$ 5,273 \$ 5,273 / 14 units = \$ 376.64
31				10 units	× \$ 376.64	= \$ 3,766	4 units	× \$ 376.64	= \$ 1,507
Totals	16 units		\$ 6,000	14 units		\$ 5,193	4 units		\$ 1,507

As noted previously, after each purchase, Smart Touch Learning computes a new weighted-average cost per unit. For example, on August 5, the new weighted-average unit cost is as follows:

$$\text{Cost of goods available for sale / Number of units available} = (\$700 + \$1,440) / (2 \text{ units} + 4 \text{ units}) \\ = \$2,140 / 6 \text{ units} \\ = \$356.67 \text{ (rounded)}$$

Under the weighted-average method, the cost per unit is a weighted average. You cannot take the average of the two unit costs (\$350 and \$360) to determine the new unit cost. Instead, you must use the total cost of goods available for sale (\$2,140) divided by the number of units available (6 units).

The goods sold on August 15 are then costed out at \$356.67 per unit. On August 26 when the next purchase is made, the new weighted-average unit cost is as follows:

$$\text{Cost of goods available for sale / Number of units available} = (\$713 + \$4,560) / (2 \text{ units} + 12 \text{ units}) \\ = \$5,273 / 14 \text{ units} \\ = \$376.64 \text{ (rounded)}$$

The weighted-average cost summary at August 31 is as follows:

- Cost of goods sold: 14 units that cost a total of \$5,193.
- Ending inventory: 4 units that cost a total of \$1,507.



With the weighted-average cost method, rounding errors can occur. However, this is not the case in this example. Notice that cost of goods sold and ending inventory total \$6,700 ($\$5,193 + \$1,507$), which equals the total cost of goods available for sale.

Under the weighted-average cost method, Smart Touch Learning could use these amounts to prepare its financial statements.

Journal Entries Under Weighted-Average

The journal entries under weighted-average costing follow. We assume all purchases and sales of inventory are on account. Amounts unique to the weighted-average method are shown in blue.

Date	Accounts and Explanation	Debit	Credit
Aug. 5	Merchandise Inventory (4 × \$360) Accounts Payable <i>Purchased inventory on account.</i>	1,440	1,440
15	Accounts Receivable (4 × \$500) Sales Revenue <i>Sale on account.</i>	2,000	2,000
15	Cost of Goods Sold (4 × \$356.67) Merchandise Inventory <i>Recorded the cost of goods sold.</i>	1,427	1,427
26	Merchandise Inventory (12 × \$380) Accounts Payable <i>Purchased inventory on account.</i>	4,560	4,560
31	Accounts Receivable (10 × \$500) Sales Revenue <i>Sale on account.</i>	5,000	5,000
31	Cost of Goods Sold (10 × \$376.64) Merchandise Inventory <i>Recorded the cost of goods sold.</i>	3,766	3,766

$$\begin{aligned}
 \frac{A \uparrow}{\text{Merchandise Inventory} \uparrow} &= \left\{ \begin{array}{l} \frac{L \uparrow}{\text{Accounts Payable} \uparrow} + \frac{E}{\text{}} \end{array} \right. \\
 \frac{A \uparrow}{\text{Accounts Receivable} \uparrow} &= \left\{ \begin{array}{l} \frac{L}{\text{}} + \frac{E \uparrow}{\text{Sales Revenue} \uparrow} \end{array} \right. \\
 \frac{A \downarrow}{\text{Merchandise Inventory} \downarrow} &= \left\{ \begin{array}{l} \frac{L}{\text{}} + \frac{E \downarrow}{\text{Cost of Goods Sold} \uparrow} \end{array} \right. \\
 \frac{A \uparrow}{\text{Merchandise Inventory} \uparrow} &= \left\{ \begin{array}{l} \frac{L \uparrow}{\text{Accounts Payable} \uparrow} + \frac{E}{\text{}} \end{array} \right. \\
 \frac{A \uparrow}{\text{Accounts Receivable} \uparrow} &= \left\{ \begin{array}{l} \frac{L}{\text{}} + \frac{E \uparrow}{\text{Sales Revenue} \uparrow} \end{array} \right. \\
 \frac{A \downarrow}{\text{Merchandise Inventory} \downarrow} &= \left\{ \begin{array}{l} \frac{L}{\text{}} + \frac{E \downarrow}{\text{Cost of Goods Sold} \uparrow} \end{array} \right.
 \end{aligned}$$

On August 5, Smart Touch Learning purchased \$1,440 of inventory and made the first journal entry. On August 15, Smart Touch Learning sold 4 TAB0503s for \$500 each. The company recorded the sale (\$2,000) and the cost of goods sold (4 units at $\$356.67 = \$1,427$). The remaining journal entries (August 26 and 31) follow the same procedure.



Try It!

5. Serenity Books has the following transactions in August related to merchandise inventory.

Aug. 1	Beginning merchandise inventory, 10 books @ \$15 each
3	Sold 3 books @ \$20 each
12	Purchased 8 books @ \$18 each
15	Sold 9 books @ \$20 each
20	Purchased 4 books @ \$20 each
28	Sold 5 books @ \$25 each

- a. Determine the cost of goods sold and ending merchandise inventory by preparing a perpetual inventory record using the specific identification method. Assume the following costing information for the books sold during the month:

August 3: 3 books costing \$15 each

August 15: 4 books costing \$15 each and 5 books costing \$18 each

August 28: 2 books costing \$18 each and 3 books costing \$20 each

- b. Determine the cost of goods sold and ending merchandise inventory by preparing a perpetual inventory record using the FIFO inventory costing method.
- c. Determine the cost of goods sold and ending merchandise inventory by preparing a perpetual inventory record using the LIFO inventory costing method.
- d. Determine the cost of goods sold and ending merchandise inventory by preparing a perpetual inventory record using the weighted-average inventory costing method. Round weighted-average unit cost to the nearest cent and total cost to the nearest dollar.

Check your answers online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercises S6-2 through S6-6. [Pearson MyLab Accounting](#)

HOW ARE FINANCIAL STATEMENTS AFFECTED BY USING DIFFERENT INVENTORY COSTING METHODS?

Learning Objective 3

Compare the effects on the financial statements when using the different inventory costing methods

What leads Smart Touch Learning to select the specific identification, FIFO, LIFO, or weighted-average inventory costing method? The different methods have different benefits.

Income Statement

Exhibit 6-7 summarizes the results for the four inventory costing methods for Smart Touch Learning. It shows sales revenue, cost of goods sold, and gross profit for specific identification, FIFO, LIFO, and weighted-average.

Exhibit 6-7 shows that FIFO produces the lowest cost of goods sold and the highest gross profit for Smart Touch Learning. Because operating expenses are the same, regardless of



Exhibit 6-7 | Comparative Results for Specific Identification, FIFO, LIFO, and Weighted-Average—Income Statement

	Specific Identification	FIFO	LIFO	Weighted- Average
Net Sales Revenue (14 units × \$500)	\$ 7,000	\$ 7,000	\$ 7,000	\$ 7,000
Less: Cost of Goods Sold	5,200	5,180	5,240	5,193
Gross Profit	<u>\$ 1,800</u>	<u>\$ 1,820</u>	<u>\$ 1,760</u>	<u>\$ 1,807</u>

which inventory method a company uses, net income is also the highest under FIFO when inventory costs are rising. **Many companies prefer high income in order to attract investors and borrow on favorable terms. FIFO offers this benefit in a period of rising costs.**

When inventory costs are rising, LIFO results in the highest cost of goods sold and the lowest gross profit. **Lower profits mean lower taxable income; thus, LIFO lets companies pay the lowest income taxes when inventory costs are rising.** Low tax payments conserve cash, and that is the main benefit of LIFO. The downside of LIFO is that the company reports lower net income.

The weighted-average method generates amounts that fall between the extremes of FIFO and LIFO. **Therefore, companies that seek a “middle-ground” solution use the weighted-average method for inventory.**

Balance Sheet

Consider again the beginning inventory and purchases made by Smart Touch Learning during August. The company had total inventory available for sale in August as follows:

Aug. 1	2 units × \$350	\$ 700
Aug. 5	4 units × \$360	1,440
Aug. 26	12 units × \$380	4,560
Cost of goods available for sale	<u>\$ 6,700</u>	

Only one of two things can happen to the tablets—either they remain in the warehouse (ending merchandise inventory) or they are sold (Cost of Goods Sold). Ending merchandise inventory can be calculated by determining first the cost of goods available for sale (beginning merchandise inventory plus inventory purchased) and then subtracting merchandise inventory sold (Cost of Goods Sold). Exhibit 6-8 (on the next page) shows the results of Smart Touch Learning’s ending merchandise inventory for each of the costing methods for August.

When using the FIFO inventory costing method, ending merchandise inventory will be the highest when costs are increasing. LIFO produces the lowest ending merchandise inventory with weighted-average again in the middle.

So far, we have been ignoring the effects on the income statement and balance sheet when using the specific identification method. This is because under specific identification, the results will vary depending on which costs are assigned to the inventory sold. Most companies will not choose to use the specific identification method unless they want to match each inventory item sold with its exact cost.

How do businesses decide which inventory costing method to use?





Exhibit 6-8 | Comparative Results for Specific Identification, FIFO, LIFO, and Weighted-Average—Balance Sheet

	Specific Identification	FIFO	LIFO	Weighted- Average
Beginning Merchandise Inventory	\$ 700	\$ 700	\$ 700	\$ 700
Plus: Net Cost of Purchases	6,000	6,000	6,000	6,000
Cost of Goods Available for Sale	6,700	6,700	6,700	6,700
Less: Cost of Goods Sold	5,200	5,180	5,240	5,193
Ending Merchandise Inventory	<u>\$ 1,500</u>	<u>\$ 1,520</u>	<u>\$ 1,460</u>	<u>\$ 1,507</u>

The weighted-average ending merchandise inventory number shown in Exhibit 6-6 may be slightly different than that found in Exhibit 6-8. This is because of rounding. When completing your homework, always read carefully for directions on how to round when using the weighted-average method.

We have looked at the effects of different inventory costing methods on the financial statements when inventory costs are rising. When inventory costs are instead declining, the effects on the financial statements will be the opposite of those discussed above. Exhibit 6-9 summarizes the effects of different inventory costing methods on the financial statements during periods of rising and declining inventory costs.

Exhibit 6-9 | Effects on the Financial Statements During Periods of Rising and Declining Inventory Costs

Period of Rising Inventory Costs:				
	Specific Identification	FIFO	LIFO	Weighted- Average
Income Statement:				
Cost of Goods Sold	Varies	Lowest	Highest	Middle
Net Income	Varies	Highest	Lowest	Middle
Balance Sheet:				
Ending Merchandise Inventory	Varies	Highest	Lowest	Middle
Period of Declining Inventory Costs:				
	Specific Identification	FIFO	LIFO	Weighted- Average
Income Statement:				
Cost of Goods Sold	Varies	Highest	Lowest	Middle
Net Income	Varies	Lowest	Highest	Middle
Balance Sheet:				
Ending Merchandise Inventory	Varies	Lowest	Highest	Middle



Try It!

6. Antelope Motors is considering which inventory costing method it should use. The business wants to maximize gross profits during a period of declining costs. Which inventory costing method should Antelope Motors select?

Check your answer online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercise S6-7. [Pearson MyLab Accounting](#)

HOW IS MERCHANDISE INVENTORY VALUED WHEN USING THE LOWER-OF-COST-OR-MARKET RULE?

In addition to the specific identification, FIFO, LIFO, and weighted-average inventory costing methods, accountants face other inventory issues, such as the **lower-of-cost-or-market (LCM) rule**. LCM shows accounting conservatism in action and requires that merchandise inventory be reported in the financial statements at whichever is lower of the following:

- The historical cost of the inventory
- The market value of the inventory

Computing the Lower-of-Cost-or-Market

For inventories, market value generally means the current replacement cost (that is, the cost to replace the inventory on hand). If the replacement cost of inventory is less than its historical cost, the business must adjust the inventory value. By adjusting the inventory down (crediting Merchandise Inventory), the balance sheet value of the asset, Merchandise Inventory, is at its correct value (market) rather than its overstated value (cost). If the merchandise inventory's market value is greater than cost, then we don't adjust the Merchandise Inventory account because of the conservatism principle.

Recording the Adjusting Journal Entry to Adjust Merchandise Inventory

Suppose Smart Touch Learning paid \$3,000 for its TAB0503 inventory. By December 31, the merchandise inventory can now be replaced for \$2,200, and the decline in value appears permanent. Market value is below cost, and the entry to write down the inventory to LCM is as follows:

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Cost of Goods Sold	800	
	Merchandise Inventory (\$3,000 – \$2,200)		800
<i>To write merchandise inventory down to market value.</i>			

Learning Objective 4

Apply the lower-of-cost-or-market rule to merchandise inventory

Lower-of-Cost-or-Market (LCM) Rule

Rule that merchandise inventory should be reported in the financial statements at whichever is lower—its historical cost or its market value.



Under International Financial Reporting Standards, inventory must be reported at the lower-of-cost-or-market value. However, "market" is defined differently. Under IFRS, the market value of inventory is defined as the "net realizable value," or essentially its sales price. If the historical cost is higher than the sales price, then inventory must be written down. The IFRS approach results in fewer write-downs on inventory.

$$\frac{A \downarrow}{\text{Merchandise Inventory} \downarrow} = \left\{ \begin{array}{l} \frac{L}{\downarrow} + \frac{E \downarrow}{\text{Cost of Goods Sold} \uparrow} \end{array} \right.$$



In this case, Smart Touch Learning's balance sheet would report this inventory as follows:

SMART TOUCH LEARNING		
Balance Sheet (Partial)		
December 31, 2019		
Current Assets:		
Merchandise Inventory		\$ 2,200

Companies often disclose that the LCM rule is followed in notes to their financial statements, as shown here for Smart Touch Learning:

NOTE 2: STATEMENT OF SIGNIFICANT ACCOUNTING POLICIES

Merchandise Inventories. Merchandise inventories are carried at the *lower-of-cost-or-market*. Cost is determined using the first-in, first-out method.

TYING IT ALL TOGETHER

Dick's Sporting Goods, Inc. is a leading sporting goods retailer that offers high-quality sports equipment, apparel, footwear, and other accessories. The company was founded in 1948 when Richard "Dick" Stack opened his original bait and tackle store in Binghamton, New York. Today, Dick's Sporting Goods operates over 600 stores in 47 states. The company sells a variety of sporting goods, active apparel, and footwear that appeals to the beginner, intermediate, and enthusiast sports consumer. (You can find Dick's Sporting Goods, Inc.'s annual report at https://www.sec.gov/Archives/edgar/data/1089063/000108906316000107/dks-10k_20160130.htm)

Would Dick's Sporting Goods most likely use a perpetual or periodic inventory system and why?

Dick's Sporting Goods would most likely use a perpetual inventory system. The company would be interested in keeping a running computerized record of its merchandise inventory in order to know the quantity of merchandise on hand and its costs. A perpetual inventory system also allows companies to have better control over their inventory. Companies, such as Dick's Sporting Goods, use bar codes that track the flow of inventory enabling the company to easily know the types and amounts of inventory in each store and when the company needs to reorder.

What inventory costing method does Dick's Sporting Goods use?

According to the notes to the financial statements, Dick's Sporting Goods uses the weighted-average cost method. This inventory method requires Dick's to compute a new weighted-average cost per unit after each purchase and records ending merchandise inventory somewhere between the lowest and highest cost. Use of the weighted-average method falls between the extremes of FIFO and LIFO.

Given that Dick's Sporting Goods uses a perpetual inventory system, would they still do a physical count of inventories? Why or why not?

Dick's Sporting Goods would still do a physical count of inventories. In the notes to the financial statements, the company states that it performs physical counts of inventories in its stores and distribution centers throughout the year. This physical count of inventory is necessary even though the company uses a perpetual inventory system in order to determine the amount of inventory shrinkage. Inventory shrinkage refers to the loss of inventory that occurs due to theft, damage, and errors. A company would want to know the amount of inventory shrinkage in order to report the correct amount of inventory on the company's balance sheet.

Try It!

7. T. J. Jackson Supplies had merchandise inventory that cost \$1,300. The market value of the merchandise inventory is \$750. What value should Jackson Supplies show on the balance sheet for merchandise inventory? Record the adjusting entry, if one is needed.

Check your answer online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.



WHAT ARE THE EFFECTS OF MERCHANDISE INVENTORY ERRORS ON THE FINANCIAL STATEMENTS?

Businesses perform a physical count of their merchandise inventory at the end of the accounting period. For the financial statements to be accurate, it is important to get a correct count. This can be difficult for a company with widespread operations.

An error in ending merchandise inventory creates a whole string of errors in other related accounts. To illustrate, suppose Smart Touch Learning accidentally reported \$5,000 more ending merchandise inventory than it actually had. In that case, ending merchandise inventory would be overstated by \$5,000 on the balance sheet. The following shows how an overstatement of ending inventory affects cost of goods sold, gross profit, and net income:

Ending Merchandise Inventory Overstated \$5,000	
Net Sales Revenue	Correct
Cost of Goods Sold:	
Beginning Merchandise Inventory	Correct
<u>Net Cost of Purchases</u>	Correct
Cost of Goods Available for Sale	Correct
<u>Less: Ending Merchandise Inventory</u>	ERROR: Overstated \$5,000
Cost of Goods Sold	Understated \$5,000
Gross Profit	Overstated \$5,000
Operating Expenses	Correct
Net Income	Overstated \$5,000

Understating the ending inventory—reporting the inventory too low—has the opposite effect. If Smart Touch Learning understated the inventory by \$1,200, the effect would be as shown here:

Ending Merchandise Inventory Understated \$1,200	
Net Sales Revenue	Correct
Cost of Goods Sold:	
Beginning Merchandise Inventory	Correct
<u>Net Cost of Purchases</u>	Correct
Cost of Goods Available for Sale	Correct
<u>Less: Ending Merchandise Inventory</u>	ERROR: Understated \$1,200
Cost of Goods Sold	Overstated \$1,200
Gross Profit	Understated \$1,200
Operating Expenses	Correct
Net Income	Understated \$1,200

Recall that one period's ending merchandise inventory becomes the next period's beginning inventory. As a result, an error in ending merchandise inventory carries over into the next period. Exhibit 6-10 (on the next page) illustrates the effect of an inventory

Learning Objective 5

Measure the effects of merchandise inventory errors on the financial statements



error, assuming all other items on the income statement are unchanged for the three periods. Period 1's ending merchandise inventory is overstated by \$5,000; Period 1's ending merchandise inventory should be \$10,000. The error carries over to Period 2. Period 3 is correct. In fact, both Period 1 and Period 2 should look like Period 3.

Exhibit 6-10 | Inventory Errors

SAMPLE COMPANY Income Statement For the Years Ended Periods 1, 2, and 3			
	Period 1	Period 2	Period 3
	<i>Ending Merchandise Inventory Overstated by \$5,000</i>	<i>Beginning Merchandise Inventory Overstated by \$5,000</i>	<i>Correct</i>
Net Sales Revenue	\$ 100,000	\$ 100,000	\$ 100,000
Cost of Goods Sold:			
Beginning Merchandise Inventory	\$ 10,000	\$ 15,000	\$ 10,000
Net Cost of Purchases	50,000	50,000	50,000
Cost of Goods Available for Sale	<u>60,000</u>	<u>65,000</u>	<u>60,000</u>
Less: Ending Merchandise Inventory	15,000	10,000	10,000
Cost of Goods Sold	45,000	55,000	50,000
Gross Profit	<u>\$ 55,000</u>	<u>\$ 45,000</u>	<u>\$ 50,000</u>

The correct gross profit is \$50,000 for each period. \$100,000

Ending merchandise inventory is *subtracted* to compute cost of goods sold in one period and the same amount is *added* as beginning merchandise inventory in the next period. Therefore, an inventory error cancels out after two periods. The overstatement of cost of goods sold in Period 2 counterbalances the understatement for Period 1. Thus, total gross profit for the two periods combined is correct. The effects of inventory errors are summarized in Exhibit 6-11.

Exhibit 6-11 | Effects of Inventory Errors

SAMPLE COMPANY Income Statement For the Years Ended Periods 1 and 2				
	Period 1		Period 2	
	Cost of Goods Sold	Gross Profit and Net Income	Cost of Goods Sold	Gross Profit and Net Income
Period 1 Ending Merchandise Inventory overstated	Understated	Overstated	Overstated	Understated
Period 1 Ending Merchandise Inventory understated	Overstated	Understated	Understated	Overstated



ETHICS

Should the inventory be included?

One of A’isha Sowell’s main responsibilities at the end of the accounting period is to supervise the count of physical inventory for her employer. She knows that it is important that the business get an accurate count of inventory so that its financial statements are reported correctly. In reviewing the inventory count sheet, she realizes that a large crate of inventory that has already been sold but not yet delivered was included in the count of inventory. The crate has left her employer but is still in transit at fiscal year-end. A’isha does not believe that it should be included because the inventory was sold FOB shipping point. When A’isha went to her supervisor with this information, she was told that she shouldn’t worry about it because the error would ultimately correct itself. What should A’isha do?

Solution

Companies whose profits are lagging can be tempted to increase reported income to make the business look more successful. One easy way to do this is to overstate ending inventory. A’isha is correct in her assumption that the inventory should not be included in the physical count of inventory. While this error will ultimately correct itself (in two years), in the current year, the business will be overstating gross profit and net income. This overstatement could cause investors to view the business more favorably than they should. A’isha should stand firm in her decision to not include the inventory in the count.

Try It!

8. The Shirley’s Gourmet Foods’ merchandise inventory data for the year ended December 31, 2018, follow:

Net Sales Revenue	\$ 48,000
Cost of Goods Sold:	
Beginning Merchandise Inventory	\$ 3,360
Net Cost of Purchases	21,280
Cost of Goods Available for Sale	24,640
Less: Ending Merchandise Inventory	<u>4,960</u>
Cost of Goods Sold	19,680
Gross Profit	<u><u>\$ 28,320</u></u>

Assume that the ending merchandise inventory was accidentally overstated by \$1,920. What are the correct amounts for cost of goods sold and gross profit?

Check your answers online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercise S6-9. **Pearson MyLab Accounting**

HOW DO WE USE INVENTORY TURNOVER AND DAYS' SALES IN INVENTORY TO EVALUATE BUSINESS PERFORMANCE?

Businesses strive to sell merchandise inventory quickly because the merchandise inventory generates no profit until it is sold. Further, fast-selling inventory is less likely to become obsolete (worthless) and does not require the business to pay for high storage and insurance

Learning Objective 6

Use inventory turnover and days' sales in inventory to evaluate business performance



costs often associated with keeping inventory on hand. There are two ratios that help businesses monitor their inventory levels: inventory turnover and days' sales in inventory.

Inventory Turnover

Measures the number of times a company sells its average level of merchandise inventory during a period. Cost of goods sold / Average merchandise inventory.

Inventory Turnover

Companies try to manage their inventory levels such that they will have just enough inventory to meet customer demand without investing large amounts of money in inventory sitting on the shelves gathering dust. **Inventory turnover** measures how rapidly merchandise inventory is sold. It is computed as follows:

$$\text{Inventory turnover} = \text{Cost of goods sold} / \text{Average merchandise inventory}$$

$$\text{Average merchandise inventory} = (\text{Beginning merchandise inventory} + \text{Ending merchandise inventory}) / 2$$

A high rate of turnover indicates ease in selling inventory; a low rate indicates difficulty. For example, an inventory value of 4 means that the company sold its average level of inventory four times—once every three months—during the year. Inventory turnover varies widely with the nature of the business and should be evaluated against industry averages.

Days' Sales in Inventory

Days' Sales in Inventory

Measures the average number of days that inventory is held by a company. 365 days / Inventory turnover.

Another key measure is the **days' sales in inventory** ratio. This ratio measures the average number of days merchandise inventory is held by the company and is calculated as follows:

$$\text{Days' sales in inventory} = 365 \text{ days} / \text{Inventory turnover}$$

Days' sales in inventory also varies widely, depending on the business. A lower days' sales in inventory is preferable because it indicates that the company is able to sell its inventory quickly, thereby reducing its inventory storage and insurance costs, as well as reducing the risk of holding obsolete inventory.

Let's return to **Kohl's Corporation** and evaluate the company's inventory levels using the two ratios discussed. Visit <http://www.pearsonglobaleditions.com/Sitemap/Horngren/> to view a link to Kohl's Corporation's annual report. Presented below are the cost of goods sold and beginning and ending merchandise inventory figures (in millions) from Kohl's Corporation's income statement for the year ended January 30, 2016, and balance sheet on January 30, 2016.

Cost of goods sold (Cost of merchandise sold)	\$ 12,265
Beginning merchandise inventory	3,814
Ending merchandise inventory	4,038

Kohl's inventory turnover is 3.12 times per year and is calculated as:

$$\text{Inventory turnover} = \text{Cost of goods sold} / \text{Average merchandise inventory}$$

$$= \$12,265 / [(\$3,814 + \$4,038) / 2]$$

$$= 3.12 \text{ times per year}$$

Its days' sales in inventory is 117 days and is calculated as:

$$\text{Days' sales in inventory} = 365 \text{ days} / \text{Inventory turnover}$$

$$= 365 \text{ days} / 3.12$$

$$= 117.0^* \text{ days}$$

*rounded

It appears that Kohl's sells its average inventory 3.12 times per year. A high turnover rate is desirable, and an increase in the turnover rate usually means higher profits. In addition, the days' sales in inventory of Kohl's indicates that the company, on average, takes 117 days to sell inventory. This seems a little high for a retail store, but it should be evaluated against the industry average.

Try It!

9. The Opa's Carving Shop had the following financial data for the year ended December 31, 2018:

Cost of Goods Sold	\$ 484,000
Beginning Merchandise Inventory	88,800
Ending Merchandise Inventory	111,200

What are the inventory turnover and days' sales in inventory for the year?

Check your answers online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercise S6-10. [Pearson MyLab Accounting](#)

APPENDIX 6A: Merchandise Inventory Costs Under a Periodic Inventory System

HOW ARE MERCHANDISE INVENTORY COSTS DETERMINED UNDER A PERIODIC INVENTORY SYSTEM?

We described the periodic inventory system briefly in the previous chapter. Accounting is simpler in a periodic inventory system because the company keeps no daily running record of inventory on hand. The only way to determine the ending merchandise inventory and cost of goods sold in a periodic inventory system is to take a physical inventory to count the goods left (on hand)—usually at the end of the fiscal year. The periodic inventory system works well for a small business in which the inventory can be controlled by visual inspection—that is, the inventory usually is not large in size or dollar amount.

The various inventory costing methods (specific identification, FIFO, LIFO, and weighted-average) in a periodic inventory system follow the pattern illustrated earlier for the perpetual inventory system. To show how the periodic inventory system works, we use the same Smart Touch Learning data that we used for the perpetual inventory system (see Exhibit 6A-1, on the next page).

Learning Objective 7

Account for merchandise inventory costs under a periodic inventory system

Exhibit 6A-1 | Perpetual Inventory Record—Changes in Cost per Unit

Item: TAB0503				
Date	Quantity Purchased	Quantity Sold	Cost per Unit	Quantity on Hand
Aug. 1			\$350	2
5	4		\$360	6
15		4		2
26	12		\$380	14
31		10		4
Totals	16	14		4

We use these data to illustrate FIFO, LIFO, and weighted-average cost. We will not illustrate the specific identification inventory costing method because it is calculated the same under both the perpetual and periodic inventory systems.

For all four inventory costing methods, cost of goods available for sale is always the sum of beginning inventory plus net purchases:

Beginning merchandise inventory (2 units × \$350)	\$ 700
Plus: Net purchases (4 units × \$360) + (12 units × \$380)	<u>6,000</u>
Cost of goods available for sale	<u><u>\$ 6,700</u></u>

The different methods—specific identification, FIFO, LIFO, and weighted-average cost—compute different amounts for ending inventory and cost of goods sold. In other words, the \$6,700 invested in cost of goods available for sale will be either on the balance sheet in Merchandise Inventory or expensed on the income statement, as Cost of Goods Sold. The amount on the balance sheet will be the cost of the four tablets that were not sold and are still on hand. The amount on the income statement will be the cost of the 14 tablets sold.

First-In, First-Out (FIFO) Method

Under FIFO, the ending inventory comes from the newest—the most recent—purchases, which cost \$380 per unit as illustrated below:

Beginning merchandise inventory (2 units × \$350)	\$ 700
Net cost of purchases (4 units × \$360) + (12 units × \$380)	<u>6,000</u>
Cost of goods available for sale	6,700
Less: Ending merchandise inventory (4 × \$380)	<u>(1,520)</u>
Cost of goods sold	<u><u>\$ 5,180</u></u>

Notice that the FIFO periodic cost of goods sold is \$5,180, exactly the same amount as we calculated using the FIFO perpetual inventory method. The amounts obtained for cost of goods sold and ending merchandise inventory are always the same for FIFO perpetual and FIFO periodic. This occurs because FIFO sells the oldest inventory acquisitions first. Therefore, it does not matter when FIFO is calculated; the earliest purchase will always be the same whether we calculate cost of goods sold on the sale date (perpetual) or at the end of the period (periodic).

Last-In, First-Out (LIFO) Method

Under LIFO, the ending inventory comes from the oldest costs of the period—in this case, the beginning inventory of two units that cost \$350 per unit, plus two from the first purchase at \$360. LIFO is calculated as follows:

Beginning merchandise inventory (2 units × \$350)	\$ 700
Net cost purchases (4 units × \$360) + (12 units × \$380)	<u>6,000</u>
Cost of goods available for sale	6,700
Less: Ending merchandise inventory (2 × \$350) + (2 × \$360)	<u>(1,420)</u>
Cost of goods sold	<u><u>\$ 5,280</u></u>

Weighted-Average Method

In the weighted-average inventory costing method, when using the periodic inventory system, we compute a single weighted-average cost per unit for the entire period:

$$\begin{aligned} \text{Cost of goods available for sale (entire period) / Number of units available} &= \$6,700 / 18 \text{ units*} \\ &= \$372.22 \text{ (rounded)} \end{aligned}$$

*2 units from beginning inventory + 16 units purchased during August

Then apply this weighted-average cost to compute ending merchandise inventory (rounded to the nearest dollar) and cost of goods sold, as shown:

Beginning merchandise inventory (2 units × \$350)	\$ 700
Net cost of purchases (4 units × \$360) + (12 units × \$380)	<u>6,000</u>
Cost of goods available for sale	6,700
Less: Ending merchandise inventory (4 × \$372.22)	<u>(1,489)</u>
Cost of goods sold	<u><u>\$ 5,211</u></u>

Notice that when using the periodic system with the LIFO and weighted-average methods, the dollar amounts obtained for the ending merchandise inventory and cost of goods sold are different than those obtained with the perpetual inventory system. This is because the perpetual inventory system keeps a running balance of inventory while the periodic inventory system does not. Under the periodic inventory system, the ending merchandise inventory is determined without regard to when the sales dates of inventory occurred.

Try It!

- 10A.** Serenity Books has the following transactions in August related to merchandise inventory.

Aug. 1	Beginning merchandise inventory, 10 books @ \$15 each
3	Sold 3 books @ \$20 each
12	Purchased 8 books @ \$18 each
15	Sold 9 books @ \$20 each
20	Purchased 4 books @ \$20 each
28	Sold 5 books @ \$25 each

- Determine the cost of goods sold and ending merchandise inventory using the FIFO inventory costing method assuming Serenity Books uses the periodic inventory system.
- Determine the cost of goods sold and ending merchandise inventory using the LIFO inventory costing method assuming Serenity Books uses the periodic inventory system.
- Determine the cost of goods sold and ending merchandise inventory using the weighted-average inventory costing method assuming Serenity Books uses the periodic inventory system.

Check your answers online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercises S6A-11 through S6A-13. [Pearson MyLab Accounting](#)

REVIEW

> Things You Should Know

1. What are the accounting principles and controls that relate to merchandise inventory?

- Consistency principle: Businesses should use the same accounting methods and procedures from period to period.
- Disclosure principle: A company's financial statements should report enough information for outsiders to make knowledgeable decisions about the company.
- Materiality concept: A company must perform strictly proper accounting only for significant items.
- Conservatism: A company should exercise caution in reporting items in the financial statements.
- Controls over merchandise inventory ensure that inventory purchases and sales are properly authorized and accounted for by the accounting system.

2. How are merchandise inventory costs determined under a perpetual inventory system?

- Four costing methods can be used to determine merchandise inventory costs:
 - Specific identification method—Uses the specific cost of each unit of inventory to determine ending inventory and cost of goods sold.

- First-in, first-out (FIFO) method—First costs into inventory are the first costs out to cost of goods sold; ending inventory is based on the costs of the most recent purchases.
- Last-in, first-out (LIFO) method—Last costs into inventory are the first costs out to cost of goods sold; ending inventory is based on the costs of the oldest inventory.
- Weighted-average method—Method based on the weighted-average cost per unit of inventory after each purchase. Weighted-average cost per unit is determined by dividing the cost of goods available for sale by the number of units available for sale.

3. How are financial statements affected by using different inventory costing methods?

- The FIFO method results in the lowest cost of goods sold and the highest gross profit when costs are rising.
- The LIFO method results in the highest cost of goods sold and the lowest gross profit when costs are rising.
- The weighted-average method generates amounts for cost of goods sold and gross profit that fall between FIFO and LIFO if costs are consistently increasing or decreasing.

4. How is merchandise inventory valued when using the lower-of-cost-or-market rule?

- Lower-of-cost-or-market requires that merchandise be reported in the financial statements at whichever is lower of the following:
 - The historical cost of the inventory
 - The market value of the inventory
- An adjusting entry must be recorded to write down merchandise inventory if the market value is lower than the historical cost.

5. What are the effects of merchandise inventory errors on the financial statements?

- An error in ending merchandise inventory creates a whole string of errors in other related accounts.
- One period's ending merchandise inventory becomes the next period's beginning merchandise inventory.

6. How do we use inventory turnover and days' sales in inventory to evaluate business performance?

- Inventory turnover measures how rapidly merchandise inventory is sold and is calculated as:
Cost of goods sold / Average merchandise inventory.
- Days' sales in inventory measures the average number of days merchandise inventory is held by the company and is calculated as:
365 days / Inventory turnover.

7. How are merchandise inventory costs determined under a periodic inventory system? (Appendix 6A)

- Specific identification, FIFO, LIFO, and weighted-average can be used in a periodic inventory system.
- Specific identification and FIFO will produce the same amounts for ending merchandise inventory and cost of goods sold under both the perpetual and periodic inventory systems.
- LIFO and weighted-average generally result in different amounts for ending merchandise inventory and cost of goods sold under the perpetual and periodic inventory systems.

> Check Your Understanding

Check your understanding of the chapter by completing this problem and then looking at the solution. Use this practice to help identify which sections of the chapter you need to study more.

Watches R Us specializes in designer watches and leather goods. Watches R Us uses the perpetual inventory system. Assume Watches R Us began June holding 10 wristwatches that cost \$50 each. During June, Watches R Us bought and sold inventory as follows:

Jun. 3	Sold 8 units for \$100 each.
16	Purchased 10 units at \$56 each.
23	Sold 8 units for \$100 each.

Requirements

1. Prepare a perpetual inventory record for Watches R Us using the FIFO, LIFO, and weighted-average inventory costing methods. (See Learning Objective 2)
2. Journalize all of Watches R Us's inventory transactions for June under all three costing methods. Assume all sales and purchases are on account. Explanations are not required. (See Learning Objective 2)
3. Show the computation of gross profit for each method. (See Learning Objective 2)
4. Which method maximizes net income? Which method minimizes income taxes? (See Learning Objective 3)

> Solution

1. Perpetual inventory records:

FIFO:

Date	Purchases			Cost of Goods Sold			Inventory on Hand		
	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost
Jun. 1							10 units	$\times \$ 50$	$= \$ 500 \} \$ 500$
3				8 units	$\times \$ 50$	$= \$ 400 \} \$ 400$	2 units	$\times \$ 50$	$= \$ 100 \} \$ 100$
16	10 units	$\times \$ 56$	$= \$ 560$				2 units 10 units	$\times \$ 50$ $\times \$ 56$	$= \$ 100 \} \$ 560 \} \$ 660$
23				2 units 6 units	$\times \$ 50$ $\times \$ 56$	$= \$ 100 \} \$ 336 \} \$ 436$	4 units	$\times \$ 56$	$= \$ 224 \} \$ 224$
Totals	10 units		<u>$\\$ 560$</u>	16 units		<u>$\\$ 836$</u>	4 units		<u>$\\$ 224$</u>

LIFO:

Date	Purchases			Cost of Goods Sold			Inventory on Hand		
	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost
Jun. 1							10 units	$\times \$ 50$	$= \$ 500 \} \$ 500$
3				8 units	$\times \$ 50$	$= \$ 400 \} \$ 400$	2 units	$\times \$ 50$	$= \$ 100 \} \$ 100$
16	10 units	$\times \$ 56$	$= \$ 560$				2 units 10 units	$\times \$ 50$ $\times \$ 56$	$= \$ 100 \} \$ 560 \} \$ 660$
23				8 units	$\times \$ 56$	$= \$ 448 \} \$ 448$	2 units 2 units	$\times \$ 50$ $\times \$ 56$	$= \$ 100 \} \$ 112 \} \$ 212$
Totals	10 units		<u>$\\$ 560$</u>	16 units		<u>$\\$ 848$</u>	4 units		<u>$\\$ 212$</u>

Weighted-Average:

Date	Purchases			Cost of Goods Sold			Inventory on Hand		
	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost	Quantity	Unit Cost	Total Cost
Jun. 1							10 units	$\times \$ 50$	$= \$ 500$
3				8 units	$\times \$ 50$	$= \$ 400$	2 units	$\times \$ 50$	$= \$ 100$
16	10 units	$\times \$ 56$	$= \$ 560$				12 units	$\times \$ 55$	$= \$ 660$ $\$ 660 / 12 \text{ units} = \$ 55$
23				8 units	$\times \$ 55$	$= \$ 440$	4 units	$\times \$ 55$	$= \$ 220$
Totals	10 units		<u>$\\$ 560$</u>	16 units		<u>$\\$ 840$</u>	4 units		<u>$\\$ 220$</u>

2. Journal entries:

FIFO:

Date	Accounts and Explanation	Debit	Credit
Jun. 3	Accounts Receivable	800	
	Sales Revenue		800
3	Cost of Goods Sold	400	
	Merchandise Inventory		400
16	Merchandise Inventory	560	
	Accounts Payable		560
23	Accounts Receivable	800	
	Sales Revenue		800
23	Cost of Goods Sold	436	
	Merchandise Inventory		436

LIFO:

Date	Accounts and Explanation	Debit	Credit
Jun. 3	Accounts Receivable	800	
	Sales Revenue		800
3	Cost of Goods Sold	400	
	Merchandise Inventory		400
16	Merchandise Inventory	560	
	Accounts Payable		560
23	Accounts Receivable	800	
	Sales Revenue		800
23	Cost of Goods Sold	448	
	Merchandise Inventory		448

Weighted-average:

Date	Accounts and Explanation	Debit	Credit
Jun. 3	Accounts Receivable	800	
	Sales Revenue		800
3	Cost of Goods Sold	400	
	Merchandise Inventory		400
16	Merchandise Inventory	560	
	Accounts Payable		560
23	Accounts Receivable	800	
	Sales Revenue		800
23	Cost of Goods Sold	440	
	Merchandise Inventory		440

3. Gross profit:

	FIFO	LIFO	Weighted-Average
Net Sales Revenue (\$800 + \$800)	\$ 1,600	\$ 1,600	\$ 1,600
Less: Cost of Goods Sold (\$400 + \$436)	<u>836</u>		
		<u>848</u>	
			<u>840</u>
Gross Profit	<u>\$ 764</u>	<u>\$ 752</u>	<u>\$ 760</u>

4. FIFO maximizes net income.

LIFO minimizes income taxes.

> Key Terms

Conservatism (p. 354)

Consistency Principle (p. 353)

Cost of Goods Available for Sale
(p. 358)

Days' Sales in Inventory (p. 372)

Disclosure Principle (p. 353)

First-In, First-Out (FIFO) Method
(p. 358)

Inventory Costing Method (p. 357)

Inventory Turnover (p. 372)

Last-In, First-Out (LIFO) Method
(p. 359)

Lower-of-Cost-or-Market (LCM)
Rule (p. 367)

Materiality Concept (p. 354)

Specific Identification Method
(p. 357)

Weighted-Average Method (p. 361)

> Quick Check

Learning Objective 1

1. Which principle or concept states that businesses should use the same accounting methods and procedures from period to period?

a. Disclosure b. Conservatism c. Consistency d. Materiality

Learning Objective 2

2. Which inventory costing method assigns to ending merchandise inventory the newest—the most recent—costs incurred during the period?

a. First-in, first-out (FIFO) c. Specific identification
b. Weighted-average d. Last-in, first-out (LIFO)

Learning Objective 2

3. Assume Nile.com began April with 14 units of inventory that cost a total of \$266. During April, Nile.com purchased and sold goods as follows:

Apr. 8	Purchase	42 units @ \$ 20
14	Sale	35 units @ \$ 40
22	Purchase	28 units @ \$ 22
27	Sale	42 units @ \$ 40

Under the FIFO inventory costing method and the perpetual inventory system, how much is Nile.com's cost of goods sold for the sale on April 14?

a. \$1,106 b. \$686 c. \$1,400 d. \$700

Learning Objective 2

4. Suppose Nile.com used the weighted-average inventory costing method and the perpetual inventory system. Use the Nile.com data in Question 3 to compute the weighted-average unit cost of the company's inventory on hand at April 8. Round weighted-average unit cost to the nearest cent.

a. \$21.00 c. \$19.50
b. \$19.75 d. Cannot be determined from the data given

Learning Objective 3

5. Which inventory costing method results in the lowest net income during a period of rising inventory costs?

a. Weighted-average c. First-in, first-out (FIFO)
b. Specific identification d. Last-in, first-out (LIFO)

Learning Objective 4

6. Which of the following is most closely linked to accounting conservatism?

a. Lower-of-cost-or-market rule c. Disclosure principle
b. Materiality concept d. Consistency principle

Learning Objective 5

7. At December 31, 2018, Stevenson Company overstated ending inventory by \$36,000. How does this error affect cost of goods sold and net income for 2018?

a. Overstates cost of goods sold and understates net income
b. Understates cost of goods sold and overstates net income
c. Leaves both cost of goods sold and net income correct because the errors cancel each other
d. Overstates both cost of goods sold and net income

Learning Objective 6

8. Suppose Hamlet's had cost of goods sold during the year of \$260,000. Beginning merchandise inventory was \$25,000, and ending merchandise inventory was \$40,000. Determine Hamlet's inventory turnover for the year. Round to the nearest hundredth.

a. 6.50 times per year c. 8.00 times per year
b. 10.40 times per year d. 17.33 times per year

- 9A.** Assume Bargain.com began July with 8 units of inventory that cost a total of \$152. During July, Bargain.com purchased and sold goods as follows:

Jul. 8	Purchase	24 units @ \$ 20
14	Sale	20 units @ \$ 40
22	Purchase	16 units @ \$ 22
27	Sale	24 units @ \$ 40

Suppose Bargain.com used the LIFO inventory costing method and the periodic inventory system. Using the information above, determine Bargain.com's cost of goods sold at the end of the month.

- a. \$76
- b. \$896
- c. \$908
- d. \$88

Check your answers at the end of the chapter.

Learning Objective 7 Appendix 6A

ASSESS YOUR PROGRESS

> Review Questions

1. Which principle states that businesses should use the same accounting methods and procedures from period to period?
2. What does the disclosure principle require?
3. Discuss the materiality concept. Is the dollar amount that is material the same for a company that has annual sales of \$10,000 compared with a company that has annual sales of \$1,000,000?
4. What is the goal of conservatism?
5. Discuss some measures that should be taken to maintain control over merchandise inventory.
6. Under a perpetual inventory system, what are the four inventory costing methods and how does each method determine ending merchandise inventory and cost of goods sold?
7. When using a perpetual inventory system and the weighted-average inventory costing method, when does the business compute a new weighted-average cost per unit?
8. During periods of rising costs, which inventory costing method produces the highest gross profit?
9. What does the lower-of-cost-or-market (LCM) rule require?
10. What account is debited when recording the adjusting entry to write down merchandise inventory under the LCM rule?
11. What is the effect on cost of goods sold, gross profit, and net income if ending merchandise inventory is understated?
12. When does an inventory error cancel out, and why?
13. How is inventory turnover calculated, and what does it measure?
14. How is days' sales in inventory calculated, and what does it measure?
- 15A. When using the periodic inventory system, which inventory costing method(s) always produces the same result as when using the perpetual inventory system?
- 16A. When using the periodic inventory system and weighted-average inventory costing method, when is the weighted-average cost per unit computed?

> Short Exercises

For all short exercises, assume the perpetual inventory system is used unless stated otherwise.

Learning Objective 1

S6-1 Determining inventory accounting principles

Ward Hardware used the FIFO inventory costing method in 2018. Ward plans to continue using the FIFO method in future years. Which accounting principle is most relevant to Ward's decision?

Learning Objective 2

S6-2 Determining inventory costing methods

Ward Hardware does not expect costs to change dramatically and wants to use an inventory costing method that averages cost changes.

Requirements

1. Which inventory costing method would best meet Ward's goal?
2. Assume Ward wanted to expense out the newer purchases of goods instead. Which inventory costing method would best meet that need?

Use the following information to answer Short Exercises S6-3 through S6-6.

Beta Furniture started June with 15 bookshelves that cost \$34 each. On June 13, Beta bought 25 bookshelves at \$39 each. On June 29, Beta sold 21 bookshelves for \$54 each.

Learning Objective 2

S6-3 Preparing a perpetual inventory record and journal entries—Specific identification

Requirements

1. Prepare Beta Furniture's perpetual inventory record assuming the company uses the specific identification inventory costing method. Assume that Beta sold 9 bookshelves that cost \$34 each and 12 bookshelves that cost \$39 each.
2. Journalize the June 13 purchase of merchandise inventory on account and the June 29 sale of merchandise inventory on account.

Learning Objective 2

S6-4 Preparing a perpetual inventory record and journal entries—FIFO

Requirements

1. Prepare Beta Furniture's perpetual inventory record assuming the company uses the FIFO inventory costing method.
2. Journalize the June 13 purchase of merchandise inventory on account and the June 29 sale of merchandise inventory on account.

Learning Objective 2

S6-5 Preparing a perpetual inventory record and journal entries—LIFO

Requirements

1. Prepare Beta Furniture's perpetual inventory record assuming the company uses the LIFO inventory costing method.
2. Journalize the June 13 purchase of merchandise inventory on account and the June 29 sale of merchandise inventory on account.

S6-6 Preparing a perpetual inventory record and journal entries—Weighted-average

Requirements

1. Prepare Beta Furniture's perpetual inventory record assuming the company uses the weighted-average inventory costing method.
2. Journalize the June 13 purchase of merchandise inventory on account and the June 29 sale of merchandise inventory on account.

Note: Short Exercises S6-4, S6-5, and S6-6 must be completed before attempting Short Exercise S6-7.

Learning Objective 2

S6-7 Comparing Cost of Goods Sold under FIFO, LIFO, and Weighted-average

Refer to Short Exercises S6-4 through S6-6. After completing those exercises, answer the following questions:

Requirements

1. Which inventory costing method produced the lowest cost of goods sold?
2. Which inventory costing method produced the highest cost of goods sold?
3. If costs had been declining instead of rising, which inventory costing method would have produced the highest cost of goods sold?

Learning Objective 3

S6-8 Applying the lower-of-cost-or-market rule

Assume that a Logan Burger restaurant has the following perpetual inventory record for hamburger patties:

Date	Purchases	Cost of Goods Sold	Merchandise Inventory on Hand
Jul. 9	\$ 450		\$ 450
22		\$ 270	180
31	210		390

At July 31, the accountant for the restaurant determines that the current replacement cost of the ending merchandise inventory is \$435. Make any adjusting entry needed to apply the lower-of-cost-or-market rule. Merchandise inventory would be reported on the balance sheet at what value on July 31?

Learning Objective 4

S6-9 Determining the effect of an inventory error

Riderco Pool Supplies's merchandise inventory data for the year ended December 31, 2019, follow:

Learning Objective 5

Sales Revenue	\$ 70,000
Cost of Goods Sold:	
Beginning Merchandise Inventory	\$ 4,400
Net Cost of Purchases	44,600
Cost of Goods Available for Sale	49,000
Less: Ending Merchandise Inventory	<u>5,900</u>
Cost of Goods Sold	43,100
Gross Profit	<u><u>\$ 26,900</u></u>

Requirements

1. Assume that the ending merchandise inventory was accidentally overstated by \$2,300. What are the correct amounts for cost of goods sold and gross profit?
2. How would the inventory error affect Riderco Pool Supplies's cost of goods sold and gross profit for the year ended December 31, 2020, if the error is not corrected in 2019?

Learning Objective 6

S6-10 Computing the rate of inventory turnover and days' sales in inventory

Liberty Communications reported the following figures in its annual financial statements:

Cost of Goods Sold	\$ 18,300
Beginning Merchandise Inventory	590
Ending Merchandise Inventory	470

Compute the rate of inventory turnover and days' sales in inventory for Liberty Communications. (Round to two decimal places.)

Use the following information to answer Short Exercises S6A-11 through S6A-13.

The periodic inventory records of Mobile Batteries indicate the following for the month of February:

Feb. 1 Beginning merchandise inventory	7 units @ \$ 50 each
7 Purchase	8 units @ \$ 55 each
14 Purchase	12 units @ \$ 60 each
22 Purchase	13 units @ \$ 70 each

At February 28, Mobile counts six units of merchandise inventory on hand.

Learning Objective 7 Appendix 6A

S6A-11 Computing periodic inventory amounts—FIFO

Compute ending merchandise inventory and cost of goods sold for Mobile Batteries using the FIFO inventory costing method.

Learning Objective 7 Appendix 6A

S6A-12 Computing periodic inventory amounts—LIFO

Compute ending merchandise inventory and cost of goods sold for Mobile Batteries using the LIFO inventory costing method.

Learning Objective 7 Appendix 6A

S6A-13 Computing periodic inventory amounts—Weighted-average

Compute ending merchandise inventory and cost of goods sold for Mobile Batteries using the weighted-average inventory costing method.

> Exercises

For all exercises, assume the perpetual inventory system is used unless stated otherwise.

E6-14 Using accounting vocabulary

Match the accounting terms with the corresponding definitions.

- | | |
|-------------------------------|--|
| 1. Specific identification | a. Treats the oldest inventory purchases as the first units sold. |
| 2. Materiality concept | b. Requires that a company report enough information for outsiders to make knowledgeable decisions. |
| 3. Last-in, first-out (LIFO) | c. Identifies exactly which inventory item was sold. Usually used for higher cost inventory. |
| 4. Conservatism | d. Calculates a weighted-average cost based on the cost of goods available for sale and the number of units available. |
| 5. Consistency principle | e. Principle whose foundation is to exercise caution in reporting financial statement items. |
| 6. Weighted-average | f. Treats the most recent/newest purchases as the first units sold. |
| 7. Disclosure principle | g. Businesses should use the same accounting methods from period to period. |
| 8. First-in, first-out (FIFO) | h. Principle that states significant items must conform to GAAP. |

E6-15 Comparing inventory methods

Travel Mart, a regional convenience store chain, maintains milk inventory by the gallon. The first month's milk purchases and sales at its Denver, Colorado, location follow:

-
- | | |
|--------|--------------------------------------|
| Jan. 2 | Purchased 8 gallons @ \$2.00 each |
| 6 | Purchased 4 gallons @ \$2.60 each |
| 8 | Sold 5 gallons of milk to a customer |
| 13 | Purchased 1 gallon @ \$2.80 each |
| 14 | Sold 2 gallons of milk to a customer |
-

Requirements

- Determine the amount that would be reported in ending merchandise inventory on January 15 using the FIFO inventory costing method.
- Determine the amount that would be reported in ending merchandise inventory on January 15 using the LIFO inventory costing method.
- Determine the amount that would be reported in ending merchandise inventory on January 15 using the weighted-average inventory costing method. (Round all amounts to the nearest cent, \$X.XX.)

Learning Objectives 1, 2

Learning Objective 2

- Ending Merch. Inv. \$16.30

Use the following information to answer Exercises E6-16 through E6-18.

Artistic Photography carries an inventory of action cameras. The sales price of each action camera is \$250. Company records indicate the following for a particular line of Artistic Photography's cameras:

Date	Item	Quantity	Unit Cost
Sep. 1	Balance	20	\$ 170
5	Sale	16	
10	Purchase	40	180
15	Sale	35	
30	Sale	6	

Learning Objective 2

1. COGS \$3,232

E6-16 Measuring and journalizing merchandise inventory and cost of goods sold—FIFO

Requirements

1. Prepare a perpetual inventory record for the action cameras assuming Artistic Photography uses the FIFO inventory costing method. Then, identify the cost of ending inventory and cost of goods sold for the month.
2. Journalize Artistic Photography's inventory transactions using the FIFO inventory costing method. (Assume purchases and sales are made on account.)

Learning Objective 2

1. Ending Merch. Inv. \$106

E6-17 Measuring ending inventory and cost of goods sold in a perpetual inventory system—LIFO

Requirements

1. Prepare a perpetual inventory record for the action cameras assuming Artistic Photography uses the LIFO inventory costing method. Then, identify the cost of ending inventory and cost of goods sold for the month.
2. Journalize Artistic Photography's inventory transactions using the LIFO inventory costing method. (Assume purchases and sales are made on account.)

Learning Objective 2

1. COGS \$3,236

E6-18 Measuring ending inventory and cost of goods sold in a perpetual inventory system—Weighted-average

Requirements

1. Prepare Artistic Photography's perpetual inventory record for the putters assuming Artistic Photography uses the weighted-average inventory costing method. Round weighted-average cost per unit to the nearest cent and all other amounts to the nearest dollar. Then, identify the cost of ending inventory and cost of goods sold for the month.
2. Journalize Artistic Photography's inventory transactions using the weighted-average inventory costing method. (Assume purchases and sales are made on account.)

E6-19 Comparing amounts for cost of goods sold, ending inventory, and gross profit—FIFO and LIFO

Assume that Gameland store bought and sold a line of dolls during December as follows:

Dec. 1 Beginning merchandise inventory	11 units @ \$ 8 each
8 Sale	8 units @ \$ 23 each
14 Purchase	15 units @ \$ 14 each
21 Sale	13 units @ \$ 23 each

Requirements

1. Compute the cost of goods sold, cost of ending merchandise inventory, and gross profit using the FIFO inventory costing method.
2. Compute the cost of goods sold, cost of ending merchandise inventory, and gross profit using the LIFO inventory costing method.
3. Which method results in a higher cost of goods sold?
4. Which method results in a higher cost of ending merchandise inventory?
5. Which method results in a higher gross profit?

E6-20 Comparing cost of goods sold and gross profit—FIFO, LIFO, and weighted-average methods

Assume that AB Tire Store completed the following perpetual inventory transactions for a line of tires:

Jul. 1 Beginning merchandise inventory	30 tires @ \$ 52 each
11 Purchase	10 tires @ \$ 64 each
23 Sale	20 tires @ \$ 71 each
26 Purchase	20 tires @ \$ 75 each
29 Sale	22 tires @ \$ 71 each

Requirements

1. Compute cost of goods sold and gross profit using the FIFO inventory costing method.
2. Compute cost of goods sold and gross profit using the LIFO inventory costing method.
3. Compute cost of goods sold and gross profit using the weighted-average inventory costing method. (Round weighted-average cost per unit to the nearest cent and all other amounts to the nearest dollar.)
4. Which method results in the largest gross profit, and why?

Learning Objectives 2, 3

2. Ending Merch. Inv. \$73

Learning Objectives 2, 3

1. COGS \$2,140

Learning Objective 4**E6-21 Applying the lower-of-cost-or-market rule to merchandise inventories**

Richmond Resources, which uses the FIFO inventory costing method, has the following account balances at January 31, 2019, prior to releasing the financial statements for the year:

Merchandise Inventory, ending	\$ 15,000
Cost of Goods Sold	71,000
Sales Revenue	115,000

Richmond has determined that the current replacement cost (current market value) of the January 31, 2019, ending merchandise inventory is \$13,800.

Requirements

1. Prepare any adjusting journal entry required from the information given.
2. What value would Richmond report on the balance sheet at January 31, 2019, for merchandise inventory?

Learning Objective 4

2. GP \$66,500

E6-22 Applying the lower-of-cost-or-market rule to inventories

Naturally Good Foods reports merchandise inventory at the lower-of-cost-or-market. Prior to releasing its financial statements for the year ended July 31, 2019, Naturally's *preliminary* income statement, before the year-end adjustments, appears as follows:

NATURALLY GOOD FOODS	
Income Statement (Partial)	
Year Ended July 31, 2019	
Sales Revenue	\$ 122,000
Cost of Goods Sold	53,000
Gross Profit	\$ 69,000

Naturally has determined that the current replacement cost of ending merchandise inventory is \$18,000. Cost is \$19,000.

Requirements

1. Journalize the adjusting entry for merchandise inventory, if any is required.
2. Prepare a revised partial income statement to show how Naturally Good Foods should report sales, cost of goods sold, and gross profit.

Learning Objective 5

b. Correct GP \$19,000

E6-23 Measuring the effect of an inventory error

Hot Bread Bakery reported Net sales revenue of \$44,000 and cost of goods sold of \$33,000. Compute Hot Bread's correct gross profit if the company made either of the following independent accounting errors. Show your work.

- a. Ending merchandise inventory is overstated by \$8,000.
- b. Ending merchandise inventory is understated by \$8,000.

E6-24 Correcting an inventory error—two years

Nature Foods Grocery reported the following comparative income statements for the years ended June 30, 2019 and 2018:

Learning Objective 5

1. 2019, NI \$36,500

NATURE FOODS GROCERY Income Statements Years Ended June 30, 2019 and 2018		
	2019	2018
Net Sales Revenue	\$ 134,000	\$ 119,000
Cost of Goods Sold:		
Beginning Merchandise Inventory	\$ 17,000	\$ 14,000
Net Cost of Purchases	78,000	67,000
Cost of Goods Available for Sale	95,000	81,000
Less: Ending Merchandise Inventory	<u>18,000</u>	<u>17,000</u>
Cost of Goods Sold	77,000	64,000
Gross Profit	57,000	55,000
Operating Expenses	26,000	21,000
Net Income	<u><u>\$ 31,000</u></u>	<u><u>\$ 34,000</u></u>

During 2019, Nature Foods Grocery discovered that ending 2018 merchandise inventory was overstated by \$5,500.

Requirements

1. Prepare corrected income statements for the two years.
2. State whether each year's net income—before your corrections—is understated or overstated, and indicate the amount of the understatement or overstatement.

E6-25 Computing inventory turnover and days' sales in inventory

Calm Day reported the following income statement for the year ended December 31, 2019:

Learning Objective 6

CALM DAY Income Statement Year Ended December 31, 2019	
Net Sales Revenue	\$ 128,000
Cost of Goods Sold:	
Beginning Merchandise Inventory	\$ 9,000
Net Cost of Purchases	62,000
Cost of Goods Available for Sale	71,000
Less: Ending Merchandise Inventory	<u>12,200</u>
Cost of Goods Sold	58,800
Gross Profit	69,200
Operating Expenses	41,600
Net Income	<u><u>\$ 27,600</u></u>

Requirements

1. Compute Calm Day's inventory turnover rate for the year. (Round to two decimal places.)
2. Compute Calm Day's days' sales in inventory for the year. (Round to two decimal places.)

Learning Objective 7

Appendix 6A

2. COGS \$513

E6A-26 Comparing ending merchandise inventory, cost of goods sold, and gross profit using the periodic inventory system—FIFO, LIFO, and weighted-average methods

Assume that Dunk Coffee Shop completed the following *periodic* inventory transactions for a line of merchandise inventory:

Jun. 1	Beginning merchandise inventory	18 units @ \$ 24 each
12	Purchase	5 units @ \$ 27 each
20	Sale	7 units @ \$ 32 each
24	Purchase	15 units @ \$ 30 each
29	Sale	21 units @ \$ 32 each

Requirements

1. Compute ending merchandise inventory, cost of goods sold, and gross profit using the FIFO inventory costing method.
2. Compute ending merchandise inventory, cost of goods sold, and gross profit using the LIFO inventory costing method.
3. Compute ending merchandise inventory, cost of goods sold, and gross profit using the weighted-average inventory costing method. (Round weighted-average cost per unit to the nearest cent and all other amounts to the nearest dollar.)

Learning Objective 7

Appendix 6A

E6A-27 Computing periodic inventory amounts

Consider the data of the following companies which use the periodic inventory system:

Company	Net Sales Revenue	Beginning Merchandise Inventory	Net Cost of Purchases	Ending Merchandise Inventory	Cost of Goods Sold	Gross Profit
Ash	\$ 107,000	\$ 18,000	\$ 58,000	\$ 15,000	\$ (a)	\$ 46,000
Elm	(b)	31,000	95,000	(c)	93,000	42,000
Fir	93,000	(d)	56,000	22,000	61,000	(e)
Oak	81,000	11,000	(f)	9,000	(g)	46,000

Requirements

1. Supply the missing amounts in the preceding table.
2. Prepare the income statement for the year ended December 31, 2019, for Ash Company, which uses the periodic inventory system. Include a complete heading, and show the full computation of cost of goods sold. Ash's operating expenses for the year were \$8,000.

Problems Group A

For all problems, assume the perpetual inventory system is used unless stated otherwise.

P6-28A Accounting for inventory using the perpetual inventory system—FIFO, LIFO, and weighted-average

Atlas Gym began May with merchandise inventory of 80 crates of vitamins that cost a total of \$3,600. During the month, Atlas Gym purchased and sold merchandise on account as follows:

May. 5	Purchase	120 crates @ \$ 58 each
13	Sale	130 crates @ \$ 106 each
18	Purchase	130 crates @ \$ 72 each
26	Sale	140 crates @ \$ 110 each

Requirements

1. Prepare a perpetual inventory record, using the FIFO inventory costing method, and determine the company's cost of goods sold, ending merchandise inventory, and gross profit.
2. Prepare a perpetual inventory record, using the LIFO inventory costing method, and determine the company's cost of goods sold, ending merchandise inventory, and gross profit.
3. Prepare a perpetual inventory record, using the weighted-average inventory costing method, and determine the company's cost of goods sold, ending merchandise inventory, and gross profit. (Round weighted-average cost per unit to the nearest cent and all other amounts to the nearest dollar.)
4. If the business wanted to pay the least amount of income taxes possible, which method would it choose?

P6-29A Accounting for inventory using the perpetual inventory system—FIFO, LIFO, and weighted-average, and comparing FIFO, LIFO, and weighted-average

Steel Mill began August with 50 units of iron inventory that cost \$35 each. During August, the company completed the following inventory transactions:

		Units	Unit Cost	Unit Sales Price
Aug. 3	Sale	45		\$ 85
8	Purchase	90	\$ 54	
21	Sale	85		88
30	Purchase	15	58	

Requirements

1. Prepare a perpetual inventory record for the merchandise inventory using the FIFO inventory costing method.
2. Prepare a perpetual inventory record for the merchandise inventory using the LIFO inventory costing method.

Learning Objectives 2, 3

2. Ending Merch. Inv., \$990

Learning Objectives 2, 3

5. FIFO GP \$5,235

3. Prepare a perpetual inventory record for the merchandise inventory using the weighted-average inventory costing method.
4. Determine the company's cost of goods sold for August using FIFO, LIFO, and weighted-average inventory costing methods.
5. Compute gross profit for August using FIFO, LIFO, and weighted-average inventory costing methods.
6. If the business wanted to maximize gross profit, which method would it select?

Learning Objectives 1, 4**P6-30A Accounting principles for inventory and applying the lower-of-cost-or-market rule**

Some of K and B Electronics's merchandise is gathering dust. It is now December 31, 2018, and the current replacement cost of the ending merchandise inventory is \$30,000 below the business's cost of the goods, which was \$95,000. Before any adjustments at the end of the period, the company's Cost of Goods Sold account has a balance of \$414,000.

Requirements

1. Journalize any required entries.
2. At what amount should the company report merchandise inventory on the balance sheet?
3. At what amount should the company report cost of goods sold on the income statement?
4. Which accounting principle or concept is most relevant to this situation?

Learning Objectives 5, 6

2. 2019, overstated \$9,000

P6-31A Correcting inventory errors over a three-year period and computing inventory turnover and days' sales in inventory

Peaceful Carpets's books show the following data. In early 2020, auditors found that the ending merchandise inventory for 2017 was understated by \$6,000 and that the ending merchandise inventory for 2019 was overstated by \$7,000. The ending merchandise inventory at December 31, 2018, was correct.

	2019	2018	2017
Net Sales Revenue	\$ 216,000	\$ 166,000	\$ 175,000
Cost of Goods Sold:			
Beginning Merchandise Inventory	\$ 22,000	\$ 28,000	\$ 41,000
Net Cost of Purchases	<u>139,000</u>	<u>109,000</u>	<u>98,000</u>
Cost of Goods Available for Sale	<u>161,000</u>	<u>137,000</u>	<u>139,000</u>
Less: Ending Merchandise Inventory	<u>33,000</u>	<u>22,000</u>	<u>28,000</u>
Cost of Goods Sold	<u>128,000</u>	<u>115,000</u>	<u>111,000</u>
Gross Profit	<u>88,000</u>	<u>51,000</u>	<u>64,000</u>
Operating Expenses	<u>62,000</u>	<u>23,000</u>	<u>28,000</u>
Net Income	<u><u>\$ 26,000</u></u>	<u><u>\$ 28,000</u></u>	<u><u>\$ 36,000</u></u>

Requirements

1. Prepare corrected income statements for the three years.
2. State whether each year's net income—before your corrections—is understated or overstated, and indicate the amount of the understatement or overstatement.
3. Compute the inventory turnover and days' sales in inventory using the corrected income statements for the three years. (Round all numbers to two decimals.)

P6A-32A Accounting for inventory using the periodic inventory system—FIFO, LIFO, and weighted-average, and comparing FIFO, LIFO, and weighted-average

Futuristic Electronic Center began October with 65 units of merchandise inventory that cost \$82 each. During October, the store made the following purchases:

Oct. 3	25 units @ \$ 90 each
12	30 units @ \$ 90 each
18	35 units @ \$ 96 each

Futuristic uses the periodic inventory system, and the physical count at October 31 indicates that 80 units of merchandise inventory are on hand.

Requirements

1. Determine the ending merchandise inventory and cost of goods sold amounts for the October financial statements using the FIFO, LIFO, and weighted-average inventory costing methods.
2. Net sales revenue for October totaled \$28,000. Compute Futuristic's gross profit for October using each method.
3. Which method will result in the lowest income taxes for Futuristic? Why? Which method will result in the highest net income for Futuristic? Why?

Learning Objectives 2, 3, 7 Appendix 6A

1. LIFO Ending Merch. Inv., \$6,680

> Problems Group B

For all problems, assume the perpetual inventory system is used unless stated otherwise.

P6-33B Accounting for inventory using the perpetual inventory system—FIFO, LIFO, and weighted-average

Exercise World began January with merchandise inventory of 90 crates of vitamins that cost a total of \$5,850. During the month, Exercise World purchased and sold merchandise on account as follows:

Jan. 2	Purchase	130 crates @ \$ 76 each
5	Sale	140 crates @ \$ 100 each
16	Purchase	170 crates @ \$ 86 each
27	Sale	180 crates @ \$ 104 each

Learning Objectives 2, 3

2. Ending Merch. Inv., \$4,550

Requirements

1. Prepare a perpetual inventory record, using the FIFO inventory costing method, and determine the company's cost of goods sold, ending merchandise inventory, and gross profit.
2. Prepare a perpetual inventory record, using the LIFO inventory costing method, and determine the company's cost of goods sold, ending merchandise inventory, and gross profit.
3. Prepare a perpetual inventory record, using the weighted-average inventory costing method, and determine the company's cost of goods sold, ending merchandise inventory, and gross profit. (Round weighted-average cost per unit to the nearest cent and all other amounts to the nearest dollar.)
4. If the business wanted to pay the least amount of income taxes possible, which method would it choose?

Learning Objectives 2, 3

5. FIFO GP \$4,640

P6-34B Accounting for inventory using the perpetual inventory system—FIFO, LIFO, and weighted-average, and comparing FIFO, LIFO, and weighted-average

Decorative Steel began August with 50 units of iron inventory that cost \$35 each. During August, the company completed the following inventory transactions:

		Units	Unit Cost	Unit Sales Price
	Aug. 3 Sale	45		\$ 85
	8 Purchase	90	\$ 54	
	21 Sale	85		88
	30 Purchase	15	58	

Requirements

1. Prepare a perpetual inventory record for the merchandise inventory using the FIFO inventory costing method.
2. Prepare a perpetual inventory record for the merchandise inventory using the LIFO inventory costing method.
3. Prepare a perpetual inventory record for the merchandise inventory using the weighted-average inventory costing method.
4. Determine the company's cost of goods sold for August using FIFO, LIFO, and weighted-average inventory costing methods.
5. Compute gross profit for August using FIFO, LIFO, and weighted-average inventory costing methods.
6. If the business wanted to maximize gross profit, which method would it select?

P6-35B Accounting principles for inventory and applying the lower-of-cost-or-market rule

Some of H and J Electronics's merchandise is gathering dust. It is now December 31, 2018, and the current replacement cost of the ending merchandise inventory is \$32,000 below the business's cost of the goods, which was \$105,000. Before any adjustments at the end of the period, the company's Cost of Goods Sold account has a balance of \$390,000.

Requirements

1. Journalize any required entries.
2. At what amount should the company report merchandise inventory on the balance sheet?
3. At what amount should the company report cost of goods sold on the income statement?
4. Which accounting principle or concept is most relevant to this situation?

P6-36B Correcting inventory errors over a three-year period and computing inventory turnover and days' sales in inventory

Waterlily Carpets's books show the following data. In early 2020, auditors found that the ending merchandise inventory for 2017 was understated by \$8,000 and that the ending merchandise inventory for 2019 was overstated by \$9,000. The ending merchandise inventory at December 31, 2018, was correct.

Learning Objectives 1, 4

Learning Objectives 5, 6

2. 2019, overstated \$9,000

	2019	2018	2017
Net Sales Revenue	\$ 214,000	\$ 167,000	\$ 181,000
Cost of Goods Sold:			
Beginning Merchandise Inventory	\$ 26,000	\$ 31,000	\$ 49,000
Net Cost of Purchases	132,000	91,000	83,000
Cost of Goods Available for Sale	158,000	122,000	132,000
Less: Ending Merchandise Inventory	35,000	26,000	31,000
Cost of Goods Sold	123,000	96,000	101,000
Gross Profit	91,000	71,000	80,000
Operating Expenses	65,000	47,000	43,000
Net Income	\$ 26,000	\$ 24,000	\$ 37,000

Requirements

1. Prepare corrected income statements for the three years.
2. State whether each year's net income—before your corrections—is understated or overstated, and indicate the amount of the understatement or overstatement.
3. Compute the inventory turnover and days' sales in inventory using the corrected income statements for the three years. (Round all numbers to two decimals.)

Learning Objectives 2, 3, 7
Appendix 6A

1. LIFO Ending Merch. Inv., \$9,460

P6A-37B Accounting for inventory using the periodic inventory system—FIFO, LIFO, and weighted-average, and comparing FIFO, LIFO, and weighted-average

Contemporary Electronic Center began July with 60 units of merchandise inventory that cost \$68 each. During July, the store made the following purchases:

Jul. 3	40 units @ \$ 72 each
12	50 units @ \$ 90 each
18	30 units @ \$ 92 each

Contemporary uses the periodic inventory system, and the physical count at July 31 indicates that 90 units of merchandise inventory are on hand.

Requirements

1. Determine the ending merchandise inventory and cost of goods sold amounts for the July financial statements using the FIFO, LIFO, and weighted-average inventory costing methods.
2. Sales revenue for July totaled \$25,000. Compute Contemporary's gross profit for July using each method.
3. Which method will result in the lowest income taxes for Contemporary? Why? Which method will result in the highest net income for Contemporary? Why?

CRITICAL THINKING

> Using Excel

P6-38 Using Excel for Inventory Cost Flow Assumptions.

Download an Excel template for this problem online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

Johnson Company uses a perpetual inventory system. The January 2018 inventory information is as follows. Assume cash purchases and sales.

Date	Description	Units	Per Unit
Jan 1	Inventory on hand	1,000	\$ 4
3	Purchase	3,000	5
6	Sale	2,750	10
15	Purchase	5,000	6
22	Sale	4,500	10

Requirements

1. Prepare a perpetual inventory record using FIFO, LIFO, and weighted-average inventory costing methods, and determine cost of goods sold and ending merchandise inventory. Use cell references from Data table for quantities and unit cost. Use Excel formulas for total costs and total quantities. Format weighted-average unit costs and total costs to display two decimal places.
2. Journalize Johnson Company's inventory transactions under each of the three methods.

> Continuing Problem

P6-39 Accounting for inventory using the perpetual inventory system—FIFO

This problem continues the Let's Bike Company situation from Chapter 5. At the beginning of the January 2019, Let's Bike Company decided to carry and sell cycling backpacks with its logo printed on them. Let's Bike Company uses the perpetual inventory system to account for the inventory. During February 2019, Let's Bike Company completed the following merchandising transactions:

-
- Feb. 2 Sold 4 backpacks at \$40 each.
- 5 Purchased 15 backpacks at \$34 each.
- 9 Sold 5 backpacks at \$40 each.
- 12 Sold 11 backpacks at \$40 each.
- 13 Let's Bike Company received a call from a corporate customer which is planning to order in bulk. Let's Bike Company placed a rush order and purchased 10 backpacks. The premium cost for these backpacks was \$36 each.
- 14 Placed a second rush order and purchased 5 backpacks at \$37 each.
- 16 Sold 4 backpacks at \$40 each.
- 18 Sold 13 backpacks at \$40 each.
- 19 Purchased 15 backpacks at \$35 each.
- 20 In order to avoid future rush orders, purchased 30 backpacks. Due to volume of the order, Let's Bike Company was able to negotiate a cost of \$33 each.
- 22 Sold 2 backpacks at \$40 each.
- 23 Sold 10 backpacks at \$40 each.
- 24 Sold 4 backpacks at \$40 each.
- 26 Sold 12 backpacks at \$40 each.
-

Requirements

1. Assume Let's Bike Company began February with 10 backpacks in inventory that cost \$33 each. Prepare the perpetual inventory records for February using the FIFO inventory costing method.
2. Provide a summary for the month, in both units and dollars, of the change in inventory in the following format:

	Number of backpacks	Dollar Amount
Beginning Balance		
Add: Purchases		
Less: Cost of Goods Sold		
Ending Balance	=====	=====

COMPREHENSIVE PROBLEM

> Comprehensive Problem for Chapters 5 and 6

The Davis Lamp Company (DLC) is a wholesale company that purchases lamps from the manufacturer and resells them to retail stores. The company has three inventory items: desk lamps, table lamps, and floor lamps. DLC uses a perpetual inventory system, FIFO method. DLC owns land with a building, which is separated into two parts: office space and warehouse space. All expenses associated with the office are categorized as Administrative Expenses. All expenses associated with the warehouse, which is used for the shipping and receiving functions of the company, are categorized as Selling Expenses. In addition to the land and building, DLC also owns office furniture and equipment and warehouse fixtures. The company uses one accumulated depreciation account for all the depreciable assets.

The trial balance for DLC as of September 30, 2018 follows:

DAVIS LAMP COMPANY		
Trial Balance		
September 30, 2018		
	Balance	
Account	Debit	Credit
Cash	\$ 457,000	
Accounts Receivable	0	
Merchandise Inventory	126,000	
Office Supplies	275	
Warehouse Supplies	350	
Land	20,000	
Building	780,000	
Office Furniture and Equipment	125,000	
Warehouse Fixtures	260,000	
Accumulated Depreciation		\$ 194,000
Accounts Payable		0
Common Stock		100,000
Retained Earnings		298,925
Dividends	0	
Sales Revenue		2,654,150
Cost of Goods Sold	1,061,450	
Salaries Expense—Selling	270,000	
Utilities Expense—Selling	32,000	
Supplies Expense—Selling	0	
Depreciation Expense—Selling	0	
Salaries Expense—Administrative	90,000	
Utilities Expense—Administrative	25,000	
Supplies Expense—Administrative	0	
Depreciation Expense—Administrative	0	
Total	\$ 3,247,075	\$ 3,247,075

Merchandise Inventory as of September 30 consists of the following lamps:

Item	Quantity	Unit Cost	Total Cost
Desk Lamp	2,500	\$ 8	\$ 20,000
Table Lamp	3,000	18	54,000
Floor Lamp	2,000	26	52,000
Total			<u>\$ 126,000</u>

During the fourth quarter of 2018, DLC completed the following transactions:

- | | |
|--------|---|
| Oct. 1 | Purchased lamps on account from Blue Ridge Lights, terms n/30, FOB destination:
5,000 desk lamps at \$9 each
7,500 table lamps at \$19 each
2,500 floor lamps at \$25 each |
| 12 | Sold lamps on account to Atlas Home Furnishings, terms 2/10, n/30:
4,000 table lamps at \$45 each |
| 15 | Sold lamps on account to Hiawassee Office Supply, terms 2/10, n/30:
1,000 desk lamps at \$20 each |
| 20 | Received a check from Atlas Home Furnishings for full amount owed on Oct. 12 sale. |
| 23 | Received a check from Hiawassee Office Supply for full amount owed on Oct. 15 sale. |
| 28 | Sold lamps on account to Parkway Home Stores, terms 2/10, n/30:
3,500 table lamps at \$45 each
1,500 floor lamps at \$65 each |
| 30 | Paid amount due to Blue Ridge Lights from Oct. 1 purchase. |
| 31 | Paid salaries, \$40,000 (75% selling, 25% administrative). |
| 31 | Paid utilities, \$2,500 (60% selling, 40% administrative). |
| Nov. 1 | Sold lamps on account to Hiawassee Office Supply, terms 2/10, n/30:
3,000 desk lamps at \$20 each |
| 5 | Purchased lamps on account from Blue Ridge Lights, terms n/30, FOB destination:
5,000 desk lamps at \$10 each
10,000 table lamps at \$21 each
5,000 floor lamps at \$27 each |
| 5 | Received a check from Parkway Home Stores for full amount owed on Oct. 28 sale. |
| 8 | Received a check from Hiawassee Office Supply for full amount owed on Nov. 1 sale. |
| 10 | Purchased and paid for supplies: \$325 for the office; \$675 for the warehouse. |
| 15 | Sold lamps on account to Anderson Office Supply, n/30:
2,000 desk lamps at \$20 each |
| 18 | Sold lamps on account to Go-Mart Discount Stores, terms 1/10, n/30:
2,000 table lamps at \$45 each
2,000 floor lamps at \$65 each |
| 28 | Received a check from Go-Mart Discount Stores for full amount owed on Nov. 18 sale. |

-
- 30 Paid salaries, \$40,000 (75% selling, 25% administrative).
- 30 Paid utilities, \$2,670 (60% selling, 40% administrative).
- Dec. 5 Paid amount due to Blue Ridge Lights from Nov. 5 purchase.
- 15 Received a check from Anderson Office Supply for full amount owed on Nov. 15 sale.
- 15 Paid dividends, \$50,000.
- 27 Sold lamps on account to Atlas Home Furnishings, terms 2/10, n/30:
 4,500 desk lamps at \$20 each
 5,000 table lamps at \$45 each
- 31 Paid salaries, \$40,000 (75% selling, 25% administrative).
- 31 Paid utilities, \$3,200 (60% selling, 40% administrative).
-

Requirements

1. Open general ledger T-accounts and enter opening balances as of September 30, 2018.
2. Open inventory records for the three inventory items and enter opening balances as of September 30, 2018. Complete the inventory records using the following transactions: Oct. 1, 12, 15, 28; Nov. 1, 5, 15, 18, and Dec. 27.
3. Record the transactions in the general journal.
4. Post transactions to the general ledger.
5. Prepare adjusting entries for the year ended December 31, 2018, and post to the ledger:
 - a. Depreciation, \$48,500 (75% selling, 25% administrative).
 - b. Supplies on hand: office, \$200; and warehouse, \$650.
 - c. A physical inventory account resulted in the following counts: desk lamps, 1,990; table lamps, 5,995; and floor lamps, 6,000. Update the inventory records.
6. Prepare an adjusted trial balance.
7. Provide a summary for the month, in both units and dollars, of the change in inventory for each item in the following format:

	Desk Lamps		Table Lamps		Floor Lamps	
	Number of lamps	Dollar Amount	Number of lamps	Dollar Amount	Number of lamps	Dollar Amount
Beginning Balance						
Add: Purchases						
Less: COGS						
Ending Balance						

Does the sum of the ending balances in the inventory records match the balance in Merchandise Inventory in the general ledger? If not, review the transactions to find your error.

8. Prepare Davis Lamp Company's multi-step income statement and statement of retained earnings for the year ended December 31, 2018, and a classified balance sheet as of December 31, 2018.

9. Calculate the following ratios for DLC as of December 31, 2018: gross profit percentage, inventory turnover, and days' sales in inventory.
10. Record and post the closing entries.
11. Prepare a post-closing trial balance.

> Tying It All Together Case 6-1

Before you begin this assignment, review the *Tying It All Together* feature in the chapter. It will also be helpful if you review Dick's Sporting Goods, Inc.'s 2015 annual report (https://www.sec.gov/Archives/edgar/data/1089063/000108906316000107/dks-10k_20160130.htm).

Dick's Sporting Goods, Inc. is headquartered in Pennsylvania and is a leading sporting goods retailer. Dick's offers a variety of high-quality sports equipment, apparel, footwear and accessories. The company sells inventory in their stores (Dick's Sporting Goods, Golf Galaxy, Field & Stream, and True Runner) and online through their Web site.

Requirements

1. On which financial statement would you find Merchandise Inventory? What was the amount of merchandise inventory as of January 30, 2016 and January 31, 2015?
2. On which financial statement would you find Cost of Goods Sold? What does Cost of Goods Sold represent?
3. How could you determine the amount of profit that Dick's Sporting Goods earns when selling its merchandise inventory? What is this amount for the year ending January 30, 2016?

> Decision Case 6-1

Suppose you manage Campbell Appliance. The store's summarized financial statements for 2019, the most recent year, follow:

CAMPBELL APPLIANCE Income Statement Year Ended December 31, 2019	
Net Sales Revenue	\$ 800,000
Cost of Goods Sold	660,000
Gross Profit	140,000
Operating Expenses	100,000
Net Income	\$ 40,000

CAMPBELL APPLIANCE Balance Sheet December 31, 2019

Assets	Liabilities and Stockholders' Equity
Cash \$ 30,000	Accounts Payable \$ 35,000
Inventories 75,000	Note Payable 280,000
Land and Buildings, Net 360,000	Total Liabilities 315,000
	Stockholders' Equity 150,000
Total Assets \$ 465,000	Total Liabilities and Stockholders' Equity \$ 465,000

Assume that you need to double net income. To accomplish your goal, it will be very difficult to raise the sales prices you charge because there is a discount appliance store nearby. Also, you have little control over your cost of goods sold because the appliance manufacturers set the amount you must pay.

Identify several strategies for doubling net income.

> Financial Statement Case 6-1

The notes are an important part of a company's financial statements, giving valuable details that would clutter the tabular data presented in the statements. This case will help you learn to use a company's inventory notes. Visit <http://www.pearsonglobaleditions.com/Sitemap/Horngren/> to view a link to **Target Corporation's** fiscal year ended January 31, 2016, Annual Report. Access the financial statements and related notes, and answer the following questions:

Requirements

1. Which inventory costing method does Target use? How does Target value its inventories? See Note 12.
2. By using the cost of goods sold formula, you can compute net purchases, which are not reported in the Target financial statements. How much were Target's inventory purchases during the year ended January 30, 2016?
3. Determine Target's inventory turnover and days' sales in inventory for the year ended January 30, 2016. (Round each ratio to one decimal place.) How do Target's inventory turnover and days' sales in inventory compare with **Kohl's Corporation's** for the year ended January 30, 2016? Explain.

> Team Project 6-1

Obtain the annual reports of as many companies as you have team members—one company per team member. Most companies post their financial statements on their Web sites.

Requirements

1. Identify the inventory method used by each company.
2. Compute each company's gross profit percentage, inventory turnover, and days' sales in inventory for the most recent two years.
3. For the industries of the companies you are analyzing, obtain the industry averages for gross profit percentage and inventory turnover from Risk Management Association, *Annual Statement Studies*; Dun and Bradstreet, *Industry Norms and Key Business Ratios*; or Leo Troy, *Almanac of Business and Industrial Financial Ratios*.
4. How well does each of your companies compare with the average for its industry? What insight about your companies can you glean from these ratios?

Pearson MyLab Accounting

For a wealth of online resources, including exercises, problems, media, and immediate tutorial help, please visit <http://www.myaccountinglab.com>.

> Quick Check Answers

1. c 2. a 3. b 4. b 5. d 6. a 7. b 8. c 9A. c

7

Internal Control and Cash



Where Did the Cash Go?

Andrew Goard, chief financial officer of a sports-themed restaurant located in Brentwood, California, stared at the bank statement on his desk. The business recently experienced record-breaking revenue due to increased customer traffic and expanded menu and drink offerings. Andrew knew that the expenses of the business had also increased, but he had expected the cash in the business's checking account to increase, not decrease, as the bank statement was showing.

Andrew wondered if it was possible that one of his employees was stealing money from the cash register. He really liked all of his employees and didn't think that any of them would steal

from the business. But the deposits on the bank statement from customer sales just didn't make sense. Given the

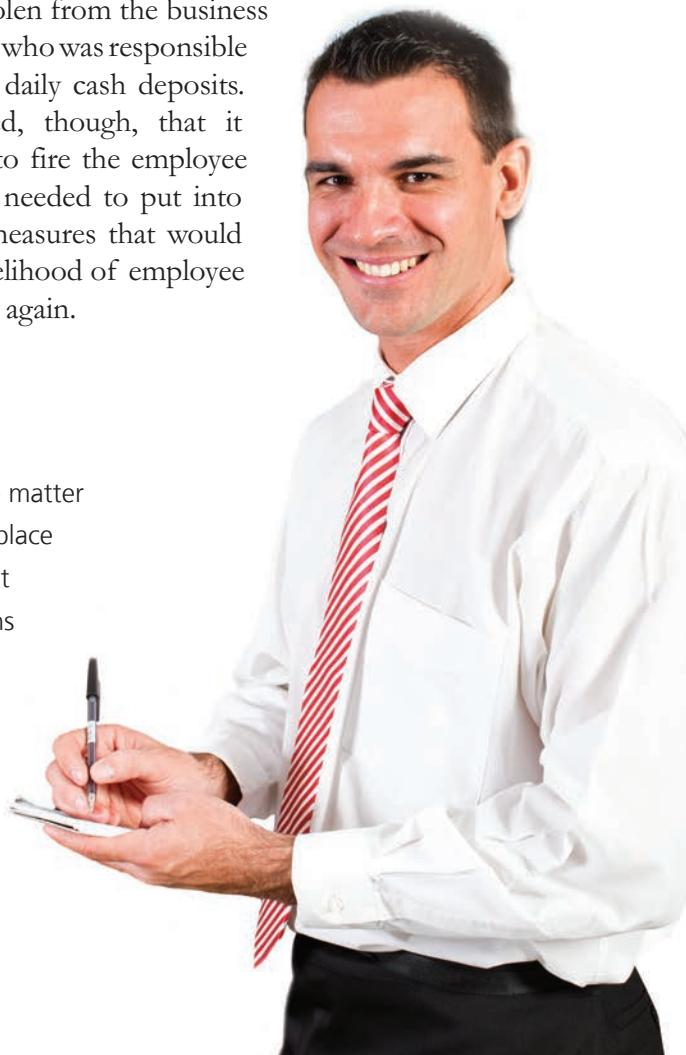
increased sales, the cash deposits should have been much higher.

Andrew knew that it was his responsibility to ensure that procedures were put into place to be sure the cash and other assets of the business remained secure. He had thought that completing employee background checks was enough to prevent the theft of the business's assets, but he now suspected that further controls needed to be put into place. Andrew began by reviewing the bank statement and comparing it to the cash records on hand. In doing this, he identified that cash was indeed being stolen from the business by the employee who was responsible for making the daily cash deposits. Andrew realized, though, that it wasn't enough to fire the employee responsible; he needed to put into place security measures that would decrease the likelihood of employee theft happening again.



What Are Internal Controls?

Safeguarding and securing assets should be a concern of all businesses—no matter how small or large the business is. The procedures that businesses put into place to protect their assets are called *internal controls* and are a key management responsibility. For example, **Buffalo Wild Wings, Inc.**, a company that owns and operates Buffalo Wild Wings, R Taco, and PizzaRev restaurants, must assure its investors that proper controls have been put into place to protect its assets, promote operational efficiency, and ensure accurate and reliable accounting records. In this chapter, we look at the policies and procedures that companies such as Buffalo Wild Wings use to fulfill this responsibility.





Chapter 7 Learning Objectives

- | | | | |
|----------|--|----------|---|
| 1 | Define internal control and describe the components of internal control and control procedures | 5 | Explain and journalize credit card sales |
| 2 | Apply internal controls to cash receipts | 6 | Demonstrate the use of a bank account as a control device and prepare a bank reconciliation and related journal entries |
| 3 | Apply internal controls to cash payments | 7 | Use the cash ratio to evaluate business performance |
| 4 | Explain and journalize petty cash transactions | | |

WHAT IS INTERNAL CONTROL, AND HOW CAN IT BE USED TO PROTECT A COMPANY'S ASSETS?

A key responsibility of a business manager is to control operations. Owners set goals, hire managers to lead the way, and hire employees to carry out the business plan. **Internal control** is the organizational plan and all the related measures designed to accomplish the following:

- Safeguard assets.** A company must protect its assets; otherwise it is throwing away resources. If you fail to safeguard cash, the most liquid of assets, it will quickly slip away.
- Encourage employees to follow company policies.** Everyone in an organization needs to work toward the same goals. It is important for a business to identify policies to help meet the company's goals. These policies are also important for the company to ensure that all customers are treated similarly and that results can be measured effectively.
- Promote operational efficiency.** Businesses cannot afford to waste resources. Businesses work hard to make sales and do not want to waste any of the benefits. Promoting operational efficiency reduces expenses and increases business profits.
- Ensure accurate, reliable accounting records.** Accurate, reliable accounting records are essential. Without reliable records, managers cannot tell which part of the business is profitable and which part needs improvement. A business could be losing money on every product sold and not realize it—unless it keeps accurate and reliable records.

Internal Control and the Sarbanes-Oxley Act

Internal controls are critical for all companies. Several organizations and laws have helped shape the way companies carry out internal controls. The **Committee of Sponsoring Organizations (COSO)**, for example, provides thought leadership related to enterprise risk management, internal control, and fraud deterrence. COSO's mission is to develop frameworks and guidance to help companies improve their internal controls and reduce fraud in organizations. **Public companies**—one that sells its stock to the general public—are required by the U. S. Congress to maintain a system of internal controls.

The Enron Corporation and WorldCom accounting scandals rocked the United States in the early years of this millennium. Enron overstated profits and went out of business almost overnight. WorldCom reported expenses as assets and overstated both profits and assets. The same accounting firm, Arthur Andersen LLP, had audited both companies' financial statements. Arthur Andersen voluntarily closed its doors in 2002 after nearly 90 years in public accounting.

Learning Objective 1

Define internal control and describe the components of internal control and control procedures

Internal Control

The organizational plan and all the related measures adopted by an entity to safeguard assets, encourage employees to follow company policies, promote operational efficiency, and ensure accurate and reliable accounting records.

Committee of Sponsoring Organizations (COSO)

A committee that provides thought leadership related to enterprise risk management, internal control, and fraud deterrence.

Public Company

A company that sells its stock to the general public.



Sarbanes-Oxley Act (SOX)

Requires companies to review internal control and take responsibility for the accuracy and completeness of their financial reports.

Internal Control Report

A report by management describing its responsibility for and the adequacy of internal controls over financial reporting.



To be IFRS compliant, foreign companies are not required to have their internal controls audited by outside auditors. While all companies have internal controls, foreign companies do not have the added expense of an audit of their internal controls. On the other hand, readers of the financial reports of foreign companies have no assurance that the controls are effective.

As the scandals unfolded, many people asked, “How could this happen? Where were the auditors?” To address public concern, Congress passed the **Sarbanes-Oxley Act**, abbreviated as **SOX**. This act requires companies to review internal control and take responsibility for the accuracy and completeness of their financial reports. SOX revamped corporate governance in the United States and affected the accounting profession. Here are some of the SOX provisions:

1. Public companies must issue an **internal control report**, which is a report by management describing its responsibility for and the adequacy of internal controls over financial reporting. Additionally, an outside auditor must evaluate the client’s internal controls and report on the internal controls as part of the audit report.
2. A new body, the Public Company Accounting Oversight Board (PCAOB), oversees the work of auditors of public companies.
3. Accounting firms are not allowed to audit a public company and also provide certain consulting services for the same client.
4. Stiff penalties await violators—25 years in prison for securities fraud and 20 years for an executive making false sworn statements.

The Sarbanes-Oxley Act changed the rules for auditors, limiting what services they can perform in addition to the audit and requiring a report on the internal controls of each public company audited. How does a business achieve good internal control? The next section identifies the components of internal control.

The Components of Internal Control

A business can achieve its internal control objectives by addressing the five components listed below:

- Control procedures
- Risk assessment
- Information system
- Monitoring of controls
- Environment

You can remember the five components of internal control by using the acronym CRIME.

Control Procedures

Control procedures are designed to ensure that the business’s goals are achieved. The next section, “Internal Control Procedures,” discusses the procedures in greater detail.

Risk Assessment

A company must identify its risks. For example, food manufacturers face the risk that their food products may harm people; airplane carrier businesses face the possibility that planes may crash; music companies face copyright infringement risks; and all companies face the risk of bankruptcy. Companies facing difficulties might be tempted to falsify their financial statements to make themselves look better than they really are. As part of the internal control system, the company’s business risk, as well as the risk concerning individual accounts, must be assessed. The higher the risk, the more controls a company must put in place to safeguard its assets and accounting records.

Information System

As we have seen, the information system is critical. Controls must be in place within the information system to ensure that only authorized users have access to various parts of the accounting information system. Additionally, controls must be in place to ensure adequate



approvals for recorded transactions are required. The decision makers need accurate information to keep track of assets and measure profits and losses.

Monitoring of Controls

Companies hire auditors to monitor their controls. An **internal auditor** is an employee of the business who ensures that the company's employees are following company policies and that operations are running efficiently. Internal auditors also determine whether the company is following legal requirements for internal controls to safeguard assets. An **external auditor** is an outside accountant who is completely independent of the business. External auditors evaluate the controls to ensure that the financial statements are presented fairly, in accordance with Generally Accepted Accounting Principles (GAAP).

Environment

The environment is the “tone at the top” or the culture of the business. It starts with the CFO or CEO and the top managers. They must behave honorably to set a good example for company employees. Each must demonstrate the importance of internal controls if he or she expects the employees to take the controls seriously.

Internal Control Procedures

Whether the business is a small business that generates less than \$10,000 in annual sales or a large business generating \$10 billion in annual sales, all companies need the following internal control procedures:

Competent, Reliable, and Ethical Personnel

Employees should be competent, reliable, and ethical. Paying good salaries will attract high-quality employees. Employees should also be trained to do the job, and their work should be adequately supervised.

Assignment of Responsibilities

In a business with good internal controls, no duty is overlooked. Each employee has certain, carefully defined responsibilities. For example, in a large company, the person in charge of signing checks is called the *treasurer*. The chief accounting officer is called the *controller*. Even an entry-level bookkeeper, whose job includes recording accounting transactions accurately, has clear responsibilities. This assignment of responsibilities creates job accountability, thus ensuring all important tasks get done.

Separation of Duties

Smart management policies divide responsibilities between two or more people. **Separation of duties** limits fraud and promotes the accuracy of the accounting records. Separation of duties can be divided into two parts:

1. **Separating operations from accounting.** Accounting should be completely separate from the operating departments, such as production and sales. What would happen if sales personnel recorded the company's revenue? Sales figures could be inflated, and then top managers would not know how much the company actually sold.
2. **Separating the custody of assets from accounting.** Accountants must not handle cash, and cashiers must not have access to the accounting records. If one employee has both duties, that employee could steal cash and conceal the theft in the accounting records. The treasurer of a company handles cash, and the controller accounts for the cash. Neither person has both responsibilities. This control applies to all assets, not just cash.

Internal Auditor

An employee of the business who ensures the company's employees are following company policies, that the company meets all legal requirements, and that operations are running efficiently.

External Auditor

An outside accountant, completely independent of the business, who evaluates the controls to ensure that the financial statements are presented fairly in accordance with GAAP.

Separation of Duties

Dividing responsibilities between two or more people to limit fraud and promote accuracy of accounting records.



Audits

To assess the adequacy and accuracy of their accounting records, most companies perform both internal and external audits. Remember that an audit is an examination of a company's financial statements and accounting system by a trained accounting professional called an *auditor*. Internal audits are performed by employees of the company. External audits are performed by independent auditors who are not employees of the company.

To evaluate the accounting system, auditors must examine the internal controls and test them to ensure the controls are working properly. For example, a control might require authorization by a manager for payments more than \$50. An auditor would check a sample of payments greater than \$50 to determine whether all payments were properly authorized by a manager.

Documents

Documents provide the details of business transactions and include invoices and orders, which may be paper or electronic. Documents should be prenumbered to prevent theft and inefficiency. A gap in the numbered sequence draws attention.

For example, for Smart Touch Learning, a key document is the sales invoice. The manager can compare the total cash sales on the invoices with the amount of cash received and deposited into the bank account.

Electronic Devices

Accounting systems are relying less on paper documents and more on electronic documents and digital storage devices. For example, retailers control inventory by attaching an electronic sensor to merchandise. The cashier removes the sensor after a sale is made. If a customer tries to leave the store with the sensor attached, an alarm sounds. Devices such as these can significantly reduce theft.

E-Commerce

E-commerce creates its own unique types of risks. Hackers may gain access to confidential information, such as account numbers and passwords, or introduce computer viruses, Trojans, or phishing expeditions. To address the risks posed by e-commerce, companies have devised a number of security measures. One technique for protecting customer data is encryption.

Encryption rearranges plain-text messages by a mathematical process. The encrypted message cannot be read by those who do not know the code. An accounting encryption example uses check-sum digits for account numbers. Each account number has its last digit equal to the sum of the previous digits. For example, consider customer number 2237, where $2 + 2 + 3 = 7$. Any account number failing this test triggers an error message.

Another technique for protecting data is firewalls. **Firewalls** limit access into a local network. Members can access the network, but nonmembers cannot. Usually several firewalls are built into the system. At the point of entry, additional security measures, such as passwords, PINs (personal identification numbers), and signatures are used. For additional security, more sophisticated firewalls are used deeper in the network to protect more sensitive data.

Encryption

Rearranging plain-text messages by a mathematical process—the primary method of achieving security in e-commerce.

Firewall

A device that enables members of a local network to access the network, while keeping nonmembers out of the network.



DECISIONS

What e-commerce internal controls should be put into place?

Jason Kane works as an information technology auditor for Netproducts, a retailer that sells merchandise over the Internet. Jason has been assigned the responsibility of reviewing the existing procedures and suggesting internal controls that could best protect the company. Netproducts sells all its merchandise over the Internet and accepts only credit card payments. Netproducts tracks trend information about its sales and maintains all customer, product, and pricing information on the company's intranet. In addition, Netproducts keeps employee information such as annual leave, payroll deposits, and Social Security numbers on its intranet. What e-commerce controls should Jason suggest?

Solution

Jason should suggest that specific controls be put into place, such as using encryption technology and firewalls, to protect customer and employee information. He should recommend that customers be required to create an online account with a password for the site and that the company only use secured Internet networks. In addition, Netproducts should ensure that the customer and employee data are physically secured and that access to the data can be obtained only by authorized individuals.

Other Controls

The types of other controls are as endless as the types of businesses that employ them. Some examples of other common controls include the following:

- Fireproof vaults to store important documents
- Burglar alarms, fire alarms, and security cameras
- Loss-prevention specialists who train company employees to spot suspicious activity
- Fidelity bonds to reimburse the company for any losses due to employee theft
- Mandatory vacations and job rotation

The Limitations of Internal Control—Costs and Benefits

Unfortunately, most internal controls can be overcome. **Collusion**—two or more people working together—can beat internal controls. For example, consider the following scenario with Galaxy Theater. Ralph and Lana, employees of Galaxy Theater, can design a scheme in which Ralph, the ticket seller, sells tickets and pockets the cash from 10 customers. Lana, the ticket taker, admits 10 customers to the theater without taking their tickets. Ralph and Lana split the cash. Ralph and Lana have colluded to circumvent controls, resulting in Galaxy Theater losing revenues. To prevent this situation, the manager must take additional steps, such as matching the number of people in the theater against the number of ticket stubs retained, which takes time away from the manager's other duties. It is difficult and costly to plan controls that can prevent collusion.

The stricter the internal control system, the more it costs. A complex system of internal control can strangle the business with red tape. How tight should the controls be? Internal controls must always be judged in light of their costs versus their benefits. Following is an example of a positive cost–benefit relationship: A security guard at a retail store costs about \$28,000 a year. On average, each guard prevents about \$50,000 of theft each year. The net savings to the retail store is \$22,000. An example of a negative cost–benefit relationship would be paying the same security guard \$28,000 a year to guard a \$1,000 cash drawer. The cost exceeds the benefit by \$27,000.

So far we have discussed what internal control is and how it can be used to protect a company's assets. We will now spend the remainder of the chapter concentrating on cash because it is the asset most likely to be stolen. However, it is important to remember that internal controls should be applied to all assets, not just cash.

Collusion

Two or more people working together to circumvent internal controls and defraud a company.



Try It!

Match the accounting terminology to the definitions.

- | | |
|-------------------------|--|
| 1. Sarbanes-Oxley Act | a. Organizational plan and all the related measures adopted by an entity to safeguard assets, encourage employees to follow company policies, promote operational efficiency, and ensure accurate and reliable accounting records. |
| 2. Internal control | b. Employees of the business who ensure that the company's employees are following company policies and meeting legal requirements and that operations are running efficiently. |
| 3. Encryption | c. Rearranging plain-text messages by a mathematical process—the primary method of achieving security in e-commerce. |
| 4. Separation of duties | d. Requires companies to review internal control and take responsibility for the accuracy and completeness of their financial reports. |
| 5. Internal auditors | e. Dividing responsibilities between two or more people. |

Check your answers online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercise S7-1. [Pearson MyLab Accounting](#)

WHAT ARE THE INTERNAL CONTROL PROCEDURES WITH RESPECT TO CASH RECEIPTS?

Learning Objective 2

Apply internal controls to cash receipts

Cash receipts occur primarily when a business sells merchandise or services. All cash receipts should be deposited in the bank for safekeeping shortly after the cash is received. Companies receive cash either over the counter, through the mail, or by electronic funds transfer. Each source of cash has its own security measures. We have already discussed internal control procedures for e-commerce, so this section focuses on over-the-counter and mailed cash receipts.

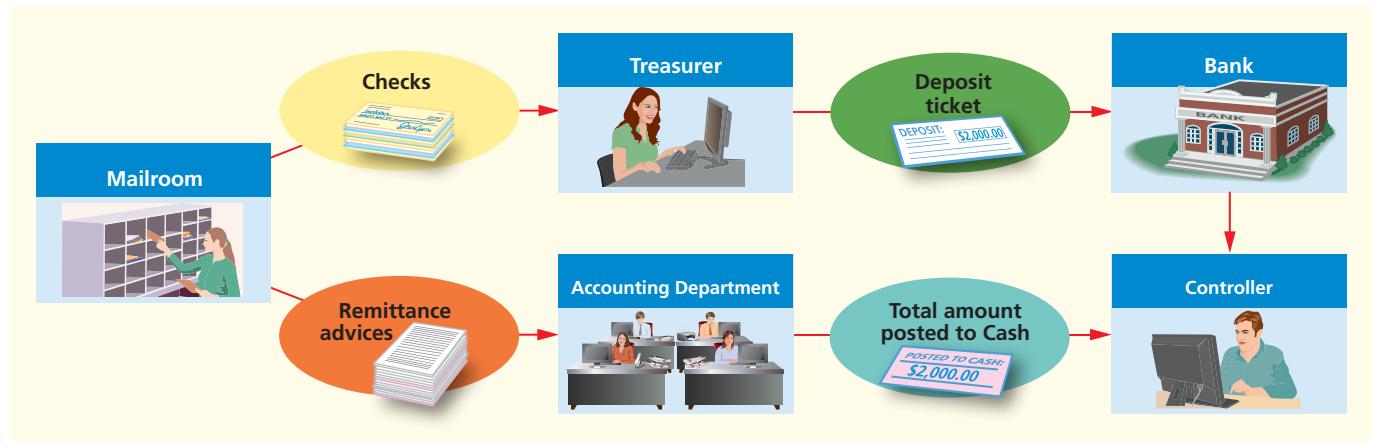
Cash Receipts Over the Counter

A cash receipt over the counter in a store involves a point-of-sale terminal (cash register) that provides control over the cash receipts. Consider a retail store. For each transaction, the retail store issues a receipt to ensure that each sale is recorded. The cash drawer opens after the clerk enters a transaction, and the machine (cash register) records it. At the end of the day, a manager proves the cash by comparing the cash in the drawer against the machine's record of cash sales. This step helps prevent theft by the clerk.

At the end of the day—or several times a day if business is brisk—the manager deposits the cash in the bank. The machine tape then goes to the accounting department to record the journal entry for cash receipts and sales revenue. These measures, coupled with oversight by a manager, discourage theft.

Cash Receipts by Mail

Many companies receive checks by mail for payments of services or merchandise. Checks sent via mail are considered to be cash receipts. Exhibit 7-1 shows how companies control cash received by mail.


Exhibit 7-1 | Cash Receipts by Mail


The process works like this:

Step 1: All incoming mail is opened by a mailroom employee. The mailroom then sends all customer checks to the treasurer and all remittance advices to the accounting department. A **remittance advice** is an optional attachment to a check that tells the business the reason for the payment.

Step 2: The treasurer has the cashier deposit the checks in the bank. The cashier receives a deposit receipt.

Step 3: The accounting department (or bookkeeper) uses the remittance advices to record the journal entries to Cash and customer accounts.

Step 4: As a final control, the controller compares the following records for the day:

- Bank deposit amount from the treasurer
- Debit to Cash from the accounting department

The debit to Cash should equal the amount deposited in the bank. If it does, all cash receipts are safe in the bank, and the company's books are up to date.

Many companies use a **lock-box system** as an alternative to accepting cash or checks via the mail or over the counter. In a lock-box system, customers send their checks directly to a post office box that belongs to a bank. A bank employee empties the box daily and records the deposits into the company's bank account. Internal control is tight because company personnel never touch incoming cash. The lock-box system puts a business's cash into the company's bank account quickly.

Remittance Advice

An optional attachment to a check that tells the business the reason for the payment.

Lock-Box System

A system in which customers send their checks to a post office box that belongs to a bank. A bank employee empties the box daily and records the deposits into the company's bank account.

Try It!

6. Fill in the missing information concerning how companies control cash received by mail.
 - a. The _____ opens the mail and sends customer checks to the treasurer.
 - b. The _____ deposits the customer checks in the bank.
 - c. The _____ uses the remittance advices to record the journal entries for cash receipts.
 - d. The _____ compares the bank deposit to the journal entry for cash receipts.

Check your answers online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.



WHAT ARE THE INTERNAL CONTROL PROCEDURES WITH RESPECT TO CASH PAYMENTS?

Learning Objective 3

Apply internal controls to cash payments

Companies make many payments by check. They also pay small amounts from a petty cash fund, which is discussed later in the chapter. Let's begin by discussing cash payments by check.

Controls Over Payment by Check

Companies need a good separation of duties between the operations of the business and writing checks for cash payments. Payment by check is an important internal control for the following reasons:

- The check provides a record of the payment.
- The check must be signed by an authorized official.
- Before signing the check, the official reviews the invoice or other evidence supporting the payment.

Controls Over Purchases and Payments

To illustrate the internal control over cash payments by check, suppose Smart Touch Learning buys its tablets from an electronics manufacturer. The purchasing and payment process follows these steps, as shown in Exhibit 7-2.

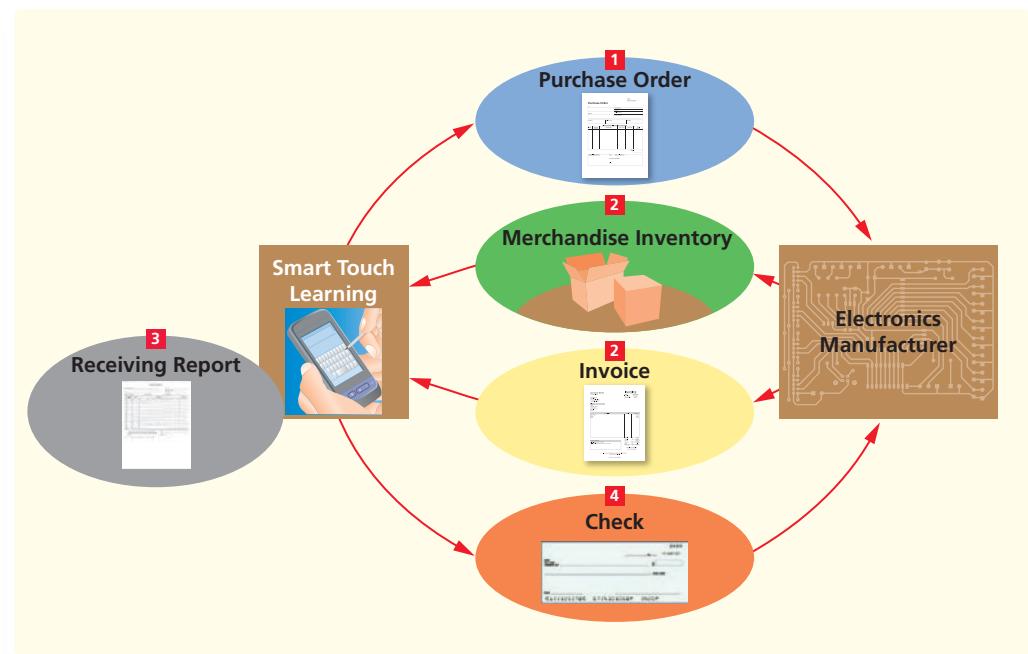
Step 1: Smart Touch Learning sends a purchase order to the electronics manufacturer that contains the quantity and type of goods needed.

Step 2: The electronics manufacturer ships the inventory and sends an invoice back to Smart Touch Learning.

Step 3: Smart Touch Learning receives the inventory and prepares a receiving report.

Step 4: After approving all documents, Smart Touch Learning sends a check to the electronics manufacturer.

Exhibit 7-2 | Cash Payments by Check



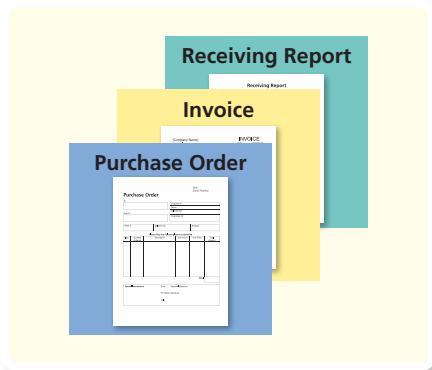


For good internal control, the purchasing agent (the employee who prepares the purchase order) should neither receive the goods nor approve the payment. If these duties are not separated, a purchasing agent could buy goods and have them shipped to his or her home. Or a purchasing agent could overpay for purchases, approve the payment, and split the excess with the supplier.

Exhibit 7-3 shows Smart Touch Learning's payment packet of documents, which may be in either electronic or paper format. Before signing the check for payment of goods, the controller or the treasurer should examine the packet to prove that all the documents agree. Only then does the company know the following:

1. It received the goods ordered.
2. It is paying only for the goods received and authorized.
3. It is paying the correct amount.

Exhibit 7-3 | Payment Packet



After payment, the payment packet is marked as paid to prevent the bill from being paid twice. Electronically paid invoices are automatically marked “paid” by most accounting systems.

Streamlined Procedures

Technology is streamlining payment procedures. **Evaluated receipts settlement (ERS)** compresses the payment approval process into a single step by comparing the receiving report to the purchase order. If those documents match, then Smart Touch Learning got the tablets it ordered and payment is made to the vendor.

An even more streamlined process bypasses paper documents altogether. In **electronic data interchange (EDI)**, a retailer's computers communicate directly with the computers of suppliers. When the retailer's inventory reaches a low level, the computer creates and sends an electronic purchase order to the supplier. The supplier then ships the inventory and electronically sends an invoice to the retailer. A manager approves the invoice, and then an electronic fund transfer (EFT) sends the retailer's payment to the supplier. These streamlined EDI procedures are used for both cash payments and cash receipts in many companies.

Evaluated Receipts Settlement (ERS)

A procedure that compresses the payment approval process into a single step by comparing the receiving report to the purchase order.

Electronic Data Interchange (EDI)

A streamlined process that bypasses paper documents altogether. Computers of customers communicate directly with the computers of suppliers to automate routine business transactions.



Try It!

7. Fill in the missing information.

- The vendor ships the inventory and sends a(n) _____ back to the purchaser.
- After approving all documents, the purchaser sends a(n) _____ to the vendor.
- When ordering merchandise inventory, the purchaser sends a(n) _____ to the vendor.
- The purchaser receives the inventory and prepares a(n) _____.

Check your answers online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercise S7-4. [Pearson MyLab Accounting](#)

HOW CAN A PETTY CASH FUND BE USED FOR INTERNAL CONTROL PURPOSES?

Learning Objective 4

Explain and journalize petty cash transactions

Petty Cash

A fund containing a small amount of cash that is used to pay for minor expenditures.

It is not cost effective for a business to write a check for a taxi fare or the delivery of a package across town. To meet these needs and to streamline record keeping for small cash transactions, companies keep cash on hand to pay small amounts. This fund is called **petty cash**.

We have already established that cash is the most liquid of assets. Petty cash is more liquid than cash in the bank because none of the bank controls are in place. Therefore, petty cash needs controls such as the following:

- Designate a custodian of the petty cash fund. The custodian is the individual assigned responsibility for the petty cash fund.
- Designate a specific amount of cash to be kept in the petty cash fund.
- Support all petty cash fund payments with a petty cash ticket. These tickets are sequentially numbered. The petty cash ticket serves as an authorization voucher and explanation.

Setting Up the Petty Cash Fund

The petty cash fund is opened when the company writes a check for the designated amount. The company makes the check payable to Petty Cash. Suppose on August 1, Smart Touch Learning creates a petty cash fund of \$200. The custodian cashes the \$200 check and places the currency in the fund box. The journal entry is as follows:

$$\begin{array}{c} \text{A} \uparrow \\ \text{Petty Cash} \uparrow \\ \text{Cash} \downarrow \end{array} = \left\{ \begin{array}{c} \text{L} + \text{E} \end{array} \right\}$$

Date	Accounts and Explanation	Debit	Credit
Aug. 1	Petty Cash	200	
	Cash		200
<i>To open the petty cash fund.</i>			

For each petty cash payment, the custodian prepares a petty cash ticket like the one in Exhibit 7-4.


Exhibit 7-4 | Petty Cash Ticket

PETTY CASH TICKET		#101
Date	Aug 25, 2019	
Amount	\$60	
For	Letterhead invoices	
Debit	Office Supplies	
Received by	Lewis Wright	Fund Custodian MAR

Signatures (or initials) identify the recipient of the cash and the fund custodian. The custodian keeps the petty cash tickets in the fund box. The sum of the cash plus the total of the petty cash tickets should equal the fund balance, \$200, at all times.

Maintaining the Petty Cash account at its designated balance is the nature of an **imprest system**. The imprest system requires that, at any point in time, the petty cash box contain cash and petty cash tickets that total the amount of the imprest balance. This clearly identifies the amount of cash for which the custodian is responsible, and it is the system's main internal control feature.

Replenishing the Petty Cash Fund

Payments decrease the fund, so periodically the fund must be replenished. Suppose that on August 31, the petty cash fund holds \$118 in cash and \$80 in petty cash tickets (ticket no. 101 for \$60 for office supplies and ticket no. 102 for \$20 for a delivery).

You can see \$2 is missing:

Fund balance	\$ 200
Cash on hand	\$ 118
Petty cash tickets	<u>80</u>
Total accounted for	<u>198</u>
Amount of cash missing	<u>\$ 2</u>

To replenish the petty cash fund, you need to bring the cash on hand up to \$200. The company writes a check, payable to Petty Cash, for \$82 (\$200 imprest balance – \$118 cash on hand). The fund custodian cashes this check and puts \$82 back in the fund box. Now the fund box holds \$200 cash as it should.

The petty cash tickets tell you what to debit and the check amount tells you what to credit, as shown in this entry to replenish the fund:

Date	Accounts and Explanation	Debit	Credit
Aug. 31	Office Supplies	60	
	Delivery Expense	20	
	Cash Short & Over	2	
	Cash		82
<i>To replenish the petty cash fund.</i>			

Imprest System

A way to account for petty cash by maintaining a constant balance in the petty cash account. At any time, cash plus petty cash tickets must total the amount allocated to the petty cash fund.



**Why wasn't
Petty Cash debited
when the fund
was replenished?**

Missing petty cash funds are debited to a new account, Cash Short & Over. In this case, \$2 was missing, so we debit Cash Short & Over for the missing petty cash. Another way to look at this is that we needed another \$2 debit to make the journal entry balance.

The Petty Cash account keeps its \$200 balance at all times. **The Petty Cash account is used in a journal entry only when the fund is started (see the August 1 entry) or when its amount is increased or decreased.** If the business increases the fund amount from \$200 to \$250, this would require a check to be cashed for \$50 and the debit would be to Petty Cash. **When replenishing the fund, the company debits either the associated expense incurred or the asset purchased with the funds.**

At times the sum of cash in the petty cash fund plus the tickets may exceed the fund balance. Consider the previous example. Assume the petty cash ticket no. 102 for delivery was for \$30 instead of \$20. Because we know the amount of the petty cash tickets and the amount of cash on hand, we can find out the amount of cash shortage or overage.

Fund balance	\$ 200
Cash on hand	\$ 118
Petty cash tickets	<u>90</u>
Total accounted for	<u>208</u>
Amount of cash overage	<u>\$ 8</u>

In this case, the cash on hand plus petty cash tickets (\$208) is more than the fund balance (\$200). A cash overage exists. The journal entry to replenish the fund would be:

$$\left. \begin{array}{c} A \downarrow \\ \text{Office Supplies} \uparrow \\ \text{Cash} \downarrow \end{array} \right\} = \left. \begin{array}{c} L + \\ \text{Delivery Expense} \uparrow \\ \text{Cash Short} \\ \& \text{Over} \downarrow \end{array} \right\}$$

Date	Accounts and Explanation	Debit	Credit
Aug. 31	Office Supplies	60	
	Delivery Expense		30
	Cash Short & Over		8
	Cash		82
<i>To replenish the petty cash fund.</i>			

We know the total debits are \$90 (\$60 + \$30). We know the check to replenish the fund was still \$82 (credit to Cash) because the fund balance should total \$200 and there was \$118 in the petty cash box. For this situation, we need an \$8 credit to make the journal entry balance, a gain, which is credited to Cash Short & Over.



Changing the Amount of the Petty Cash Fund

Suppose that on September 1, Smart Touch Learning decides to increase the amount of the petty cash fund from \$200 to \$300. In order to increase the fund, Smart Touch Learning must write a check for the additional \$100, cash the check, and place the additional currency in the petty cash box. Because the amount of the fund has changed, the company must record the following journal entry showing this change:

Date	Accounts and Explanation	Debit	Credit
Sep. 1	Petty Cash	100	
	Cash		100
<i>To increase the petty cash fund.</i>			

$$\frac{A \uparrow}{\begin{array}{c} \text{Petty Cash} \uparrow \\ \text{Cash} \downarrow \end{array}} = \left\{ \begin{array}{c} L + E \end{array} \right\}$$

Had the Petty Cash fund been decreased, the debit would've been to Cash and the credit to the Petty Cash account. Remember that the only time the Petty Cash account is used in the journal entry is when the account is established, increased, or decreased.

Try It!

8. The following petty cash transactions of Green Golf Equipment occurred in May:

May 1 Established a petty cash fund with a \$200 balance.

31 The petty cash fund has \$18 in cash and \$180 in petty cash tickets that were issued to pay for Office Supplies (\$81), Delivery Expense (\$36), Postage Expense (\$54), and Miscellaneous Expense (\$9). The petty cash custodian replenished the fund and recorded the expenses.

Prepare the journal entries.

Check your answers online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercise S7-5. [Pearson MyLab Accounting](#)

HOW ARE CREDIT CARD SALES RECORDED?

In addition to receiving cash receipts from customers over the counter, most companies also accept credit cards and debit cards. By accepting credit cards and debit cards, such as Visa, MasterCard, and American Express, businesses are able to attract more customers. Credit cards offer the customer the convenience of buying something without having to pay cash immediately. Debit cards, on the other hand, reduce the customer's bank account immediately but allow the customer to pay electronically instead of with currency or by writing a check.

Learning Objective 5

Explain and journalize credit card sales



Companies hire a third-party processor to process credit and debit card transactions. Transactions are usually entered into an electronic terminal (card scanner) that the company either purchases or rents from the processor. The fees the card processor charges the company for its processing services vary depending on the type of card and the specific agreement the company has with the card processor. The processor agreement specifies how fees are paid to the processor. The following are two common methods of handling the proceeds and processing fees:

- **Net**—The total sale less the processing fee assessed equals the net amount of cash deposited by the processor, usually within a few days of the sale date.
- **Gross**—The total sale is deposited daily within a few days of the actual sale date. The processing fees for all transactions processed for the month are deducted from the company's bank account by the processor, often on the last day of the month.

Proceeds from credit and debit card transactions are usually deposited within a few business days after the sale. Therefore, credit and debit card sales are journalized similar to cash sales. For example, Smart Touch Learning sells merchandise inventory (ignore Cost of Goods Sold) to a customer for \$3,000 on August 15. The customer pays with a third-party credit card. Smart Touch Learning would record the entry, assuming the card processor assesses a 4% fee and deposits the net amount, as follows:

$$\frac{A \uparrow}{\text{Cash} \uparrow} = \left\{ \begin{array}{l} L + E \uparrow \\ \hline \text{Sales} \\ \text{Revenue} \uparrow \\ \text{Credit Card} \\ \text{Expense} \uparrow \end{array} \right\}$$

Date	Accounts and Explanation	Debit	Credit
Aug. 15	Cash	2,880	
	Credit Card Expense (\$3,000 × 0.04)	120	
	Sales Revenue		3,000
<i>Recorded credit card sales, net of fee.</i>			

The same entry, assuming the processor uses the gross method, on the sale date would be as follows:

$$\frac{A \uparrow}{\text{Cash} \uparrow} = \left\{ \begin{array}{l} L + E \uparrow \\ \hline \text{Sales} \\ \text{Revenue} \uparrow \end{array} \right\}$$

Date	Accounts and Explanation	Debit	Credit
Aug. 15	Cash	3,000	
	Sales Revenue		3,000
<i>Recorded credit card sales.</i>			

At the end of August, the processor would collect the fees assessed for the month. (*Note:* We assume only the one credit card sale for this month.)

$$\frac{A \downarrow}{\text{Cash} \downarrow} = \left\{ \begin{array}{l} L + E \downarrow \\ \hline \text{Credit Card} \\ \text{Expense} \uparrow \end{array} \right\}$$

Date	Accounts and Explanation	Debit	Credit
Aug. 31	Credit Card Expense	120	
	Cash		120
<i>Paid fees assessed by credit card processor.</i>			



TYING IT ALL TOGETHER

Buffalo Wild Wings, Inc. owns and operates more than 550 Buffalo Wild Wings, R Taco, and PizzaRev restaurants. The restaurant Buffalo Wild Wings features a variety of boldly-flavored, crave-able menu items including Buffalo, New York-style chicken wings in 16 signature sauces and 5 signature seasonings. R Taco is a fast casual taco concept that offers a variety of tacos at an affordable price. Lastly, PizzaRev empowers guests to craft their own custom personal pizza, using fresh ingredients and homemade pizza dough. (You can find Buffalo Wild Wings, Inc.'s annual report at <https://www.sec.gov/Archives/edgar/data/1062449/000106244916000052/bwld2015122710-k.htm>)

How does Buffalo Wild Wings, Inc. ensure the security of its credit and debit card payments?

In the notes to the financial statements, Buffalo Wild Wings, Inc. states the company maintains the highest level of Payment Card Industry (PCI) Data Security Standard compliance at its restaurants.

These standards require the company to build and maintain a secure network, protect cardholder data, use and regularly update antivirus software, implement strong access controls, regularly monitor and test networks, and maintain policies that address information security for employees.

Who is responsible for the internal controls and what could happen if the internal controls fail?

According to the notes in the financial statements, the management of Buffalo Wild Wings is responsible for establishing and maintaining effective internal control. Internal controls are meant to provide reasonable assurance regarding the reliability of financial reporting. Failure to maintain internal controls could limit the ability of the company to report accurate financial results and detect and prevent fraud. If significant enough, a failure of internal controls could cause a loss of investor confidence and a decline in market price of the company's stock.

Try It!

Phoenix Restaurants accepts credit and debit cards as forms of payment. Assume Phoenix had \$12,000 of credit and debit card sales on June 30, 2017.

9. Suppose Phoenix's processor charges a 2% fee and deposits sales net of the fee. Journalize the sale transaction for the restaurant.
10. Suppose Phoenix's processor charges a 2% fee and deposits sales using the gross method. Journalize the sale transaction for the restaurant.

Check your answers online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercise S7-6.

[Pearson MyLab Accounting](#)

HOW CAN THE BANK ACCOUNT BE USED AS A CONTROL DEVICE?

Cash is the most liquid asset reported on the balance sheet because it is the medium of exchange. Because cash is easy to conceal and relatively easy to steal, businesses keep their cash in a bank account. The bank has established practices for safeguarding the business's money. This section identifies the most common controls applied to a bank account.

Learning Objective 6

Demonstrate the use of a bank account as a control device and prepare a bank reconciliation and related journal entries



Signature Card

A card that shows each authorized person's signature for a bank account.

Deposit Ticket

A bank form that is completed by the customer and shows the amount of each deposit.

Check

A document that instructs a bank to pay the designated person or business a specified amount of money.

Maker

The party who issues the check.

Payee

The individual or business to whom the check is paid.

Signature Card

Banks require each person authorized to sign on an account to provide a **signature card**. This helps protect against forgery because the signature card should be checked frequently by bank personnel to authenticate written checks or deposits made by the business.

Deposit Ticket

Banks supply standard forms such as a deposit ticket. Completed by the customer, the **deposit ticket** shows the amount of each deposit. As proof of the transaction, the customer receives a deposit receipt from the bank.

Check

To pay cash, the depositor writes a **check**, which is a prenumbered document that tells the bank to pay the designated party a specified amount. Exhibit 7-5 shows a check drawn by Smart Touch Learning. There are three parties to a check: the maker, payee, and bank. The **maker** is the issuer of the check, in this case, Smart Touch Learning. The **payee** (California Office Products) is the individual or business to whom the check is paid.

Exhibit 7-5 | Check with Remittance Advice

Smart Touch Learning		
	Date	Description
Remittance Advice	4/21/19	paid on account
Maker	SMART TOUCH LEARNING 227 Lake Street Pompton Plains, NJ 07444	
Payee	PAY TO THE ORDER OF California Office Products	
Amount	\$ 300.00	
Bank	VALPARAISO STATE BANK John Sims Parkway Pompton Plains, NJ 07444	
Routing Number	071000013 10136213733 203 33	
	Check Serial Number	203
	Account Number	11-8/1210

An easy way to remember the difference between the maker and the payee is the maker is the party who is **making** the promise that the cash is available in the bank to settle the check.

Routing Number

On a check, the 9-digit number that identifies the bank upon which the payment is drawn.

Account Number

On a check, the number that identifies the account upon which the payment is drawn.

This check has two parts, the check itself and the remittance advice. In addition, the check includes the routing number and account number. The **routing number** is a 9-digit number that identifies the bank upon which the payment is drawn. The **account number** identifies the account upon which the payment is drawn.



Bank Statement

Banks send monthly statements to customers either electronically or in the mail. A **bank statement** reports the activity in the customer's account. The statement shows the account's beginning and ending balances, cash receipts, and cash payments. Included with the statement sometimes are physical or scanned copies of the maker's **canceled checks**, the checks written by the maker that have been cashed (paid) by the bank. Exhibit 7-6 is the April 30, 2019, bank statement of Smart Touch Learning.

Bank Statement

A document from the bank that reports the activity in the customer's account. It shows the bank account's beginning and ending balances and lists the month's cash transactions conducted through the bank account.

Exhibit 7-6 | Bank Statement

BANK STATEMENT				
Smart Touch Learning 227 Lake Street Pompton Plains, IL 07444		CHECKING ACCOUNT 136-213733 APRIL 30, 2019		
BEGINNING BALANCE	TOTAL DEPOSITS	TOTAL WITHDRAWALS	SERVICE CHARGES	ENDING BALANCE
\$12,470	27,080	26,810	20	\$12,720
TRANSACTIONS				
DEPOSITS				
Deposit		04/01	19,450	
Deposit		04/10	5,500	
Deposit		04/22	2,000	
EFT—Collection from customer		04/27	100	
Interest		04/30	30	
CHARGES				
Service Charge		04/30	20	
CHECKS				
Number	Amount	Number	Amount	Number
202	3,200	203	300	
201	20,000	205	150	
200	1,920			
OTHER DEDUCTIONS				
EFT—Water Works		04/20	40	
NSF		04/25	1,200	

Electronic Funds Transfers

Electronic funds transfer (EFT) moves cash by electronic communication. Many bills and other payments, such as salaries, rent, utilities, and insurance, are now paid by EFT. It is much cheaper to pay these items by EFT without having to mail a check. Debit card transactions and direct deposits are also considered EFTs.

Electronic Funds Transfer (EFT)

A system that transfers cash by electronic communication rather than by paper documents.



Bank Reconciliation

A document explaining the reasons for the difference between a depositor's cash records and the depositor's cash balance in its bank account.

Timing Difference

Difference that arises between the balance on the bank statement and the balance on the company's books because of a time lag in recording transactions.

Deposit in Transit

A deposit recorded by the company but not yet by its bank.

Outstanding Check

A check issued by a company and recorded on its books but not yet paid by its bank.

Bank Reconciliation

The **bank reconciliation** compares and explains the differences between cash on the company's books and cash according to the bank's records on a specific date. There are two records of a business's cash:

1. The Cash account in the company's general ledger. April's Cash T-account for Smart Touch Learning is shown below.

Cash			
Beg. Bal.	10,550	20,000	Apr. 2
Apr. 1	19,450	3,200	Apr. 15
Apr. 8	5,500	300	Apr. 21
Apr. 22	2,000	2,000	Apr. 30
Apr. 30	9,000	150	Apr. 30
End. Bal.	20,850		

2. The bank statement, which shows the cash receipts and payments transacted through the bank. In Exhibit 7-6, however, the bank shows an ending balance of \$12,720 for Smart Touch Learning.

The books and the bank statement usually show different cash balances. Differences may arise because of a time lag in recording transactions, called **timing differences**. Three examples of timing differences follow:

- When a business writes a check, it immediately deducts the amount in its checkbook and Cash account. The bank, however, does not subtract the check from the company's account until the bank pays the check a few days later.
- When a company deposits cash in its account, it immediately adds the cash receipt to the checkbook and Cash account. The bank, however, may take a day or two to add deposits to the company's balance.
- EFT cash payments and EFT cash receipts are often recorded by the bank before a company learns of them.

To obtain accurate cash records, a company must update its Cash account after the company receives its bank statement. A bank reconciliation is used to carry out the updating process. The bank reconciliation explains all differences between the company's cash records and the bank's records of the company's balance. The person who prepares the bank reconciliation should have no other cash duties. This means the reconciler should not be a person who has access to cash or duties that require journalizing cash transactions. Otherwise, he or she could steal cash and manipulate the reconciliation to conceal the theft.

Preparing the Bank Side of the Bank Reconciliation

Here are the items that appear on the bank side of the bank reconciliation. They all cause differences between the bank balance and the book balance.

The bank side contains items not yet recorded by the bank but recorded by the company, or errors made by the bank. These items include the following:

Deposits in Transit (Outstanding Deposits) A **deposit in transit** has been recorded and has already been added to the company's book balance, but the bank has not yet recorded it. These are shown as "Add: Deposits in transit" on the bank side because when the bank does record these deposits, it will increase the bank balance.

Outstanding Checks An **outstanding check** is a check that has been recorded and has already been deducted from the company's book balance, but the bank has not yet paid



(deducted) it. Such checks are shown as “Less: Outstanding checks” on the bank side because when the bank does make payment for the checks, it will decrease the bank balance.

Bank Errors Bank errors are posting errors made by the bank that either incorrectly increase or decrease the bank balance. All bank errors are corrected on the bank side of the reconciliation by reversing the effect of the errors.

Errors are always recorded on the side of the reconciliation of the party that made the error. If the bank made the error, it is recorded on the bank side. If the business made the error, it is recorded on the book side.

Preparing the Book Side of the Bank Reconciliation

The book side contains items not yet recorded by the company on its books but that have been recorded by the bank, or errors made by the company. Items to show on the book side include the following:

Bank Collections Bank collections are cash receipts the bank has received and recorded for a company’s account but that the company has not recorded yet on its books. An example of a bank collection would occur when a business has its customers use a lock-box system. Another example is a bank collecting on a note receivable for a business. A bank collection is often referred to as a credit memorandum. A **credit memorandum** indicates that the customer’s account has been increased. A bank collection (which increases the bank balance) that appears on the bank statement will show as “Add: Bank collections” on the book side of the reconciliation because it represents cash receipts not yet recorded by the company.

Electronic Funds Transfers The bank may receive or pay cash on a company’s behalf. An EFT may be a cash receipt or a cash payment. These will either show up on the book side of the reconciliation as “Add: EFT” for receipts not yet added to the company’s books or “Less: EFT” for payments not yet deducted on the company’s books.

Service Charge This cash payment is the bank’s fee for processing a company’s transactions. Service charges can also include the cost of printed checks and other bank fees such as ATM fees. Service charges could also include the fees charged by the bank for processing credit and debit card transactions if the company used the gross method for recording credit card sales. A service charge is often referred to as a **debit memorandum** and represents a decrease in the bank account. This will show as “Less: Service charges” on the book side of the reconciliation because it represents a cash payment not yet subtracted from the company’s cash balance.

Interest Revenue on a Checking Account A business will sometimes earn interest if it keeps enough cash in its account. The bank statement tells the company of this cash receipt. This will show as “Add: Interest revenue” on the book side of the reconciliation because it represents cash receipts not yet added in the company’s cash balance.

Nonsufficient Funds (NSF) Checks **Nonsufficient funds (NSF) checks** represent checks received from customers for payment of services rendered or merchandise sold that have turned out to be worthless. NSF checks (sometimes called *hot checks* or *bad checks*) are treated as subtractions on a company’s bank reconciliation. NSF checks are customer checks the company has received and deposited for which the customer doesn’t have enough money in his or her bank account to cover. NSF checks will show as “Less: NSF checks” on the book side of the reconciliation, as the company previously recorded this receipt as an increase in cash, which now has to be deducted as the funds were not actually received.

Credit Memorandum

An increase in a bank account.

Debit Memorandum

A decrease in a bank account.

Nonsufficient Funds (NSF) Check

A check for which the maker’s bank account has insufficient money to pay the check.



Book Errors Book errors are errors made on the books of the company that either incorrectly increase or decrease the cash balance in the company's general ledger. All book errors are corrected on the book side of the reconciliation by reversing the effect of the errors.

Completing the Bank Reconciliation

The bank statement in Exhibit 7-6 shows that the April 30 bank balance of Smart Touch Learning is \$12,720 (upper-right corner). However, the company's Cash account has a balance of \$20,850. This situation calls for a bank reconciliation to explain the difference. In completing the bank reconciliation, Smart Touch Learning will review the bank statement and the business's Cash account to determine the timing differences. Exhibit 7-7, Panel A, lists the reconciling items for your easy reference, and Panel B shows the completed reconciliation.

Exhibit 7-7 | Bank Reconciliation

PANEL A—Reconciling Items

Bank side:

1. Deposit in transit, Apr. 30, \$9,000.
2. Outstanding check no. 204, \$2,000.

Book side:

3. EFT receipt from customer, \$100.
4. Interest revenue earned on bank balance, \$30.
5. Bank service charge, \$20.
6. EFT payment of water bill, \$40.
7. NSF check, \$1,200.

PANEL B—Bank Reconciliation

SMART TOUCH LEARNING Bank Reconciliation April 30, 2019		
BANK	BOOK	
Balance, April 30, 2019	\$ 12,720	Balance, April 30, 2019 \$ 20,850
ADD:		
1. Deposit in transit	9,000	3. EFT receipt from customer \$ 100
	21,720	4. Interest revenue earned on bank balance 30 130
		20,980
LESS:		
2. Outstanding checks		5. Service charge 20
No. 204	2,000	6. EFT payment of water bill 40
Adjusted bank balance, April 30, 2019	\$ 19,720	7. NSF check 1,200 1,260
		Adjusted book balance, April 30, 2019 \$ 19,720

These amounts must agree.

SUMMARY OF THE VARIOUS RECONCILING ITEMS:

BANK BALANCE—ALWAYS

- Add deposits in transit.
- Subtract outstanding checks.
- Add or subtract corrections of bank errors.

BOOK BALANCE—ALWAYS

- Add bank collections, interest revenue, and EFT receipts.
- Subtract service charges, NSF checks, and EFT payments.
- Add or subtract corrections of book errors.



Examining a Bank Reconciliation

Let's go through each side of the bank reconciliation for Smart Touch Learning.

Bank Side of the Reconciliation

Smart Touch Learning begins by recording the bank balance as of April 30, 2019, which is taken from the bank statement, \$12,720. The business then identifies any additions or subtractions affecting the bank balance:

1. **Deposit in transit.** Smart Touch Learning reviews the bank statement and the Cash account to determine whether any cash deposits made by the business have not yet been recorded by the bank. Smart Touch Learning identifies that the deposit made on April 30 for \$9,000 has not yet been recorded by the bank. This amount is added to the bank balance.
2. **Outstanding check.** The business reviews the canceled checks included with the statement to determine whether any checks written by the business have not yet cleared the bank. Smart Touch Learning identifies check number 204 for \$2,000 as outstanding. This amount is subtracted from the bank balance.

After all items affecting the bank side have been identified, the adjusted bank balance is determined.

Book Side of the Reconciliation

The book side of the reconciliation begins by Smart Touch Learning listing the Cash account balance as of April 30, 2019. This amount—\$20,850—is found in the general ledger. Next, Smart Touch Learning reviews the Cash account and bank statement for items that affect the company's Cash account balance but are not recorded by the company:

3. **Electronic funds transfer (EFT).** In reviewing the bank statement, Smart Touch Learning identifies an EFT receipt from a customer in the amount of \$100. The company has not recorded this receipt in the Cash account; therefore, it will need to be added to the book balance.
4. **Interest revenue.** Smart Touch Learning identifies a \$30 deposit on the bank statement for interest earned that has not yet been recorded in the Cash account. This deposit will be added to the book balance.
5. **Service charge.** The bank statement shows a \$20 service charge. Smart Touch Learning has not recorded this charge in the company's Cash account and will, therefore, need to subtract this amount from the book balance.
6. **Electronic funds transfer (EFT).** Listed in the other deductions section on the bank statement, Smart Touch Learning identifies an EFT payment to Water Works for \$40. This payment has not been recorded in the company's Cash account. Smart Touch Learning will subtract this amount from the book balance.
7. **Nonsufficient funds (NSF) check.** Smart Touch Learning identifies an NSF check from a customer on the bank statement. The company had recorded the receipt of this check as an increase to cash originally. The bank has now communicated that the customer's check did not clear and that the customer's payment was never deposited into the business's account. Smart Touch Learning must subtract this amount from the book balance.

After recording all of the items that affect the book balance, Smart Touch Learning determines the adjusted book balance and verifies that it equals the adjusted bank balance. This amount represents the correct cash balance as of April 30, 2019.



Journalizing Transactions from the Bank Reconciliation

The bank reconciliation is an accountant's tool separate from the journals and ledgers. It does *not* account for transactions in the journal. To get the transactions into the accounts, we must make journal entries and post to the ledger. All items on the book side of the bank reconciliation require journal entries. We make no journal entries from the items on the bank side because we have already recorded these items in the business's Cash account.

The bank reconciliation in Exhibit 7-7 requires Smart Touch Learning to make journal entries to bring the Cash account up to date. Numbers in the journal entries correspond to the reconciling items listed in Exhibit 7-7, Panel A, and to the book side of the reconciliation in Panel B. Note that we chose to list each item in a separate journal entry here, but one compound entry could be made instead of the five separate entries illustrated.

$A \uparrow$	$Cash \uparrow$	$A \downarrow$	$Cash \downarrow$	L	$+ E$
Cash↑		Accounts Receivable↓			
$A \uparrow$	$Cash \uparrow$	$A \downarrow$	$Cash \downarrow$	L	$+ E \uparrow$
					Interest Revenue↑
$A \downarrow$	$Cash \downarrow$	$A \uparrow$	$Cash \uparrow$	L	$+ E \downarrow$
					Bank Expense↑
$A \downarrow$	$Cash \downarrow$	$A \uparrow$	$Cash \uparrow$	L	$+ E \downarrow$
					Utilities Expense↑
$A \uparrow$	$Cash \uparrow$	$A \downarrow$	$Cash \downarrow$	L	$+ E$
Accounts Receivable↑	Cash↓				

Date	Accounts and Explanation	Debit	Credit
3: Apr. 30	Cash Accounts Receivable <i>To record account receivable collected by bank.</i>	100	100
4: 30	Cash Interest Revenue <i>To record interest earned on bank balance.</i>	30	30
5: 30	Bank Expense Cash <i>To record bank service charges incurred.</i>	20	20
6: 30	Utilities Expense Cash <i>To record payment of water bill by EFT.</i>	40	40
7: 30	Accounts Receivable Cash <i>To record NSF check returned by bank.</i>	1,200	1,200

The above journal entries are posted to the Cash T-account to update the balance as shown below:

Cash			
Beg. Bal.	10,550	20,000	Apr. 2
Apr. 1	19,450	3,200	Apr. 15
Apr. 8	5,500	300	Apr. 21
Apr. 22	2,000	2,000	Apr. 30
Apr. 30	9,000	150	Apr. 30
Bal.	20,850		
Apr. 30	100	20	Apr. 30
Apr. 30	30	40	Apr. 30
		1,200	Apr. 30
End. Bal.	19,720		



Notice that the ending balance in the Cash T-account equals the adjusted book balance and the adjusted bank balance on the bank reconciliation at April 30, 2019.

Try It!

For each of the following items, determine whether the item would be:

- a. added to the bank balance
 - b. subtracted from the bank balance
 - c. added to the book balance
 - d. subtracted from the book balance
- | | |
|-----------------------------|-----------------------|
| 11. Interest revenue earned | 14. Service charge |
| 12. NSF check | 15. Outstanding check |
| 13. Deposit in transit | |

Check your answers online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercises S7-7 through S7-10. **Pearson MyLab Accounting**

HOW CAN THE CASH RATIO BE USED TO EVALUATE BUSINESS PERFORMANCE?

Cash is an important part of every business. Without an adequate supply of available cash, businesses cannot continue to operate. Businesses, therefore, monitor cash very carefully. One measure that can be used to measure a company's liquidity is the cash ratio. The **cash ratio** helps to determine a company's ability to meet its short-term obligations. It is calculated as follows:

$$\text{Cash ratio} = (\text{Cash} + \text{Cash equivalents}) / \text{Total current liabilities}$$

Notice that the cash ratio includes cash and cash equivalents. **Cash equivalents** are highly liquid investments that can be converted into cash in three months or less. Examples of cash equivalents are money-market accounts and investments in U.S. government securities.

Returning to **Kohl's Corporation**, let's evaluate the company's liquidity using the cash ratio. Kohl's cash and cash equivalents and total current liabilities can be found on the balance sheet (visit <http://www.pearsonglobaleditions.com/Sitemap/Horngren/> to view a link to Kohl's Corporation's annual report) and are presented below (shown in millions):

	January 30, 2016	January 31, 2015
Cash and cash equivalents	\$ 707	\$ 1,407
Total current liabilities	2,714	2,859

Kohl's cash ratio as of January 30, 2016, follows:

$$\text{Cash ratio} = \$707 / \$2,714 = 0.26$$

In comparison, the cash ratio as of January 31, 2015, was:

$$\text{Cash ratio} = \$1,407 / \$2,859 = 0.49$$

Learning Objective 7

Use the cash ratio to evaluate business performance

Cash Ratio

A measure of a company's ability to pay current liabilities from cash and cash equivalents:
 $(\text{Cash} + \text{Cash equivalents}) / \text{Total current liabilities}$

Cash Equivalent

A highly liquid investment that can be converted into cash in three months or less.



The cash ratio has dropped significantly from 2015 to 2016 due to a decrease in available cash and cash equivalents. This ratio is the most conservative valuation of liquidity because it looks at only cash and cash equivalents, leaving out other current assets such as merchandise inventory and accounts receivable. Notice that for both years the cash ratio was below 1.0. Having a cash ratio below 1.0 is a good thing. A cash ratio above 1.0 might signify that the company has an unnecessarily large amount of cash supply. This cash could be used to generate higher profits or be paid out for dividends. However, a very low ratio doesn't send a strong message to investors and creditors that the company has the ability to repay its short-term debt.

Try It!

16. The Scott Sun & Shade Company had the following financial data at December 31, 2018:

Cash and cash equivalents	\$ 60,000
Total current liabilities	75,000

What is the cash ratio as of December 31, 2018, for Scott Sun & Shade?

Check your answer online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercise S7-11. [Pearson MyLab Accounting](#)

REVIEW

> Things You Should Know

1. What is internal control, and how can it be used to protect a company's assets?

- Internal control is the organizational plan and all the related measures designed to safeguard assets, encourage employees to follow company policies, promote operational efficiency, and ensure accurate and reliable accounting records.
- The Sarbanes-Oxley Act was passed by Congress to revamp corporate governance in the United States.
- Internal control includes five components: control procedures, risk assessment, information system, monitoring of controls, and environment.

2. What are the internal control procedures with respect to cash receipts?

- A point-of-sale terminal provides control over cash receipts over the counter.
- Companies control cash by mail by ensuring appropriate separation of duties when handling cash and recording the transaction.

3. What are the internal control procedures with respect to cash payments?

- Good separation of duties between operations of the business and writing checks for cash payments should exist.
- Many companies use technology to make secure payments.

4. How can a petty cash fund be used for internal control purposes?

- A petty cash fund allows a business to keep cash on hand to pay for small miscellaneous items such as postage, office supplies, and taxi fares.
- When the petty cash fund is established, the company records a debit to Petty Cash and a credit to Cash.
- The petty cash fund is replenished by debiting the associated asset and expense accounts and crediting Cash.
- Discrepancies in petty cash funds are either debited or credited to the Cash Short & Over account.

5. How are credit card sales recorded?

- Sales by credit cards and debit cards are treated as cash sales and typically include a fee (Credit Card Expense) that is paid by the business to the credit card processor.
- Sales can be either recorded using the net or gross method. The net method records the amount of the sale less the processing fee at the time of sale. The gross method records the gross amount of the sale at the time of sale and the credit card fees are recorded at a later time.

6. How can the bank account be used as a control device?

- Bank accounts provide established practices that safeguard a business's money. These controls include use of signature cards, deposit tickets, checks, bank statements, and electronic funds transfers.
- A bank reconciliation can also be used as a form of internal control. The bank reconciliation compares and explains the difference between cash on the company's books and cash according to the bank's records on a specific date.
- After the bank reconciliation has been prepared, journal entries must be completed for all items on the book side of the bank reconciliation.

7. How can the cash ratio be used to evaluate business performance?

- The cash ratio measures a company's ability to pay its current liabilities from cash and cash equivalents.
- Cash ratio = $(\text{Cash} + \text{Cash equivalents}) / \text{Total current liabilities}$.

> Check Your Understanding 7-1

Check your understanding of the chapter by completing this problem and then looking at the solution. Use this practice to help identify which sections of the chapter you need to study more.

Misler Corporation established a \$300 petty cash fund on January 12, 2018. Karen Misler (KM) is the fund custodian. At the end of the month, the petty cash fund contains the following:

- a. Cash: \$163
- b. Petty cash tickets, as follows:

No.	Amount	Issued to	Signed by	Account Debited
44	\$ 14	B. Jarvis	B. Jarvis and KM	Office Supplies
45	39	S. Bell	S. Bell	Delivery Expense
47	43	R. Tate	R. Tate and KM	—
48	33	L. Blair	L. Blair and KM	Travel Expense

Requirements

1. Identify three internal control weaknesses revealed in the given data. (See Learning Objectives 1, 4)
2. Journalize the following transactions (See Learning Objective 4):
 - a. Establishment of the petty cash fund on January 12, 2018.
 - b. Replenishment of the fund on January 31, 2018. Assume petty cash ticket no. 47 was issued for the purchase of office supplies.
3. What is the balance in the Petty Cash account immediately before replenishment? Immediately after replenishment? (See Learning Objective 4)

> Solution

Requirement 1

The three internal control weaknesses are as follows:

1. Petty cash ticket no. 46 is missing. There is no indication of what happened to this ticket. The company should investigate.
2. The petty cash custodian (KM) did not sign petty cash ticket no. 45. This omission may have been an oversight on her part. However, it raises the question of whether she authorized the payment. Both the fund custodian and the recipient of the cash should sign the petty cash ticket.
3. Petty cash ticket no. 47 does not indicate which account to debit on the actual ticket. If Tate or Karen Misler do not remember where the \$43 went, then the accountant will not know what account should be debited.

Requirement 2

Petty cash journal entries:

- a. Entry to establish the petty cash fund:

Date	Accounts and Explanation	Debit	Credit
Jan. 12	Petty Cash	300	
	Cash		300
<i>To open the petty cash fund.</i>			

- b. Entry to replenish the fund:

Date	Accounts and Explanation	Debit	Credit
Jan. 31	Office Supplies	57	
	Delivery Expense	39	
	Travel Expense	33	
	Cash Short & Over	8	
	Cash		137
<i>To replenish the petty cash fund.</i>			

Requirement 3

The balance in the Petty Cash account is *always* its imprest balance, in this case \$300.

> Check Your Understanding 7-2

Check your understanding of the chapter by completing this problem and then looking at the solution. Use this practice to help identify which sections of the chapter you need to study more.

The Cash account of Baylor Associates at February 28, 2019, follows:

Cash			
Beg. Bal.	3,995	400	Feb. 3
Feb. 6	800	3,100	Feb. 12
Feb. 15	1,800	1,100	Feb. 19
Feb. 23	1,100	500	Feb. 25
Feb. 28	2,400	900	Feb. 27
End. Bal.	4,095		

Baylor Associates received the following bank statement on February 28, 2019:

 BANK OF TOMORROW		BANK STATEMENT	
123 PETER PAN RD, KISSIMMEE, FL 34747		CHECKING ACCOUNT 136-213734	
Baylor Associates 14 W Gadsden St Pensacola, FL 32501		FEBRUARY 28, 2019	
BEGINNING BALANCE	TOTAL DEPOSITS	TOTAL WITHDRAWALS	SERVICE CHARGES
\$3,995	4,715	5,630	10
TRANSACTIONS			
DEPOSITS		DATE	AMOUNT
Deposit		02/07	800
Deposit		02/15	1,800
EFT—Collection of note		02/17	1,000
Deposit		02/24	1,100
Interest		02/28	15
CHARGES		DATE	AMOUNT
Service Charge		02/28	10
CHECKS			
Number	Amount	Number	Amount
102	400	103	1,100
101	3,100		
OTHER DEDUCTIONS		DATE	AMOUNT
EFT—EZ Rent		02/01	330
NSF Check		02/13	700

Additional data:

Baylor deposits all cash receipts in the bank and makes all payments by check.

Requirements

1. Prepare the bank reconciliation of Baylor Associates at February 28, 2019. (See Learning Objective 6)
2. Journalize the entries based on the bank reconciliation. (See Learning Objective 6)

> Solution

Requirement 1

BAYLOR ASSOCIATES Bank Reconciliation February 28, 2019		
Bank:		
Balance, February 28, 2019		\$ 3,070
Add: Deposit of February 28 in transit		2,400
		<u>5,470</u>
Less: Outstanding checks issued on February 25 (\$500) and February 27 (\$900)		1,400
Adjusted bank balance, February 28, 2019		<u><u>\$ 4,070</u></u>
Books:		
Balance, February 28, 2019		\$ 4,095
Add: Bank collection of note receivable	\$ 1,000	
Interest revenue earned on bank balance	15	1,015
		<u>5,110</u>
Less: Service charge	10	
NSF check	700	
EFT—Rent expense	330	1,040
Adjusted book balance, February 28, 2019		<u><u>\$ 4,070</u></u>

Must be equal.

Requirement 2

Date	Accounts and Explanation	Debit	Credit
Feb. 28	Cash Notes Receivable <i>Note receivable collected by bank.</i>	1,000	1,000
28	Cash Interest Revenue <i>Interest earned on bank balance.</i>	15	15
28	Bank Expense Cash <i>Bank service charge.</i>	10	10
28	Accounts Receivable Cash <i>NSF check returned by bank.</i>	700	700
28	Rent Expense Cash <i>Monthly rent expense.</i>	330	330

> Key Terms

Account Number (p. 422)
 Bank Reconciliation (p. 424)
 Bank Statement (p. 423)
 Canceled Checks (p. 423)
 Cash Equivalent (p. 429)
 Cash Ratio (p. 429)
 Check (p. 422)
 Collusion (p. 411)
 Committee of Sponsoring Organizations (COSO) (p. 407)
 Credit Memorandum (p. 425)
 Debit Memorandum (p. 425)
 Deposit in Transit (p. 424)
 Deposit Ticket (p. 422)

Electronic Data Interchange (EDI) (p. 415)
 Electronic Funds Transfer (EFT) (p. 423)
 Encryption (p. 410)
 Evaluated Receipts Settlement (ERS) (p. 415)
 External Auditor (p. 409)
 Firewall (p. 410)
 Imprest System (p. 417)
 Internal Auditor (p. 409)
 Internal Control (p. 407)
 Internal Control Report (p. 408)
 Lock-Box System (p. 413)

Maker (p. 422)
 Nonsufficient Funds (NSF) Check (p. 425)
 Outstanding Check (p. 424)
 Payee (p. 422)
 Petty Cash (p. 416)
 Public Company (p. 407)
 Remittance Advice (p. 413)
 Routing Number (p. 422)
 Sarbanes-Oxley Act (SOX) (p. 408)
 Separation of Duties (p. 409)
 Signature Card (p. 422)
 Timing Difference (p. 424)

> Quick Check

Learning Objective 1

1. Which of the following is *not* part of the definition of internal control?
 - a. Separation of duties
 - b. Safeguard assets
 - c. Encourage employees to follow company policies
 - d. Promote operational efficiency

2. The Sarbanes–Oxley Act
 - a. created the Private Company Accounting Board.
 - b. allows accountants to audit and to perform any type of consulting work for a public company.
 - c. stipulates that violators of the act may serve 20 years in prison for securities fraud.
 - d. requires that an outside auditor must evaluate a public company's internal controls.

3. Encryption
 - a. avoids the need for separation of duties.
 - b. creates firewalls to protect data.
 - c. cannot be broken by hackers.
 - d. rearranges messages by a special process.

Learning Objective 1

4. Separation of duties is important for internal control of

a. cash receipts.	c. Neither of the above
b. cash payments.	d. Both a and b

5. Michelle Darby receives cash from customers. Her other assigned job is to post the collections to customer accounts receivable. Her company has weak

a. assignment of responsibilities.	c. computer controls.
b. ethics.	d. separation of duties.

6. Payment by check is an important internal control over cash payments because
 - a. the check must be signed by an authorized official.
 - b. before signing the check, the official reviews the invoice supporting the payment.
 - c. Both a and b
 - d. None of the above

Learning Objective 4

7. The petty cash fund had an initial imprest balance of \$140. It currently has \$21 and petty cash tickets totaling \$79 for office supplies. The entry to replenish the fund would contain

a. a credit to Petty Cash for \$119.	c. a debit to Cash Short & Over for \$40.
b. a credit to Cash Short & Over for \$40.	d. a debit to Petty Cash for \$119.

8. When recording credit card or debit card sales using the net method,
 - a. cash received equals sales.
 - b. cash received equals sales minus the fee assessed by the card processing company.
 - c. cash received equals sales plus the fee assessed by the card processing company.
 - d. cash isn't received by the seller until the customer pays his or her credit card statement.

9. The document that explains all the differences between the company's cash records and the bank's figures is called a(n)
- bank collection.
 - electronic fund transfer.
 - bank statement.
 - bank reconciliation.
10. Long Branch Company's Cash account shows an ending balance of \$810. The bank statement shows a \$13 service charge and an NSF check for \$160. A \$200 deposit is in transit, and outstanding checks total \$310. What is Long Branch adjusted cash balance?
- a. \$700 b. \$527 c. \$637 d. \$983
11. Espinoza Air Conditioning & Heating had the following select financial data as of June 30, 2018.

Cash	\$ 10,000
Cash Equivalents	8,850
Accounts Receivable	3,700
Total current liabilities	29,000

What is Espinoza's cash ratio?

- a. 0.34 b. 0.65 c. 0.78 d. 1.54

Check your answers at the end of the chapter.

Learning Objective 6

Learning Objective 6

Learning Objective 7

ASSESS YOUR PROGRESS

> Review Questions

1. What is internal control?
2. How does the Sarbanes-Oxley Act relate to internal controls?
3. What are the five components of internal control? Briefly explain each component.
4. What is the difference between an internal auditor and external auditor?
5. What is separation of duties?
6. List internal control procedures related to e-commerce.
7. What are some limitations of internal controls?
8. How do businesses control cash receipts over the counter?
9. How do businesses control cash receipts by mail?
10. What are the steps taken to ensure control over purchases and payments by check?
11. What are the controls needed to secure the petty cash fund?
12. When are the only times the Petty Cash account is used in a journal entry?
13. What are two common methods used when accepting deposits for credit card and debit card transactions?
14. What are some common controls used with a bank account?

15. What is a bank reconciliation?
16. List some examples of timing differences, and for each difference, determine if it would affect the book side of the reconciliation or the bank side of the reconciliation.
17. Why is it necessary to record journal entries after the bank reconciliation has been prepared? Which side of the bank reconciliation requires journal entries?
18. What does the cash ratio help determine, and how is it calculated?

> Short Exercises

Learning Objective 1

S7-1 Defining internal control

Internal controls are designed to safeguard assets, encourage employees to follow company policies, promote operational efficiency, and ensure accurate accounting records.

Requirements

1. Which objective do you think is most important?
2. Which objective do you think the internal controls must accomplish for the business to survive? Give your reason.

Learning Objective 2

S7-2 Applying internal control over cash receipts

Sandra Kristof sells furniture for McKinney Furniture Company. Kristof is having financial problems and takes \$650 that she received from a customer. She rang up the sale through the cash register. What will alert Megan McKinney, the controller, that something is wrong?

Learning Objective 2

S7-3 Applying internal control over cash receipts by mail

Review the internal controls over cash receipts by mail presented in the chapter. Exactly what is accomplished by the final step in the process, performed by the controller?

Learning Objective 3

S7-4 Applying internal control over cash payments by check

A purchasing agent for Franklin Office Supplies receives the goods that he purchases and also approves payment for the goods.

Requirements

1. How could this purchasing agent cheat his company?
2. How could Franklin avoid this internal control weakness?

Learning Objective 4

S7-5 Journalizing petty cash

Prepare the journal entries for the following petty cash transactions of Pawnee Gaming Supplies:

Sep. 1 Established a petty cash fund with a \$150 balance.

30 The petty cash fund has \$14 in cash and \$142 in petty cash tickets that were issued to pay for Office Supplies (\$62) and Entertainment Expense (\$80). Replenished the fund and recorded the expenses.

Oct. 15 Increased the balance of the petty cash fund to \$300.

S7-6 Recording credit card and debit card sales

Restaurants do a large volume of business by credit and debit cards. Suppose Winter Retreats restaurant had these transactions on January 28, 2018:

National Express credit card sales	\$ 11,100
ValueCard debit card sales	9,000

Requirements

1. Suppose Winter Retreats' processor charges a 4% fee and deposits sales net of the fee. Journalize these sales transactions for the restaurant.
2. Suppose Winter Retreats' processor charges a 4% fee and deposits sales using the gross method. Journalize these sales transactions for the restaurant.

S7-7 Understanding bank account controls

Answer the following questions about the controls in bank accounts:

Requirements

1. Which bank control protects against forgery?
2. Which bank control reports the activity in the customer's account each period?
3. Which bank control confirms the amount of money put into the bank account?

S7-8 Identifying timing differences related to a bank reconciliation

For each timing difference listed, identify whether the difference would be reported on the book side of the reconciliation or the bank side of the reconciliation. In addition, identify whether the difference would be an addition or subtraction.

- | | |
|--|--|
| a. Deposit in transit | g. Service charges |
| b. Bank collection | h. Interest revenue |
| c. Debit memorandum from bank | i. \$2,500 cash payment for rent expense erroneously recorded by the business as \$250 |
| d. EFT cash receipt | j. Credit memorandum from bank |
| e. Outstanding checks | |
| f. \$1,000 deposit erroneously recorded by the bank as \$100 | |

S7-9 Preparing a bank reconciliation

The Cash account of Speedy Mobile Payment reported a balance of \$3,780 at December 31, 2018. There were outstanding checks totaling \$500 and a December 31 deposit in transit of \$200. The bank statement, which came from Park Cities Bank, listed the December 31 balance of \$4,793. Included in the bank balance was a collection of \$720 on account from Clara Ko, a Speedy Mobile Payment customer who pays the bank directly. The bank statement also shows a \$25 service charge and \$18 of interest revenue that Speedy Mobile Payment earned on its bank balance. Prepare Speedy Mobile Payment bank reconciliation at December 31.

Learning Objective 5

Learning Objective 6

Learning Objective 6

Learning Objective 6

Note: Short Exercise S7-9 must be completed before attempting Short Exercise S7-10.

Learning Objective 6

S7-10 Recording transactions from a bank reconciliation

Review your results from preparing Speedy Mobile Payment's bank reconciliation in Short Exercise S7-9. Journalize the company's transactions that arise from the bank reconciliation. Include an explanation with each entry.

Learning Objective 7

S7-11 Computing the cash ratio

Shea Banners reported the following figures in its financial statements:

Cash	\$ 21,000
Cash Equivalents	80,500
Total Current Liabilities	70,000

Compute the cash ratio for Shea Banners.

> Exercises

Learning Objective 1

E7-12 Understanding the Sarbanes–Oxley Act and identifying internal control strengths and weaknesses

The following situations suggest a strength or a weakness in internal control.

- Top managers delegate all internal control procedures to the accounting department.
- Accounting department staff (or the bookkeeper) orders merchandise and approves invoices for payment.
- Cash received over the counter is controlled by the sales clerk, who rings up the sale and places the cash in the register. The sales clerk matches the total recorded by the register to each day's cash sales.
- The employee who signs checks need not examine the payment packet because he is confident the amounts are correct.

Requirements

- Define *internal control*.
- The system of internal control must be tested by external auditors. What law or rule requires this testing?
- Identify each item in the list above as either a strength or a weakness in internal control, and give your reason for each answer.

Learning Objective 1

E7-13 Identifying internal controls

Consider each situation separately. Identify the missing internal control procedure from these characteristics:

- Assignment of responsibilities
- Separation of duties
- Audits
- Electronic devices
- Other controls (specify)

- a. While reviewing the records of Quality Pharmacy, you find that the same employee orders merchandise and approves invoices for payment.
- b. Business is slow at Amazing Amusement Park on Tuesday, Wednesday, and Thursday nights. To reduce expenses, the business decides not to use a ticket taker on those nights. The ticket seller (cashier) is told to keep the tickets as a record of the number sold.
- c. The same trusted employee has served as cashier for 12 years.
- d. When business is brisk, Fast Mart deposits cash in the bank several times during the day. The manager at one store wants to reduce the time employees spend delivering cash to the bank, so he starts a new policy. Cash will build up over weekends, and the total will be deposited on Monday.
- e. Grocery stores such as Convenience Market and Natural Foods purchase most merchandise from a few suppliers. At another grocery store, the manager decides to reduce paperwork. He eliminates the requirement that the receiving department prepare a receiving report listing the goods actually received from the supplier.

E7-14 Evaluating internal control over cash receipts

Fresh N Health Drinks sells juice and detox drinks and handles all sales with a cash register. The cash register displays the amount of the sale and produces a customer receipt which does not have any receipt number. At the end of the day, the store manager counts the cash in the register and compares this amount to the tape record. The cash is then kept in the company's vault for two weeks and the store manager gives the cash to the cashier to deposit it in the company's bank account every fortnight.

Learning Objective 2

Requirements

1. Identify the internal control weakness over cash receipts.
2. What could you do to correct the weakness?

E7-15 Evaluating internal control over cash payments

Gary's Great Cars purchases high-performance auto parts from a Nebraska vendor. Dave Simon, the accountant for Gary's, verifies receipt of merchandise and then prepares, signs, and mails the check to the vendor.

Learning Objective 3

Requirements

1. Identify the internal control weakness over cash payments.
2. What could the business do to correct the weakness?

Learning Objectives 1, 2, 3**E7-16 Understanding internal control, components, procedures, and laws**

Match the following terms with their definitions.

- | | |
|----------------------------|--|
| 1. Internal control | a. Two or more people working together to overcome internal controls. |
| 2. Control procedures | b. Part of internal control that ensures resources are not wasted. |
| 3. Firewalls | c. Requires companies to review internal control and take responsibility for the accuracy and completeness of their financial reports. |
| 4. Encryption | d. Should be prenumbered to prevent theft and inefficiency. |
| 5. Environment | e. Limits access to a local network. |
| 6. Information system | f. Example: The person who opens the bank statement should not also be the person who is reconciling cash. |
| 7. Separation of duties | g. Identification of uncertainties that may arise due to a company's products, services, or operations. |
| 8. Collusion | h. Examination of a company's financial statements and accounting system by a trained accounting professional. |
| 9. Documents | i. Without a sufficient one of these, information cannot properly be gathered and summarized. |
| 10. Audits | j. The organizational plan and all the related measures that safeguard assets, encourage employees to follow company policies, promote operational efficiency, and ensure accurate and reliable accounting data. |
| 11. Operational efficiency | k. Component of internal control that helps ensure business goals are achieved. |
| 12. Risk assessment | l. Rearranges data by a mathematical process. |
| 13. Sarbanes-Oxley Act | m. To establish an effective one, a company's CEO and top managers must behave honorably to set a good example for employees. |

Learning Objective 4

2. Cash Short & Over \$15

E7-17 Accounting for petty cash

Adam Dance Studio created a \$420 imprest petty cash fund. During the month, the fund custodian authorized and signed petty cash tickets as follows:

Petty Cash		Account Debited	Amount
Ticket No.	Item		
1	Delivery of programs to customers	Delivery Expense	\$ 30
2	Mail package	Postage Expense	40
3	Newsletter	Printing Expense	50
4	Key to closet	Miscellaneous Expense	45
5	Copier paper	Office Supplies	55

Requirements

1. Make the general journal entry to create the petty cash fund. Include an explanation.
2. Make the general journal entry to record the petty cash fund replenishment. Cash in the fund totals \$182. Include an explanation.
3. Assume that Adam Dance Studio decides to decrease the petty cash fund to \$300. Make the general journal entry to record this decrease.

E7-18 Controlling petty cash

Just Hangin' Night Club maintains an imprest petty cash fund of \$150, which is under the control of Sandra Morgan. At March 31, the fund holds \$14 cash and petty cash tickets for office supplies, \$109, and delivery expense, \$35.

Requirements

1. Explain how an imprest petty cash system works.
2. Journalize the establishment of the petty cash fund on March 1 and the replenishing of the fund on March 31.
3. Prepare a T-account for petty cash, and post to the account. What is the balance of the Petty Cash account at all times?

E7-19 Journalizing credit card sales

Slick Running Shoes reports the following:

2018

- | | |
|--------|---|
| Nov. 1 | Recorded Credit Express credit card sales for of \$140,000, net of processor fee of 3%. Ignore Cost of Goods Sold. |
| 15 | Recorded GoldCard credit card sales of \$100,000. Processor charges a 2.5% fee. GoldCard charges the fee at the end of the month, therefore Slick uses the gross method for these credit card sales. Ignore Cost of Goods Sold. |
| 30 | GoldCard collected the fees for the month of November. Assume the November 15 transaction is the only GoldCard credit card sale. |

Journalize all entries required for Slick Running Shoes.

E7-20 Classifying bank reconciliation items

The following items could appear on a bank reconciliation:

- a. Bad check from customer, no. 920, for \$420.
- b. Cost of processing credit card transactions charged by the bank, \$205.
- c. Outstanding deposit, \$3,200.
- d. Outstanding checks, \$670.
- e. Interest revenue on checking account, \$75.
- f. EFT payment of utilities bill, \$490.
- g. The accountant erroneously credited cash \$450 for a cash payment of \$540.
- h. EFT receipt from a customer, Johnny So, \$910.

Classify each item as (1) an addition to the book balance, (2) a subtraction from the book balance, (3) an addition to the bank balance, or (4) a subtraction from the bank balance.

Learning Objective 4

2. March 31, Cash CR \$136

Learning Objective 5**Learning Objective 6**

Learning Objective 6

1. Adjusted Balance \$1,137

E7-21 Preparing a bank reconciliation

Hunter Photography's checkbook lists the following:

Date	Check No.	Item	Check	Deposit	Balance
Nov. 1					\$ 520
4	622	Quick Mailing	\$ 55		465
9		Service Revenue		\$ 150	615
13	623	Photo Supplies	45		570
14	624	Utilities	80		490
18	625	Cash	95		395
26	626	Office Supplies	95		300
28	627	Upstate Realty Co.	250		50
30		Service Revenue		1,255	1,305

Hunter's November bank statement shows the following:

Balance		\$ 520
Deposits		150
Checks:	No.	Amount
	622	\$ 55
	623	45
	624	120*
	625	95
		(315)
Other charges:		
Printed checks		\$ 21
Service charge		35
Balance		<u><u>\$ 299</u></u>

*This is the correct amount for check number 624.

Requirements

1. Prepare Hunter Photography's bank reconciliation at November 30, 2018.
2. How much cash does Hunter actually have on November 30, 2018?
3. Journalize any transactions required from the bank reconciliation.

Learning Objective 6

1. Book Deductions \$314

E7-22 Preparing a bank reconciliation

Harry Neal Corporation operates four bowling alleys. The business just received the October 31, 2018 bank statement from City National Bank, and the statement shows an ending balance of \$920. Listed on the statement are an EFT rent collection of \$420, a service charge of \$10, NSF checks totaling \$85, and a \$24 charge for printed checks. In reviewing the cash records, the business identified outstanding checks totaling \$460 and a deposit in transit of \$1,760. During October, the business recorded a \$300 check by debiting Salaries Expense and crediting Cash for \$30. The business's Cash account shows an October 31 balance of \$2,189.

Requirements

1. Prepare the bank reconciliation at October 31.
2. Journalize any transactions required from the bank reconciliation.

> Problems Group A

P7-23A Identifying internal control weakness in cash receipts

K Street Productions makes all sales on credit. Cash receipts arrive by mail. Justin Benson, the mailroom clerk, opens envelopes and separates the checks from the accompanying remittance advices. Benson forwards the checks to another employee, who makes the daily bank deposit but has no access to the accounting records. Benson sends the remittance advices, which show cash received, to the accounting department for entry in the accounts. Benson's only other duty is to grant sales allowances to customers. (A *sales allowance* decreases the customer's account receivable.) When Benson receives a customer check for \$300 less a \$60 allowance, he records the sales allowance and forwards the document to the accounting department.

Learning Objective 2

Requirements

1. Identify the internal control weakness in this situation.
2. Who should record sales allowances?
3. What is the amount that should be shown in the ledger for cash receipts?

P7-24A Correcting internal control weaknesses

Learning Objectives 1, 2, 3

Each of the following situations has an internal control weakness.

- a. Modern Electronics manufactures electronic parts for mobile phones. Modern Electronics establishes an internal audit function due to legislative requirements. In a recent internal control review, only two out of over 10,000 cash disbursement transactions were checked as the internal audit manager claimed that audit efficiency was of paramount importance.
- b. The owners of Ed Carpenter claimed that they have been managing their business for more than 20 years and they were an experienced leader in the industry. No formal risk assessment was, therefore, necessary for Ed Carpenter.
- c. All the staff members in the accounting department of Professional Services, a private company, can access all modules of its accounting information system with both read and write function.
- d. The management of Organic Food Warehouse claimed that there were minimal thefts in the past and has decided that it will remove the burglar alarms in their warehouses.
- e. Denise Chiu, the Chief Financial Officer, of Fantastic Entertainment, claimed that she recruited all qualified accountants as her staff members in the accounting department and therefore no regular training was offered to her staff.
- f. Smartie Kids starts selling toys over the Internet. All online sales are paid by credit cards and customers input their personal particulars together with their credit card details upon ordering. In order to save costs, Smartie Kids does not use encryption techniques.

Requirements

1. Identify the missing internal control characteristics in each situation.
2. Identify the possible problem caused by each control weakness.
3. Propose a solution to each internal control problem.

Learning Objective 4

3. June 30, Cash CR \$210

P7-25A Accounting for petty cash transactions

On June 1, Fab Salad Dressings creates a petty cash fund with an imprest balance of \$400. During June, Al Franklin, the fund custodian, signs the following petty cash tickets:

Petty Cash Ticket Number	Item	Amount
101	Office supplies	\$ 55
102	Cab fare for executive	25
103	Delivery of package across town	35
104	Business dinner	45
105	Merchandise inventory	110

On June 30, prior to replenishment, the fund contains these tickets plus cash of \$145. The accounts affected by petty cash payments are Office Supplies, Travel Expense, Delivery Expense, Entertainment Expense, and Merchandise Inventory.

Requirements

1. Explain the characteristics and the internal control features of an imprest fund.
2. On June 30, how much cash should the petty cash fund hold before it is replenished?
3. Journalize all required entries to create the fund and replenish it. Include explanations.
4. Make the July 1 entry to increase the fund balance to \$475. Include an explanation and briefly describe what the custodian does.

Learning Objective 4

2. June 30, Cash CR \$160

P7-26A Accounting for petty cash transactions

Suppose that on June 1, Rockin' Gyration, a disc jockey service, creates a petty cash fund with an imprest balance of \$300. During June, Michael Martell, fund custodian, signs the following petty cash tickets:

Petty Cash Ticket Number	Item	Amount
1	Postage for package received	\$ 30
2	Office party	25
3	Two boxes of stationery	20
4	Printer cartridges	15
5	Business dinner	65

On June 30, prior to replenishment, the fund contains these tickets plus cash of \$140. The accounts affected by petty cash payments are Office Supplies, Entertainment Expense, and Postage Expense.

Requirements

1. On June 30, how much cash should this petty cash fund hold before it is replenished?
2. Journalize all required entries to (a) create the fund and (b) replenish it. Include explanations.
3. Make the entry on July 1 to increase the fund balance to \$325. Include an explanation.

P7-27A Preparing a bank reconciliation and journal entries

The December cash records of Dickson Insurance follow:

Cash Receipts		Cash Payments	
Date	Cash Debit	Check No.	Cash Credit
Dec. 4	\$ 4,200	1416	\$ 850
9	460	1417	150
14	500	1418	660
17	2,050	1419	680
31	1,880	1420	1,520
		1421	1,500
		1422	630

Dickson Cash account shows a balance of \$16,900 at December 31. On December 31, Dickson Insurance received the following bank statement:

Bank Statement for December			
Beginning Balance			\$ 13,800
Deposits and other Credits:			
Dec. 1	EFT	\$ 100	
Dec. 5		4,200	
Dec. 10		460	
Dec. 15		500	
Dec. 18		2,050	
Dec. 22	BC	2,200	9,510
Checks and other Debits:			
Dec. 8	NSF	100	
Dec. 11 (check no. 1416)		850	
Dec. 19	EFT	620	
Dec. 22 (check no. 1417)		150	
Dec. 29 (check no. 1418)		660	
Dec. 31 (check no. 1419)		860	
Dec. 31	SC	25	(3,265)
Ending Balance			\$ 20,045

Explanations: BC—bank collection; EFT—electronic funds transfer; NSF—nonufficient funds checks; SC—service charge

Additional data for the bank reconciliation follow:

- The EFT credit was a receipt of rent. The EFT debit was an insurance payment.
- The NSF check was received from a customer.
- The \$2,200 bank collection was for a note receivable.
- The correct amount of check no. 1419, for rent expense, was \$860. Dickson's controller mistakenly recorded the check for \$680.

Learning Objective 6

- Adjusted Balance \$18,025

Requirements

1. Prepare the bank reconciliation of Dickson Insurance at December 31, 2018.
2. Journalize any required entries from the bank reconciliation.

Learning Objective 6

1. Book Additions \$2,120

P7-28A Preparing a bank reconciliation and journal entries

The August 31 bank statement of Western Healthcare has just arrived from Unified Bank. To prepare the bank reconciliation, you gather the following data:

- a. The August 31 bank balance is \$4,830.
- b. The bank statement includes two charges for NSF checks from customers. One is for \$410 (#1), and the other is for \$150 (#2).
- c. The following Western Healthcare checks are outstanding at August 31:

Check No.	Amount
237	\$ 100
288	210
291	500
294	620
295	20
296	80

- d. Western collects from a few customers by EFT. The August bank statement lists a \$1,300 EFT deposit for a collection on account.
- e. The bank statement includes two special deposits that Western hasn't recorded yet: \$1000 for dividend revenue, and \$90 for the interest revenue Western earned on its bank balance during August.
- f. The bank statement lists a \$110 subtraction for the bank service charge.
- g. On August 31, the Western treasurer deposited \$320, but this deposit does not appear on the bank statement.
- h. The bank statement includes a \$700 deduction for a check drawn by Multi-State Freight Company. Western notified the bank of this bank error.
- i. Western's Cash account shows a balance of \$2,600 on August 31.

Requirements

1. Prepare the bank reconciliation for Western Healthcare at August 31, 2018.
2. Journalize any required entries from the bank reconciliation. Include an explanation for each entry.

> Problems Group B

Learning Objective 2

P7-29B Identifying internal control weakness in cash receipts

Rocking Chair Productions makes all sales on credit. Cash receipts arrive by mail. Craig Rennicke, the mailroom clerk, opens envelopes and separates the checks from the accompanying remittance advices. Rennicke forwards the checks to another employee, who makes the daily bank deposit but has no access to the accounting records. Rennicke sends the remittance advices, which show cash received, to the accounting department for entry in the accounts. Rennicke's only other duty is to grant sales

allowances to customers. (A *sales allowance* decreases the customer's account receivable.) When Rennicke receives a customer check for \$500 less a \$25 allowance, he records the sales allowance and forwards the document to the accounting department.

Requirements

1. Identify the internal control weakness in this situation.
2. Who should record sales allowances?
3. What is the amount that should be shown in the ledger for cash receipts?

P7-30B Correcting internal control weaknesses

Each of the following situations has an internal control weakness.

- a. The accountant clerk responsible for recording sales in Budget Tours, a private company, has just resigned. As it takes time to find a suitable candidate to fill in this position, as a temporary measure, the sales personnel of Budget Tours access to the accounting information system and make the sales record as well.
- b. Justin Lam has been responsible for keeping the petty cash in Budget Tours for the past 10 years as he is very familiar with the petty cash operation and this role does not take up much time for his daily work.
- c. The management of Studious Bookstore claimed that the details of the purchase orders, most of the time, are the same as the purchase invoice and, therefore, no purchase order is to be kept in order to save storing space.
- d. Most of the customers of Convenient Supermarkets pay in cash. To reduce expenses, one of the store managers ceases purchasing fidelity bonds on the cashiers.
- e. The controller of Healthy Baby Food suggests defining the responsibilities of its accounting staff in a boarder way so that its staff can assist each other when some of the staff members are on vacation.
- f. Jose Musical has a number of shops selling musical instruments. The controller of Jose Musical thinks that the accounting job in the company is very routine and, therefore, offers a salary much lower than the market to recruit staff.

Learning Objectives 1, 2, 3

Requirements

1. Identify the missing internal control characteristics in each situation.
2. Identify the possible problem caused by each control weakness.
3. Propose a solution to each internal control problem.

P7-31B Accounting for petty cash transactions

On June 1, Top Taste Salad Dressings creates a petty cash fund with an imprest balance of \$500. During June, Sunny Lewis, the fund custodian, signs the following petty cash tickets:

Learning Objective 4

3. Cash Short & Over CR \$15

Ticket Number	Petty Cash Item	Amount
101	Office supplies	\$ 15
102	Cab fare for executive	30
103	Delivery of package across town	45
104	Business dinner	50
105	Merchandise inventory	85

On June 30, prior to replenishment, the fund contains these tickets plus cash of \$285. The accounts affected by petty cash payments are Office Supplies, Travel Expense, Delivery Expense, Entertainment Expense, and Merchandise Inventory.

Requirements

1. Explain the characteristics and the internal control features of an imprest fund.
2. On June 30, how much cash should the petty cash fund hold before it is replenished?
3. Journalize all required entries to create the fund and replenish it. Include explanations.
4. Make the July 1 entry to increase the fund balance to \$575. Include an explanation and briefly describe what the custodian does.

Learning Objective 4

2. Sep. 30, Cash CR \$140

P7-32B Accounting for petty cash transactions

Suppose that on June 1, Cool Gyration, a disc jockey service, creates a petty cash fund with an imprest balance of \$250. During June, Al Franklin, fund custodian, signs the following petty cash tickets:

Ticket Number	Petty Cash Item	Amount
1	Postage for package received	\$ 35
2	Office party	25
3	Two boxes of stationery	20
4	Printer cartridges	15
5	Business dinner	75

On June 30, prior to replenishment, the fund contains these tickets plus cash of \$77. The accounts affected by petty cash payments are Office Supplies, Entertainment Expense, and Postage Expense.

Requirements

1. On June 30, how much cash should this petty cash fund hold before it is replenished?
2. Journalize all required entries to (a) create the fund and (b) replenish it. Include explanations.
3. Make the entry on May 1 to increase the fund balance to \$275. Include an explanation.

Learning Objective 6

1. Adjusted Balance \$17,580

P7-33B Preparing a bank reconciliation and journal entries

The December cash records of Dunlap Insurance follow:

Date	Cash Receipts		Cash Payments	
	Cash Debit	Check No.	Cash Credit	
Dec. 4	\$ 4,150	1416	\$ 880	
9	490	1417	220	
14	550	1418	640	
17	2,300	1419	690	
31	1,870	1420	1,430	
		1421	800	
		1422	650	

Dunlap Cash account shows a balance of \$17,750 at December 31. On December 31, Dunlap Insurance received the following bank statement:

Bank Statement for December			
Beginning Balance			\$ 13,700
Deposits and other Credits:			
Dec. 1	EFT	\$ 150	
Dec. 5		4,150	
Dec. 10		490	
Dec. 15		550	
Dec. 18		2,300	
Dec. 22	BC	<u>1,700</u>	9,340
Checks and other Debits:			
Dec. 8	NSF	900	
Dec. 11 (check no. 1416)		880	
Dec. 19	EFT	425	
Dec. 22 (check no. 1417)		220	
Dec. 29 (check no. 1418)		640	
Dec. 31 (check no. 1419)		960	
Dec. 31	SC	<u>15</u>	(4,040)
Ending Balance			<u><u>\$ 19,000</u></u>

Explanations: BC—bank collection; EFT—electronic funds transfer;
NSF—nonsufficient funds checks; SC—service charge

Additional data for the bank reconciliation follow:

- a. The EFT credit was a receipt of rent. The EFT debit was an insurance payment.
- b. The NSF check was received from a customer.
- c. The \$1,700 bank collection was for a note receivable.
- d. The correct amount of check no. 1419, for rent expense, is \$960. Dunlap's controller mistakenly recorded the check for \$690.

Requirements

1. Prepare the bank reconciliation of Dunlap Insurance at December 31, 2018.
2. Journalize any required entries from the bank reconciliation.

P7-34B Preparing a bank reconciliation and journal entries

The October 31 bank statement of Wyndham's Healthcare has just arrived from State Bank. To prepare the bank reconciliation, you gather the following data:

- a. The October 31 bank balance is \$6,290.
- b. The bank statement includes two charges for NSF checks from customers. One is for \$370 (#1), and the other is for \$180 (#2).

Learning Objective 6

1. Book Deductions \$630

- c. The following Wyndham's checks are outstanding at October 31:

Check No.	Amount
237	\$ 120
288	140
291	570
294	570
295	30
296	110

- d. Wyndham's collects from a few customers by EFT. The October bank statement lists a \$2,200 EFT deposit for a collection on account.
- e. The bank statement includes two special deposits that Wyndham's hasn't recorded yet: \$900 for dividend revenue and \$100 for the interest revenue Wyndham's earned on its bank balance during October.
- f. The bank statement lists a \$80 subtraction for the bank service charge.
- g. On October 31, the Wyndham's treasurer deposited \$270, but this deposit does not appear on the bank statement.
- h. The bank statement includes a \$750 deduction for a check drawn by Multi-State Freight Company. Wyndham's notified the bank of this bank error.
- i. Wyndham's Cash account shows a balance of \$3,200 on October 31.

Requirements

1. Prepare the bank reconciliation for Wyndham's Healthcare at October 31, 2018.
2. Journalize any required entries from the bank reconciliation. Include an explanation for each entry.

CRITICAL THINKING

> Using Excel

P7-35 Using Excel for a Bank Reconciliation

Download an Excel template for this problem online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

Lori Anders of Wilderness Associates is getting ready to prepare the October bank reconciliation.

The cash balance on the books of Wilderness Associates on October 31 is \$3,546.

Lori reviews the bank statement, and notes the checking account balance at October 31 is \$2,445. The bank statement also reveals that the bank collected a note receivable on behalf of Wilderness Associates—the principal was \$1,500 and the interest was \$15. One customer's check for \$29 was returned by the bank for insufficient funds. Two additional items on the bank statement were the monthly EFT for the utilities, \$250, and the bank service fee of \$12. Lori notes that the cash deposit made on October 31 of \$3,300 does not appear on the statement, and that three checks totaling \$975 had not cleared the bank account when the bank statement was prepared.

Requirements

1. Prepare the bank reconciliation for Wilderness Associates at October 31, 2018. Format appropriate cells with dollar signs and double underlines. Use Excel formulas to calculate subtotals and totals.
2. Journalize the entries based on the bank reconciliation. For dollar amounts, use cell references on bank reconciliation.

> Continuing Problem

P7-36 Preparing a bank reconciliation and journal entries

This problem continues the Let's Bike Company situation from Chapter 6. Let's Bike Company has decided to open a new checking account at Russel Square Bank during March 2019. The accountant of Let's Bike Company gathered the following information for the preparation of the bank reconciliation at March 31, 2019:

1. The bank statement received by the end of March 2019 revealed the following list of paid checks:

Paid Checks for March 2019	
Check	Amount
200	\$ 385
203	\$ 792
202	\$ 480
205	\$ 159
204	\$ 394
999	\$ 444

The accountant had no idea about Check 999 as it has never been issued by Let's Bike Company.

2. The cash disbursement journals for March 2019 has been reproduced as follows:

Cash Disbursements for March 2019		
Check	Nature	Amount
200	Paid materials on account	\$ 385
201	Paid utilities bill	\$ 320
202	Paid advertising fee	\$ 480
203	Paid supplies on account	\$ 792
204	Paid telephone bill	\$ 394
205	Paid materials on account	\$ 159
200	Paid materials on account	\$ 385

3. Let's Bike Company has a standing order payment for rent of \$340. (*Note: Standing order payment refers to company's instruction to the bank to pay a set amount to a named party at regular intervals for a specific period of time.*)
4. The total amount of deposits processed by the bank in March 2019, excluding items that appear on the credit memorandum (see below), was \$3,200. The cash receipts journals revealed that during March 2019, a total amount of \$3,590 was received. The accountant verified that there had been no mistake in recording cash receipts both in the books and in the bank statement.

5. The credit memorandum attached to the bank statement for the month of March 2019 revealed two transactions:

Transactions	Amount
Interests from deposits	\$ 20
Collection of \$1,000 notes receivable from a customer, Sports & Fitness Company for renting the bikes in March 2019 and interest from the notes receivable, \$30. Collection fee has been charged with net amount deposited to bank account.	\$ 1,010

6. The accountant promised to issue a check for \$430 payable to a supplier, UCC Ltd., before March 31, 2019, but the accountant forgot to do so.
7. The cash balance as per bank statement at 31 March 2019 was \$7,186. The cash balance as per Let's Bike Company's books at March 31, 2019 was \$6,625.

Requirements

1. Prepare the bank reconciliation at March 31, 2019.
2. Prepare the necessary adjusting journal entries for Let's Bike Company after preparing the bank reconciliation.

> Tying It All Together Case 7-1

Before you begin this assignment, review the *Tying It All Together* feature in the chapter. It will also be helpful if you review Buffalo Wild Wings, Inc.'s 2015 annual report (<https://www.sec.gov/Archives/edgar/data/1062449/000106244916000052/bwld2015122710-k.htm>).

Buffalo Wild Wings, Inc. owns and operates more than 550 Buffalo Wild Wings, R Taco, and PizzaRev restaurants. Additionally, the corporation has franchised restaurants in both the United States and Canada. The corporation takes internal control responsibilities very seriously and in 2015 conducted an assessment of the effectiveness of its internal controls over financial reporting.

Requirements

1. Review Item 9a (Controls and Procedures) of the Notes to the Financial Statements. What was the material weakness in internal controls that Buffalo Wild Wings discovered when the company conducted its assessment?
2. Review the auditor's report over internal controls (p. 66 of the annual report). What did the auditor have to say about the company's internal controls?
3. What remedial measures does the company plan to take in order to correct the weaknesses in internal control?

> Decision Cases

Decision Case 7-1

Conduct an Internet search for information on internal control and the Sarbanes-Oxley Act. Write a report of your findings. In your report, discuss some of the advantages and disadvantages of the Sarbanes-Oxley Act. Present it to your class (if required by your instructor).

Decision Case 7-2

This case is based on an actual situation. Centennial Construction Company, headquartered in Dallas, Texas, built a Rodeway Motel 35 miles north of Dallas. The construction foreman, whose name was Slim Chance, hired the 40 workers needed to complete the project. Slim had the construction workers fill out the necessary tax forms, and he sent their documents to the home office.

Work on the motel began on April 1 and ended September 1. Each week, Slim filled out a time card of hours worked by each employee during the week. Slim faxed the time cards to the home office, which prepared the payroll checks on Friday morning. Slim drove to the home office on Friday, picked up the payroll checks, and returned to the construction site. At 5 p.m. on Friday, Slim distributed payroll checks to the workers.

Requirements

1. Describe in detail the main internal control weakness in this situation. Specify what negative result(s) could occur because of the internal control weakness.
2. Describe what you would do to correct the internal control weakness.

> Fraud Case 7-1

Levon Helm was a kind of one-man mortgage broker. He would drive around Tennessee looking for homes that had second mortgages, and if the criteria were favorable, he would offer to buy the second mortgage for “cash on the barrelhead.” Helm bought low and sold high, making sizable profits. Being a small operation, he employed one person, Cindy Patterson, who did all his bookkeeping. Patterson was an old family friend, and he trusted her so implicitly that he never checked up on the ledgers or the bank reconciliations. At some point, Patterson started “borrowing” from the business and concealing her transactions by booking phony expenses. She intended to pay it back someday, but she got used to the extra cash and couldn’t stop. By the time the scam was discovered, she had drained the company of funds that it owed to many of its creditors. The company went bankrupt, Patterson did some jail time, and Helm lost everything.

Requirements

1. What was the key control weakness in this case?
2. Many small businesses cannot afford to hire enough people for adequate separation of duties. What can they do to compensate for this?

> Financial Statement Case 7-1

Visit <http://www.pearsonglobaleditions.com/Sitemap/Horngren/> to view a link to **Target Corporation's** 2015 Fiscal Year Annual Report. Study the audit opinion (labeled Report of Independent Registered Public Accounting Firm) of Target Corporation and the Target Corporation financial statements. Answer the following questions about the company:

Requirements

1. What is the name of Target's outside auditing firm (independent registered public accounting firm)? What office of this firm signed the audit report?
2. Who bears primary responsibility for maintaining effective internal control over financial reporting? How can you tell?
3. Does it appear that Target's internal controls are adequate? How can you tell?
4. What standard of auditing did the outside auditors use in examining the Target financial statements?
5. By how much did Target's cash balance (including cash equivalents) change during year ended January 30, 2016? What were the beginning and ending cash balances?
6. Review the notes to the consolidated financial statements, specifically Note 11 dealing with Cash Equivalents. What type of instruments does Target consider to be cash equivalents?
7. Determine Target's cash ratio as of January 30, 2016, and January 31, 2015. How do Target's cash ratios compare with **Kohl's Corporation** as illustrated in the chapter? Explain.

> Communication Activity 7-1

In 100 words or fewer, explain why there may be a difference between the bank statement ending cash balance and the ending balance in the Cash account. Give at least two examples each of adjustments to the bank balance and to the book balance.

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> Quick Check Answers

1. a 2. d 3. d 4. d 5. d 6. c 7. c 8. b 9. d 10. c 11. b

8

Receivables



Should Credit Be Extended?



James Hulsey works for a large department store as a credit manager. His main responsibility is managing all credit sales that generate accounts receivable. James must evaluate each customer's request for credit and determine which customers are allowed to purchase goods on credit. He does this by reviewing the customer's credit history and credit score. James has an important decision to make. He understands that granting credit increases the sales of the department store, but it also has its disadvantages.

One of those disadvantages is that the department store has to wait to receive cash. But, for James, the biggest disadvantage—and the most frustrating part of his job—is when customers don't pay. When this happens, the department store suffers a loss because it will never collect the cash associated with the sale. The department store must have a way to take the accounts of customers who will never make payment off the books; this is called a *write-off*. In addition, James must also help the department store estimate the amount of receivables that will be uncollectible. It's important that the department store have a good idea of the amount of cash that will actually be collected on its receivables so it can estimate future cash flows.

How Are Receivables Accounted For?

In this chapter, we determine how companies account for receivables. Receivables represent the right to receive cash in the future from a current transaction. We begin by looking at how companies such as **Sears Holdings Corporation** (the parent company of Kmart Holding Corporation and Sears, Roebuck and Co.) record accounts receivable, including when customers don't make the required payments. Then we review notes receivable, which usually extend over a longer term than accounts receivable and typically involve interest. We finish the chapter by looking at how companies (and investors) can use financial ratios to evaluate a company's ability to collect cash on accounts receivable.





Chapter 8 Learning Objectives



- | | |
|---|---|
| <p>1 Define and explain common types of receivables and journalize sales on credit</p> <p>2 Apply the direct write-off method for uncollectibles</p> <p>3 Apply the allowance method for uncollectibles and estimate bad debts expense based on the percent-of-sales, percent-of-receivables, and aging-of-receivables methods</p> | <p>4 Account for notes receivable including computing interest and recording honored and dishonored notes</p> <p>5 Use the acid-test ratio, accounts receivable turnover ratio, and days' sales in receivables to evaluate business performance</p> |
|---|---|

WHAT ARE COMMON TYPES OF RECEIVABLES, AND HOW ARE CREDIT SALES RECORDED?

A **receivable** occurs when a business sells goods or services to another party on account (on credit). It is a monetary claim against a business or an individual. The receivable is the seller's claim for the amount of the transaction. Receivables also occur when a business loans money to another party. A receivable is the right to *receive* cash in the future from a current transaction. It is something the business owns; therefore, it is an asset. *Each* receivable transaction involves two parties:

- The creditor, who receives a receivable (an asset). The creditor will collect cash from the customer or borrower.
- The **debtor**, the party to a credit transaction who takes on an obligation/payable (a liability). The debtor will pay cash later.

Types of Receivables

The three major types of receivables are:

- Accounts receivable
- Notes receivable
- Other receivables

Accounts Receivable

Accounts receivable, also called *trade receivables*, represent the right to receive cash in the future from customers for goods sold or for services performed. Accounts receivable are usually collected within a short period of time, such as 30 or 60 days, and are therefore reported as a current asset on the balance sheet.

Notes Receivable

Notes receivable usually have longer terms than accounts receivable. Notes receivable, sometimes called *promissory notes*, represent a written promise that a customer (or another individual or business) will pay a fixed amount of principal plus interest by a certain date in the future—called the **maturity date**. The maturity date is the date on which the notes receivable is due. A written document known as a promissory note serves as evidence of

Learning Objective 1

Define and explain common types of receivables and journalize sales on credit

Receivable

A monetary claim against a business or an individual.

Debtor

The party to a credit transaction who takes on an obligation/payable.

Accounts Receivable

The right to receive cash in the future from customers for goods sold or for services performed.

Notes Receivable

A written promise that a customer will pay a fixed amount of principal plus interest by a certain date in the future.

Maturity Date

The date when a note is due.



the debt and is signed by the debtor. Notes receivable due within 12 months or within the normal operating cycle if the cycle is longer than a year are considered current assets. Notes receivable due beyond one year are long-term assets.

Other Receivables

Other receivables make up a miscellaneous category that includes any other type of receivable where there is a right to receive cash in the future. Common examples include dividends receivable, interest receivable, and taxes receivable. These other receivables may be either current or long-term assets, depending on whether they will be received within one year or the normal operating cycle if the cycle is longer than a year (current asset) or received more than a year in the future (long-term asset).

Exercising Internal Control Over Receivables

Businesses that sell goods or services on account receive cash by mail, usually in the form of a check, or online payments via electronic funds transfer (EFT), so internal control over collections is important. As we discussed in the previous chapter, a critical element of internal control is the separation of cash-handling and cash-accounting duties.

Most large companies also have a credit department to evaluate customers' credit applications to determine if they meet the company's credit approval standards. The extension of credit is a balancing act. The company does not want to lose sales to good customers, but it also wants to avoid receivables that will never be collected. For good internal control over cash collections from receivables, separation of duties must be maintained. The credit department should have no access to cash, and those who handle cash should not be in a position to grant credit to customers. If a credit department employee also handles cash, he or she could pocket money received from a customer. The employee could then label the customer's account as uncollectible, and the company would stop billing that customer. In this scenario, the employee may have covered his or her theft.

Recording Sales on Credit

As discussed earlier, selling on account (on credit) creates an account receivable. Businesses must maintain a separate accounts receivable account for each customer in order to account for payments received from the customer and amounts still owed.

For example, Smart Touch Learning provides \$5,000 in services to customer Brown on account and sells \$10,000 (sales price) of merchandise inventory to customer Smith on account on August 8. The revenue is recorded (ignore Cost of Goods Sold) as follows:

$$\begin{array}{c} A \uparrow \\ \text{Accounts} \\ \text{Receivable} \uparrow \end{array} = \left\{ \begin{array}{c} L + E \uparrow \\ \text{Service} \\ \text{Revenue} \uparrow \end{array} \right.$$

$$\begin{array}{c} A \uparrow \\ \text{Accounts} \\ \text{Receivable} \uparrow \end{array} = \left\{ \begin{array}{c} L + E \uparrow \\ \text{Sales} \\ \text{Revenue} \uparrow \end{array} \right.$$

Date	Accounts and Explanation	Debit	Credit
Aug. 8	Accounts Receivable—Brown Service Revenue <i>Performed service on account.</i>	5,000	5,000
8	Accounts Receivable—Smith Sales Revenue <i>Sold goods on account.</i>	10,000	10,000



These separate customer accounts receivable (for example, Accounts Receivable—Brown) are called *subsidiary accounts*. The sum of all balances in subsidiary accounts receivable equals a control account balance. In this case, Accounts Receivable serves as the control account. This is illustrated as follows:

CONTROL ACCOUNT		SUBSIDIARY ACCOUNTS	
Accounts Receivable		Accounts Receivable—Brown	
Bal.	15,000	Bal.	5,000
Accounts Receivable—Smith			
Bal.	10,000		
		Total for subsidiary accounts = \$15,000 —	

The control account, Accounts Receivable, shows a balance of \$15,000. The individual customer accounts in the subsidiary ledger (Accounts Receivable—Brown \$5,000 + Accounts Receivable—Smith \$10,000) add up to a total of \$15,000.

When the business collects cash from both customers on August 29—\$4,000 from Brown and \$8,000 from Smith—Smart Touch Learning makes the following entry and posts the entry to the T-accounts:

Date	Accounts and Explanation	Debit	Credit
Aug. 29	Cash	12,000	
	Accounts Receivable—Brown		4,000
	Accounts Receivable—Smith		8,000
<i>Collected cash on account.</i>			

$$\left. \begin{array}{l} A \uparrow \\ \text{Cash} \uparrow \\ \text{Accounts} \\ \text{Receivable} \downarrow \end{array} \right\} = \left\{ \begin{array}{l} L \\ + \\ E \end{array} \right.$$

CONTROL ACCOUNT		SUBSIDIARY ACCOUNTS	
Accounts Receivable		Accounts Receivable—Brown	
Bal.	15,000	Bal.	5,000
→ Bal.	12,000	→ Bal.	4,000
	Aug. 29		Aug. 29
		Bal.	1,000
		Accounts Receivable—Smith	
		Bal.	10,000
		→ Bal.	8,000
			Aug. 29
		Bal.	2,000
		Total for subsidiary accounts = \$3,000 —	

Decreasing Collection Time and Credit Risk

One of the many drawbacks of accepting sales on account is that the company must wait for the receipt of cash. Sometimes this time period could be delayed as much as 60 to 90 days. In addition, there is always the risk that the company will never collect on the receivable. Let's look at some options companies have to decrease the collection time in receiving cash while also transferring the risk of noncollection to a third party.



Credit Card and Debit Card Sales

In the previous chapter, we looked at accepting third party credit cards and debit cards, such as American Express, MasterCard, and Visa, as a way to increase sales. By accepting credit cards and debit cards, businesses are able to attract more customers. Credit cards offer the customer the convenience of buying something without having to pay cash immediately. Debit cards, on the other hand, reduce the customer's bank account immediately but allow the customer to pay electronically instead of with currency or by writing a check.

Businesses also benefit from accepting payment by credit and debit cards. They do not have to check each customer's credit rating or worry about keeping accounts receivable records or even collecting from the customer because the card issuer has the responsibility of collecting from the customer. Thus, instead of collecting cash from the customer, the seller will receive cash from the card issuer. While there is almost always a fee to the seller to cover the processing costs charged by the card issuer, most businesses consider the benefits of transferring the risk of not being able to collect from the customer and avoiding the costs associated with credit customers are greater than the costs of the processing fees.

Factoring and Pledging Receivables

When a business factors its receivables, it sells its receivables to a finance company or bank (often called a *factor*). The business immediately receives cash less an applicable fee from the factor for the receivables. The factor, instead of the business, now collects the cash on the receivables. The business no longer has to deal with the collection of the receivable from the customer. The business receives cash associated with the receivable from the factor instead of the customer.

Pledging of receivables is another option for businesses that need cash immediately. In a pledging situation, a business uses its receivables as security for a loan. The business borrows money from a bank and offers its receivables as collateral. The business is still responsible for collecting on the receivables, but it uses this money to pay off the loan along with interest. In pledging, if the loan is not paid, the bank can collect on the receivables.

In both situations, the business has managed to receive cash immediately for the receivables instead of having to wait for collection.

Try It!

Match the accounting terminology to the definitions.

- | | |
|--------------------------|--|
| 1. Factoring receivables | a. A monetary claim against a business or an individual. |
| 2. Debtor | b. The party to a transaction who takes on an obligation/payable. |
| 3. Accounts receivable | c. Using receivables as security (collateral) for a loan. |
| 4. Maturity date | d. The right to receive cash in the future from customers for goods sold or for services provided. |
| 5. Receivable | e. The date when a note is due. |
| 6. Pledging receivables | f. Selling receivables to a finance company or bank. |

Check your answers online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.



HOW ARE UNCOLLECTIBLES ACCOUNTED FOR WHEN USING THE DIRECT WRITE-OFF METHOD?

Selling on account brings both a benefit and a cost:

- The benefit to a business is the potential increased revenues and profits by making sales to a wider range of customers.
- The cost, however, is that some customers do not pay, creating uncollectible receivables.

Customers' accounts receivable are an asset. Accounts receivable that are uncollectible must be written off, which means they must be removed from the books, because the company does not expect to receive cash in the future. Instead, the company must record an expense associated with the cost of the uncollectible account. This expense is called **bad debts expense**. Bad debts expense is sometimes called *doubtful accounts expense* or *uncollectible accounts expense*.

There are two methods of accounting for uncollectible receivables and recording the related bad debts expense:

- Direct write-off method
- Allowance method

Recording and Writing Off Uncollectible Accounts—Direct Write-off Method

The **direct write-off method** of accounting for uncollectible receivables is primarily used by small, nonpublic companies. Under the direct write-off method, accounts receivable are written off and bad debts expense is recorded when the business determines that it will never collect from a specific customer.

For example, let's assume that on August 9 Smart Touch Learning determines that it will not be able to collect \$200 from customer Dan King for a sale of merchandise inventory made on May 5. The company would write off the customer's account receivable by debiting Bad Debts Expense and crediting the customer's Accounts Receivable as follows:

Date	Accounts and Explanation	Debit	Credit
Aug. 9	Bad Debts Expense	200	
	Accounts Receivable—King		200
	<i>Wrote off an uncollectible account.</i>		

Direct Write-off Method

A method of accounting for uncollectible receivables in which the company records bad debts expense when a customer's account receivable is uncollectible.

$$\left. \begin{array}{l} A \downarrow \\ \text{Accounts} \\ \text{Receivable} \downarrow \end{array} \right\} = \left\{ \begin{array}{l} L + \\ E \downarrow \\ \text{Bad Debts} \\ \text{Expense} \uparrow \end{array} \right\}$$

Once an account receivable is written off, the company stops pursuing the collection. Some companies might turn delinquent receivables over to an attorney or other collection agency to recover some of the cash for the company, but generally companies do not expect to receive any future payment.

Recovery of Accounts Previously Written Off—Direct Write-off Method

Occasionally after a company writes off an account, the customer will decide to make payment. To account for this recovery, the company must reverse the earlier write-off. For example, on September 10, Smart Touch Learning unexpectedly receives \$200 cash from



Dan King. The company will reverse the earlier write-off and then record the cash collection as follows:

$$\begin{array}{c} \text{A} \uparrow \\ \text{Accounts Receivable} \uparrow \end{array} \left\{ \begin{array}{l} = \\ \hline \end{array} \right\} \begin{array}{c} \text{L} + \text{E} \uparrow \\ \text{Bad Debts Expense} \downarrow \end{array}$$

$$\begin{array}{c} \text{A} \downarrow \\ \text{Cash} \uparrow \\ \text{Accounts Receivable} \downarrow \end{array} \left\{ \begin{array}{l} = \\ \hline \end{array} \right\} \begin{array}{c} \text{L} + \text{E} \\ \end{array}$$

Date	Accounts and Explanation	Debit	Credit
Sep. 10	Accounts Receivable—King	200	
	Bad Debts Expense		200
	<i>Reinstated previously written off account.</i>		
10	Cash	200	
	Accounts Receivable—King		200
	<i>Collected cash on account.</i>		

In order to keep accurate records about the collection of cash for a previously written off account, the business should reestablish the Accounts Receivable by debiting the receivable account. Then the business can record the receipt of cash for the receivable by debiting Cash and crediting Accounts Receivable. This helps restore the credit history of the customer by showing that the customer did fulfill the promise of payment.

Limitations of the Direct Write-off Method

The direct write-off method, as stated earlier, is often used only by small, nonpublic companies. This is because the direct write-off method violates the matching principle. The matching principle requires that the expense of uncollectible accounts be matched with the related revenue. For example, when using the direct write-off method, a company might record sales revenue in 2017 but not record the bad debts expense until 2018. By recording the bad debts expense in a different year than when the revenue was recorded, the company is overstating net income in 2017 and understating net income in 2018. In addition, on the balance sheet at December 31, 2017, Accounts Receivable will be overstated because the company will have some receivables that will be uncollectible but are not yet written off. This method is only acceptable for companies that have very few uncollectible receivables. Most companies must use a method that does a better job of matching expenses to the associated sales revenue. This method is called the *allowance method*, and it is the method required by GAAP.

Try It!

Williams Company uses the direct write-off method to account for uncollectible receivables. On July 18, Williams wrote off a \$6,800 account receivable from customer W. Jennings. On August 24, Williams unexpectedly received full payment from Jennings on the previously written off account.

7. Journalize Williams's write-off on the uncollectible receivable.
8. Journalize Williams's collection of the previously written off receivable.

Check your answers online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.



HOW ARE UNCOLLECTIBLES ACCOUNTED FOR WHEN USING THE ALLOWANCE METHOD?

Most companies use the allowance method to measure bad debts. The **allowance method** is based on the matching principle; thus, the key concept is to record bad debts expense in the same period as the sales revenue. The offset to the expense is a contra asset account called **Allowance for Bad Debts** or *Allowance for Doubtful Accounts* or *Allowance for Uncollectible Accounts*. The allowance account is subtracted from the asset Accounts Receivable. The business does not wait to see which customers will not pay. Instead, it records a bad debts expense based on estimates developed from past experience and uses the Allowance for Bad Debts to hold the pool of “unknown” uncollectible accounts.

Recording Bad Debts Expense—Allowance Method

When using the allowance method, companies estimate bad debts expense at the end of the period and then record an adjusting entry. Suppose that as of December 31, 2019, Smart Touch Learning estimates that \$80 of its \$4,400 accounts receivable are uncollectible. The accounting clerk will record the following adjusting entry:

Date	Accounts and Explanation	Debit	Credit
2019			
Dec. 31	Bad Debts Expense	80	
	Allowance for Bad Debts		80
	<i>Recorded bad debts expense for the period.</i>		

Learning Objective 3

Apply the allowance method for uncollectibles and estimate bad debts expense based on the percent-of-sales, percent-of-receivables, and aging-of-receivables methods

Allowance Method

A method of accounting for uncollectible receivables in which the company estimates bad debts expense instead of waiting to see which customers the company will not collect from.

Allowance for Bad Debts

A contra asset account, related to accounts receivable, that holds the estimated amount of uncollectible accounts.

$$\frac{A \downarrow}{\text{Allowance for Bad Debts} \uparrow} = \left\{ \begin{array}{l} \frac{L}{\text{ }} + \frac{E \downarrow}{\text{Bad Debts Expense} \uparrow} \end{array} \right.$$

After posting the adjusting entry, Smart Touch Learning has the following balances in its accounts:

Accounts Receivable	Allowance for Bad Debts	Bad Debts Expense
Dec. 31 4,400	80 Dec. 31	Dec. 31 80

Accounts Receivable will be reported on the balance sheet, but it will now be shown at the net realizable value. **Net realizable value** is the net value the company expects to

Net Realizable Value

The net value a company expects to collect from its accounts receivable. Accounts Receivable less Allowance for Bad Debts.



collect from its accounts receivable (Accounts Receivable less Allowance for Bad Debts). Smart Touch Learning would report the following on its balance sheet:



Under IFRS, receivables are recognized and reported similarly to what is required by GAAP. Accounts Receivable must be reported at net realizable value. The allowance method is used to accomplish the matching of bad debt expense to the sales of the period and to report receivables at net realizable value. Under IFRS, the Allowance for Bad Debts may be called the *Provision for Bad Debts*. IFRS provides more detailed criteria than GAAP for determining when an account is uncollectible.

SMART TOUCH LEARNING Balance Sheet (Partial) December 31, 2019		
Assets		
Current Assets:		
Accounts Receivable	\$ 4,400	
Less: Allowance for Bad Debts	<u>(80)</u>	<u>\$ 4,320</u>

The balance sheet now reports the amount of accounts receivable that Smart Touch Learning expects to collect, \$4,320. The contra account, Allowance for Bad Debts, is subtracted from Accounts Receivable showing that although \$4,400 is owed to Smart Touch Learning, the company estimates that \$80 of accounts receivable will be uncollectible.

ETHICS

Should the uncollectible accounts be underestimated?

Norah Wang is in the process of recording adjusting entries for her employer, Happy Kennels. She is evaluating the uncollectible accounts and determining the amount of bad debts expense to record for the year. Her manager, Gillian Tedesco, has asked that Norah underestimate the amount of uncollectible accounts for the year. Gillian is hoping to get a bank loan for an expansion of the kennel facility, and she is concerned that the net income of the company will be too low for a loan to be approved. What should Norah do?

Solution

It is important that accounts receivable be reported at the appropriate amount on the balance sheet. This involves determining an accurate estimate of uncollectible accounts and recognizing the associated bad debts expense. In understating the amount of uncollectible accounts, Norah would be misleading the bank on the amount of cash that Happy Kennels expects to collect in the future. Norah would also underestimate Bad Debts Expense and overstate net income on the income statement.

Writing Off Uncollectible Accounts—Allowance Method

When using the allowance method, companies still write off accounts receivable that are uncollectible. However, instead of recording a debit to Bad Debts Expense (as done when using the direct write-off method), the company will record a debit to Allowance for Bad Debts. **Bad Debts Expense is not debited when a company writes off an account receivable when using the allowance method because the company has already recorded the Bad Debts Expense as an adjusting entry.** The entry to write off an account under the allowance method has no effect on net income at the time of entry.



Why isn't Bad Debts Expense debited when writing off an account receivable when using the allowance method?



For example, on January 10, 2020, Smart Touch Learning determines that it cannot collect a total of \$25 from its customer, Shawn Clark. The accounting clerk would record the following entry to write off the account:

Date	Accounts and Explanation	Debit	Credit
2020			
Jan. 10	Allowance for Bad Debts	25	
	Accounts Receivable—Clark		25
<i>Wrote off an uncollectible account.</i>			

$$\frac{A \uparrow}{\text{Allowance for Bad Debts} \downarrow} = \left\{ \begin{array}{l} L + E \\ \text{Accounts Receivable} \downarrow \end{array} \right\}$$

Smart Touch Learning's account balances after the write-off are:

Accounts Receivable		Allowance for Bad Debts	
Jan. 1, 2020	4,400	80	Jan. 1, 2020
	25	Jan. 10, 2020	25
Bal.	4,375	55	Bal.

The entry to write off a receivable reduces the amount of the Allowance for Bad Debts account and also the Accounts Receivable account, but it does not affect the net realizable value shown on the balance sheet. This is because both Allowance for Bad Debts (contra asset) and Accounts Receivable (asset) were reduced by the amount of the write-off. In addition, the write-off of a receivable does not affect net income because the entry does not involve revenue or expenses.

	Before Write-off	After Write-off
Accounts Receivable	\$ 4,400	\$ 4,375
Less: Allowance for Bad Debts	(80)	(55)
Net Realizable Value	<u><u>\$ 4,320</u></u>	<u><u>\$ 4,320</u></u>

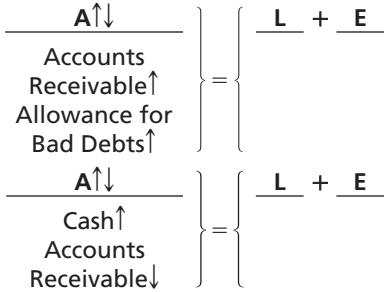
Recovery of Accounts Previously Written Off—Allowance Method

After a company has previously written off an account, the company stops attempting to collect on the receivable. Customers will occasionally make payment on receivables that have already been written off. A business will need to reverse the write-off to the Allowance for Bad Debts account and then record the receipt of cash. In reversing the write-off, the business is reestablishing the receivable account and reversing the write-off from the Allowance for Bad Debts account.

Recall that Smart Touch Learning wrote off the \$25 receivable from customer Shawn Clark on January 10, 2020. It is now March 4, 2020, and Smart Touch Learning unexpectedly



receives \$25 cash from Clark. The entries to reverse the write-off and record the receipt of cash are as follows:



Date	Accounts and Explanation	Debit	Credit
2020			
Mar. 4	Accounts Receivable—Clark	25	
	Allowance for Bad Debts		25
	<i>Reinstated previously written off account.</i>		
4	Cash	25	
	Accounts Receivable—Clark		25
	<i>Collected cash on account.</i>		

Estimating and Recording Bad Debts Expense—Allowance Method

How do companies determine the amount of bad debts expense when using the allowance method? Companies use their past experience as well as consider the economy, the industry they operate in, and other variables. In short, they make an educated guess, called an *estimate*. There are three basic ways to estimate uncollectibles:

- Percent-of-sales
- Percent-of-receivables
- Aging-of-receivables

Percent-of-Sales Method

Percent-of-Sales Method

A method of estimating uncollectible receivables that calculates bad debts expense based on a percentage of net credit sales.

The **percent-of-sales method** computes bad debts expense as a percentage of net credit sales. (Some companies will use all sales, not just credit sales.) This method is also called the *income-statement approach* because it focuses on the amount of expense that is reported on the income statement.

Let's return to Smart Touch Learning. Based on prior experience, the company's bad debts expense is normally 0.5% of net credit sales, which totaled \$60,000 for the year. The accountant calculates bad debts expense using the percent-of-sales method as follows:

Percent-of-Sales Method:

$$\begin{aligned}
 \text{Bad Debts Expense} &= \text{Net credit sales} \times \% \\
 &= \$60,000 \times 0.005 \\
 &= \$300
 \end{aligned}$$



At December 31, Smart Touch Learning records the following adjusting entry to recognize bad debts expense for the year:

Date	Accounts and Explanation	Debit	Credit
2020			
Dec. 31	Bad Debts Expense Allowance for Bad Debts <i>Recorded bad debts expense for the period.</i>	300	300

$$\frac{A \downarrow}{\text{Allowance for Bad Debts} \uparrow} = \left\{ \begin{array}{l} \frac{L}{\downarrow} + \frac{E \downarrow}{\uparrow} \\ \text{Bad Debts Expense} \uparrow \end{array} \right.$$

When using the allowance method, the **only** time Bad Debts Expense is recorded is as an adjusting entry.

After posting the adjusting entry, Smart Touch Learning has the following balances in its balance sheet and income statement accounts. Ignore the previously recorded reversal of the write-off and assume collections on account during the year are \$58,000:

Balance sheet accounts:

Accounts Receivable		Allowance for Bad Debts	
Jan. 1, 2020, Bal.	4,400	80	Jan. 1, 2020, Bal.
Net credit sales	60,000	25	Unadj. Bal.
		Write-off	Adj.
	25	58,000	300
		Collections	
Unadj. Bal.	6,375		355
Dec. 31, 2020, Bal.	6,375		Dec. 31, 2020, Bal.

Income statement account:

Bad Debts Expense	
Jan. 1, 2020, Bal.	0
Adj.	300
Dec. 31, 2020, Bal.	300

Percent-of-Receivables Method

The percent-of-receivables and aging-of-receivables methods are based on the balance of accounts receivable. These approaches are also called *balance-sheet approaches* because they focus on Accounts Receivable (a balance sheet account) and determine a target allowance balance based on a percentage of the receivable balance.

The first balance sheet approach is the **percent-of-receivables method**. In the percent-of-receivables method, the business once again determines a percentage of uncollectible accounts based on past experience. This method is different than the percent-of-sales method because it multiplies the percentage by the *ending* unadjusted balance in the Accounts Receivable account instead of by net credit sales.

Percent-of-Receivables Method

A method of estimating uncollectible receivables by determining the balance of the Allowance for Bad Debts account based on a percentage of accounts receivable.



The calculation for bad debts expense under the percent-of-receivables method is a two-step process. First, the company determines the target balance of Allowance for Bad Debts. Then, it uses the target balance to determine the amount of the bad debts expense.

Percent-of-Receivables Method:

Step 1: Determine the target balance of Allowance for Bad Debts.

$$\text{Target balance} = \text{Ending balance of accounts receivable} \times \%$$

Step 2: Determine the amount of bad debts expense by evaluating the allowance account.

$$\text{Bad debts expense} = \text{Target balance} - \text{Unadjusted credit balance of Allowance for Bad Debts}$$

OR

$$\text{Bad debts expense} = \text{Target balance} + \text{Unadjusted debit balance of Allowance for Bad Debts}$$

Let's look at an example for Smart Touch Learning. Assume that at December 31, 2020, the company's unadjusted accounts receivable balance is \$6,375. Smart Touch Learning estimates that 4% of its accounts receivable will be uncollectible. In Step 1, the company determines the target balance for the Allowance for Bad Debts account: \$255 ($\$6,375 \times 0.04$). Next, its accountant determines the amount of the bad debts expense adjustment: $\$255 - \$55 = \$200$.

Allowance for Bad Debts

	80	Jan. 1, 2020, Bal.
Write-offs	25	
	55	Unadj. Bal.
	200	Adj. ←
	255	Dec. 31, 2020, Bal.

Step 2: The bad debts expense adjustment must be calculated based on the target balance.
 $\$255 - \$55 = \$200$

Step 1: Calculate the target balance. It is always reported as a credit balance.
 $\$6,375 \times 0.04 = \255

Smart Touch Learning records the following adjusting entry on December 31 to recognize bad debts expense for the year:

$$\left. \begin{array}{c} A \downarrow \\ \text{Allowance} \\ \text{for Bad} \\ \text{Debts} \uparrow \end{array} \right\} = \left\{ \begin{array}{c} L \downarrow \\ \text{Bad Debts} \\ \text{Expense} \uparrow \end{array} \right. + E \downarrow$$

Date	Accounts and Explanation	Debit	Credit
2020			
Dec. 31	Bad Debts Expense	200	
	Allowance for Bad Debts		200
	<i>Recorded bad debts expense for the period.</i>		



After posting the adjusting entry, Smart Touch Learning has the following balances in its balance sheet and income statement accounts:

Balance sheet accounts:

Accounts Receivable			
Jan. 1, 2020, Bal.	4,400		
Net credit sales	60,000	25	Write-offs
		58,000	Collections
Unadj. Bal.	6,375		
Dec. 31, 2020, Bal.	6,375		

Allowance for Bad Debts	
	80 Jan. 1, 2020, Bal.
Write-offs	25
	55 Unadj. Bal.
	200 Adj.
	255 Dec. 31, 2020, Bal.

Income statement account:

Bad Debts Expense	
Jan. 1, 2020, Bal.	0
Adj.	200
Dec. 31, 2020, Bal.	200

The Allowance for Bad Debts has a credit unadjusted balance because the company overestimated the bad debt expense and has written off less accounts receivable than it expected during the year.

In the preceding example, Smart Touch Learning had an unadjusted *credit* balance in the allowance account. **If a company has a debit balance before the adjustment, the calculation for bad debts expense is a little different. Instead of subtracting the unadjusted balance of the Allowance for Bad Debts from the target balance, the unadjusted balance will be added to the target balance.**

Let's look at an example. Suppose that Martin's Music has a *debit* balance in its Allowance for Bad Debts account of \$150. Assume that it estimates its percentage of uncollectible accounts will be 2% of \$40,000 of Accounts Receivable. Martin's Music's bad debts expense adjustment would be calculated as follows:

What if a business had a debit balance in the Allowance for Bad Debts account before the adjustment for bad debts expense?



Allowance for Bad Debts	
Unadj. Bal.	150
	950 Adj.
	800 Bal.

Step 1: Calculate the target balance. It is always reported as a credit balance.
 $\$40,000 \times 0.02 = \800

Step 2: The bad debts expense adjustment must be calculated based on the target balance.
 $\$800 + \$150 = \$950$

A company will have a debit unadjusted balance in the Allowance for Bad Debts account if the company has underestimated the bad debt expense and written off more accounts receivable than it expected to during the year.

Notice that when the allowance account has an unadjusted debit balance, the target balance must be added to the unadjusted balance of the Allowance for Bad Debts to



determine the bad debts expense adjustment. Martin's Music would record the following adjusting entry to recognize bad debts expense:

$$\begin{array}{c} A \downarrow \\ \text{Allowance} \\ \text{for Bad} \\ \text{Debts} \uparrow \end{array} = \left\{ \begin{array}{c} L \downarrow \\ + \\ E \downarrow \\ \text{Bad Debts} \\ \text{Expense} \uparrow \end{array} \right\}$$

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Bad Debts Expense	950	
	Allowance for Bad Debts		950
<i>Recorded bad debts expense for the period.</i>			

Aging-of-Receivables Method

Aging-of-Receivables Method
A method of estimating uncollectible receivables by determining the balance of the Allowance for Bad Debts account based on the age of individual accounts receivable.

The **aging-of-receivables method** is similar to the percent-of-receivables method. However, in the aging method, businesses group individual accounts (Broxson, Andrews, and so on) according to how long the receivable has been outstanding. Then they apply a different percentage uncollectible on each aging category. Exhibit 8-1 shows the aging schedule for Smart Touch Learning.

Exhibit 8-1 | Aging of Accounts Receivable

Age of Account as of December 31, 2020					
Customer Name	1-30 Days	31-60 Days	61-90 Days	Over 90 Days	Total Balance
Broxson	\$ 800				\$ 800
Phi Chi Fraternity		2,100			2,100
Andrews			\$ 350		350
Jones			480		480
Perez		1,345			1,345
Thompson				\$ 1,200	1,200
Clark				\$ 100	100
Totals	\$ 4,245	\$ 830	\$ 1,200	\$ 100	\$ 6,375
Estimated percentage uncollectible	× 1%	× 2%	× 3%	× 90%	
Estimated total uncollectible	\$ 42	\$ 17	\$ 36	\$ 90	\$ 185

Target balance

At year-end, Smart Touch Learning will need to record the adjusting entry to recognize bad debts expense. The procedure is similar to the percent-of-receivables method.

Aging-of-Receivables Method:

- Step 1:** Determine the target balance of Allowance for Bad Debts by using the age of each account.
Step 2: Determine the amount of bad debts expense by evaluating the allowance account.

Bad debts expense = Target balance – Unadjusted credit balance of Allowance for Bad Debts

OR

Bad debts expense = Target balance + Unadjusted debit balance of Allowance for Bad Debts



Based on Exhibit 8-1, Smart Touch Learning knows the target balance of the Allowance for Bad Debts account is \$185. Smart Touch Learning will determine its bad debts expense by subtracting the \$55 unadjusted credit balance in the allowance account from the target balance, \$185.

Allowance for Bad Debts	
Write-offs	80 Jan. 1, 2020, Bal.
25	
	55 Unadj. Bal.
	130 Adj. ←
	185 Dec. 31, 2020, Bal.

Step 1: Calculate the target balance using the aging schedule. It is always reported as a credit balance.

Step 2: The bad debts expense adjustment must be calculated based on the target balance.
\$185 – \$55 = \$130

Smart Touch Learning will record the following adjusting entry on December 31 to recognize bad debts expense for the year:

Date	Accounts and Explanation	Debit	Credit
2020			
Dec. 31	Bad Debts Expense	130	
	Allowance for Bad Debts		130
<i>Recorded bad debts expense for the period.</i>			

$$\left. \begin{array}{c} A \downarrow \\ \text{Allowance} \\ \text{for Bad} \\ \text{Debts} \uparrow \end{array} \right\} = \left\{ \begin{array}{c} L \downarrow \\ + \\ E \downarrow \\ \text{Bad Debts} \\ \text{Expense} \uparrow \end{array} \right\}$$

After posting the adjusting entry, Smart Touch Learning has the following balances in its balance sheet and income statement accounts:

Balance sheet accounts:

Accounts Receivable		
Jan. 1, 2020, Bal.	4,400	
Net credit sales	60,000	25 Write-offs
		58,000 Collections
Unadj. Bal.	6,375	
Dec. 31, 2020, Bal.	6,375	

Allowance for Bad Debts		
Write-offs	25	80 Jan. 1, 2020, Bal.
		55 Unadj. Bal.
		130 Adj.
		185 Dec. 31, 2020, Bal.

Income statement account:

Bad Debts Expense		
Jan. 1, 2020, Bal.	0	
Adj.	130	
Dec. 31, 2020, Bal.	130	

Comparison of Accounting for Uncollectibles

Exhibit 8-2 (on the next page) shows the journal entries that are recorded when using both the direct write-off method and the allowance method of accounting for uncollectibles. Take a moment to review the differences in these two methods. Remember that when using the direct write-off method, the business does not use an allowance account and that this method does not conform with GAAP.


Exhibit 8-2 | Direct Write-off Method Versus Allowance Method

DIRECT WRITE-OFF METHOD	ALLOWANCE METHOD																														
Write-off of an uncollectible account:																															
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 5px;">Bad Debts Expense</td> <td style="text-align: right; padding: 5px;">25</td> <td style="border-left: 1px solid black; width: 1px;"></td> <td style="border-right: 1px solid black; width: 1px;"></td> <td style="padding: 5px;">25</td> </tr> <tr> <td style="padding: 5px;">Accounts Receivable—Customer Name</td> <td style="text-align: right; padding: 5px;"></td> <td style="border-left: 1px solid black; width: 1px;"></td> <td style="border-right: 1px solid black; width: 1px;"></td> <td style="padding: 5px;"></td> </tr> <tr> <td colspan="5" style="text-align: center; padding: 5px;"><i>Wrote off an uncollectible account.</i></td> </tr> </table>	Bad Debts Expense	25			25	Accounts Receivable—Customer Name					<i>Wrote off an uncollectible account.</i>					<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 5px;">Allowance for Bad Debts</td> <td style="text-align: right; padding: 5px;">25</td> <td style="border-left: 1px solid black; width: 1px;"></td> <td style="border-right: 1px solid black; width: 1px;"></td> <td style="padding: 5px;">25</td> </tr> <tr> <td style="padding: 5px;">Accounts Receivable—Customer Name</td> <td style="text-align: right; padding: 5px;"></td> <td style="border-left: 1px solid black; width: 1px;"></td> <td style="border-right: 1px solid black; width: 1px;"></td> <td style="padding: 5px;"></td> </tr> <tr> <td colspan="5" style="text-align: center; padding: 5px;"><i>Wrote off an uncollectible account.</i></td> </tr> </table>	Allowance for Bad Debts	25			25	Accounts Receivable—Customer Name					<i>Wrote off an uncollectible account.</i>				
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Adjusting entry to recognize bad debts:																															
<i>No adjusting entry recorded.</i>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 5px;">Bad Debts Expense</td> <td style="text-align: right; padding: 5px;">300</td> <td style="border-left: 1px solid black; width: 1px;"></td> <td style="border-right: 1px solid black; width: 1px;"></td> <td style="padding: 5px;">300</td> </tr> <tr> <td style="padding: 5px;">Allowance for Bad Debts</td> <td style="text-align: right; padding: 5px;"></td> <td style="border-left: 1px solid black; width: 1px;"></td> <td style="border-right: 1px solid black; width: 1px;"></td> <td style="padding: 5px;"></td> </tr> <tr> <td colspan="5" style="text-align: center; padding: 5px;"><i>Recorded bad debts expense for the period.</i></td> </tr> </table>	Bad Debts Expense	300			300	Allowance for Bad Debts					<i>Recorded bad debts expense for the period.</i>																			
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Under the allowance method of accounting for uncollectibles, businesses must estimate the amount of the bad debts expense at the end of the accounting period. This is done using one of three methods: percent-of-sales, percent-of-receivables, or aging-of-receivables. Exhibit 8-3 summarizes the differences in those three methods.

Exhibit 8-3 | Comparison of Percent-of-Sales, Percent-of-Receivables, and Aging-of-Receivables Methods

ALLOWANCE METHOD		
INCOME STATEMENT APPROACH:	BALANCE SHEET APPROACHES:	
Percent-of-Sales Method $\text{Bad Debts Expense} = \text{Net credit sales} \times \%$	Percent-of-Receivables Method	Aging-of-Receivables Method
	<p>Step 1: $\text{Target balance} = \text{Ending balance of Accounts Receivable} \times \%$</p> <p>Step 2: $\text{Bad debts expense} = \text{Target balance} - \text{Unadj. credit balance in Allowance for Bad Debts}$</p> <p style="text-align: center;">OR</p> <p>$\text{Bad debts expense} = \text{Target balance} + \text{Unadj. debit balance in Allowance for Bad Debts}$</p>	



TYING IT ALL TOGETHER

Sears Holdings Corporation is the parent company of Kmart Holding Corporation and Sears, Roebuck and Co. The corporation operates more than 1,600 retail stores under the names of Kmart and Sears. In addition, the corporation has a large online presence through its Web sites sears.com and kmart.com and offers millions of products to its customers—including home appliances, tools, lawn and garden, fitness equipment, and automotive repair and maintenance. (You can find Sears Holdings Corporation's annual report at <https://www.sec.gov/Archives/edgar/data/1310067/000131006716000059/shld201510k.htm>)

Sears Holdings Corporation reported Accounts Receivable of \$419 million as of January 30, 2016. What do these receivables represent?

Sears Holdings Corporation's annual report states the accounts receivable relate to customer-related accounts receivable,

including receivables related to the company's pharmacy operations.

Which method, the direct write-off method or the allowance method, would Sears Holdings Corporation use to account for bad debts? Why?

The corporation uses the allowance method to account for bad debts. On the corporation's financial statements, the company states that accounts receivables are reported at net realizable value. Net realizable value is the amount the company expects to collect from its accounts receivable (Accounts Receivable less Allowance for Bad Debts). Sears Holdings Corporation uses the allowance method because this method provides a better matching of bad debts expense with the sales revenue.

Try It!

Johnson Company uses the allowance method to account for uncollectible receivables. On September 2, Johnson wrote off a \$14,000 account receivable from customer J. Mraz. On December 12, Johnson unexpectedly received full payment from Mraz on the previously written off account. Johnson records an adjusting entry for bad debts expense of \$800 on December 31.

9. Journalize Johnson's write-off of the uncollectible receivable.
10. Journalize Johnson's collection of the previously written off receivable.
11. Journalize Johnson's adjustment for bad debts expense.

Check your answers online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercises S8-5 through S8-8. [Pearson MyLab Accounting](#)

HOW ARE NOTES RECEIVABLE ACCOUNTED FOR?

Notes receivable are more formal than accounts receivable. The debtor signs a promissory note as evidence of the transaction. Before launching into the accounting, let's define the special terms used for notes receivable:

- **Promissory note**—A written promise to pay a specified amount of money at a particular future date, usually with interest.
- **Maker of the note (debtor)**—The entity that signs the note and promises to pay the required amount; the maker of the note is the debtor.
- **Payee of the note (creditor)**—The entity to whom the maker promises future payment; the payee of the note is the creditor. The creditor is the company that loans the money.
- **Principal**—The amount loaned by the payee and borrowed by the maker of the note.
- **Interest**—The revenue to the payee for loaning money. Interest is an expense to the debtor and revenue to the creditor.

Learning Objective 4

Account for notes receivable including computing interest and recording honored and dishonored notes

Principal

The amount loaned out by the payee and borrowed by the maker of the note.

Interest

The revenue to the payee for loaning money—the expense to the debtor.

**Interest Period**

The period of time during which interest is computed. It extends from the original date of the note to the maturity date.

Interest Rate

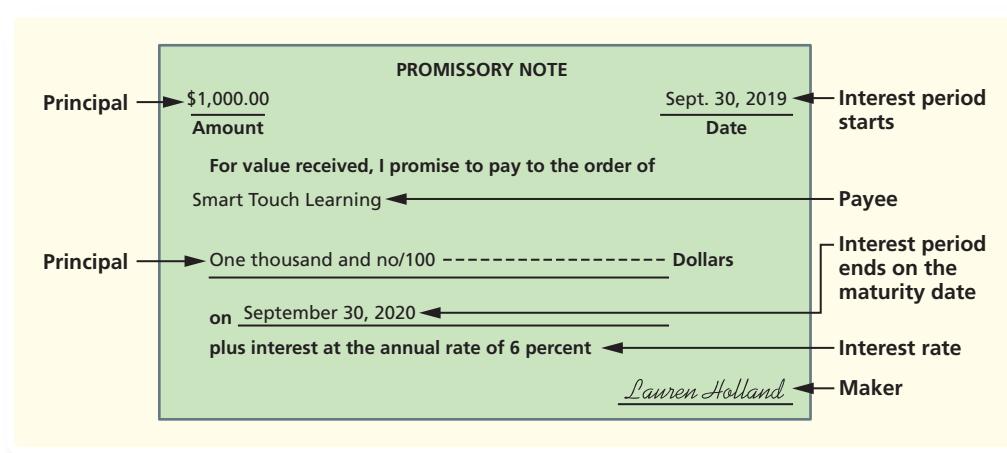
The percentage rate of interest specified by the note.

Maturity Value

The sum of the principal plus interest due at maturity.

- **Interest period**—The period of time during which interest is computed. It extends from the original date of the note to the maturity date. Also called the *note term*.
- **Interest rate**—The percentage rate of interest specified by the note. Interest rates are almost always stated for a period of one year.
- **Maturity date**—As stated earlier, this is the date when final payment of the note is due. Also called the *due date*.
- **Maturity value**—The sum of the principal plus interest due at maturity. Maturity value is the total amount that will be paid back.

Exhibit 8-4 illustrates a promissory note.

Exhibit 8-4 | Promissory Note

In Exhibit 8-4, we can see Smart Touch Learning is lending Lauren Holland \$1,000 on September 30, 2019, for one year at an annual interest rate of 6%. The accounting clerk for Smart Touch Learning would record the following journal entry:

$$\begin{array}{c} \text{A} \uparrow \\ \text{Notes Receivable} \uparrow \\ \text{Cash} \downarrow \end{array} = \left\{ \begin{array}{l} \text{L} + \text{E} \end{array} \right\}$$

Date	Accounts and Explanation	Debit	Credit
2019			
Sep. 30	Notes Receivable—Holland	1,000	
	Cash		1,000
	<i>Accepted note in exchange for cash.</i>		

Identifying Maturity Date

Some notes specify the maturity date. For example, September 30, 2020, is the maturity date of the note shown in Exhibit 8-4. Other notes state the period of the note in days or months. When the period is given in months, the note's maturity date falls on the same day of the month as the date the note was issued. For example, a six-month note dated February 16, 2019, would mature on August 16, 2019.



When the period is given in days, the maturity date is determined by counting the actual days from the date of issue. A 180-day note dated February 16, 2019, matures on August 15, 2019, as shown here:

Month	Number of Days	Cumulative Total
Feb. 2019	$28 - 16 = 12$	12
Mar. 2019	31	43
Apr. 2019	30	73
May 2019	31	104
Jun. 2019	30	134
Jul. 2019	31	165
Aug. 2019	15	180

In counting the number of days in a note term, remember to:

- Count the maturity date.
- Omit the date the note was issued.

Computing Interest on a Note

The formula for computing the interest is as follows:

$$\text{Amount of interest} = \text{Principal} \times \text{Interest rate} \times \text{Time}$$

In the formula, time (period) represents the portion of a year that interest has accrued on the note. It may be expressed as a fraction of a year in months (number of months/12) or a fraction of a year in days (number of days/365). Using the data in Exhibit 8-4, Smart Touch Learning computes interest revenue for one year as follows:

$$\begin{aligned}\text{Amount of interest} &= \text{Principal} \times \text{Interest rate} \times \text{Time} \\ &= \$1,000 \times 0.06 \times 12/12 \\ &= \$60\end{aligned}$$

The maturity value of the note is \$1,060 (\$1,000 principal + \$60 interest). The time element is 12/12 or 1 because the note's term is one year.

When the term of a note is stated in months, we compute the interest based on the 12-month year. Interest on a \$2,000 note at 10% for nine months is computed as follows:

$$\begin{aligned}\text{Amount of interest} &= \text{Principal} \times \text{Interest rate} \times \text{Time} \\ &= \$2,000 \times 0.10 \times 9/12 \\ &= \$150\end{aligned}$$



When the interest period is stated in days, we sometimes compute interest based on a 360-day year rather than on a 365-day year. A 360-day year eliminates some rounding and was used frequently in the past. However, with the use of computers to calculate interest, a 365-day year is much more common now. A 365-day year will be used for all calculations in this chapter. The interest on a \$5,000 note at 12% for 60 days can be computed as follows:

$$\begin{aligned}\text{Amount of interest} &= \text{Principal} \times \text{Interest rate} \times \text{Time} \\ &= \$5,000 \times 0.12 \times 60/365 \\ &= \$98.63 \text{ (rounded)}\end{aligned}$$

Keep in mind that interest rates are stated as an annual rate. Therefore, the time in the interest formula should also be expressed in terms of a fraction of one year.

Accruing Interest Revenue and Recording Honored Notes Receivable

Some notes receivable may be outstanding at the end of an accounting period. The interest revenue earned on the note up to year-end is part of that year's earnings. Recall that interest revenue is earned over time, not just when cash is received. Because of the revenue recognition principle, we want to record the earnings from the note in the year in which they were earned.

Now, we continue analyzing Smart Touch Learning's note receivable from Exhibit 8-4. Smart Touch Learning's accounting period ends December 31.

- How much of the total interest revenue does Smart Touch Learning earn in 2019 (from September 30 through December 31)? Smart Touch Learning earns three months (October, November, and December) of interest.

$$\$1,000 \times 0.06 \times 3/12 = \$15$$

The accounting clerk makes the following adjusting entry at December 31, 2019:

$$\begin{array}{c} A \uparrow \\ \text{Interest} \\ \text{Receivable} \uparrow \end{array} \left. \right\} = \left\{ \begin{array}{l} L \downarrow \\ + E \uparrow \\ \text{Interest} \\ \text{Revenue} \uparrow \end{array} \right.$$

Date	Accounts and Explanation	Debit	Credit
2019			
Dec. 31	Interest Receivable	15	
	Interest Revenue		15
	<i>Accrued interest revenue.</i>		

- How much interest revenue does Smart Touch Learning earn in 2020 (for January 1 through September 30)? Smart Touch Learning earns nine months (January through September) of interest.

$$\$1,000 \times 0.06 \times 9/12 = \$45$$

	\$15		\$45	
9-30-19 Note Issued		12-31-19 Accrual		9-30-20 Cash Receipt



On the maturity date of the note, Smart Touch Learning will receive cash for the principal amount plus interest. The company considers the note honored and makes the following entry:

Date	Accounts and Explanation	Debit	Credit
2020			
Sep. 30	Cash (\$1,000 + (\$1,000 × 0.06 × 12/12))	1,060	
	Notes Receivable—Holland		1,000
	Interest Receivable		15
	Interest Revenue		45
	<i>Collected note receivable plus interest.</i>		

$$\left. \begin{array}{l} A \uparrow \\ Cash \uparrow \\ Notes \\ Receivable \downarrow \\ Interest \\ Receivable \downarrow \end{array} \right\} = \left\{ \begin{array}{l} L + E \uparrow \\ Interest \\ Revenue \uparrow \end{array} \right.$$

Some companies sell merchandise in exchange for notes receivable. Assume that on July 1, 2019, Rosa Electric sells household appliances for \$2,000 to Dorman Builders. Dorman signs a nine-month promissory note at 10% annual interest. Rosa's entries to record the sale (ignore Cost of Goods Sold), interest accrual, and collection from Dorman are as follows:

Date	Accounts and Explanation	Debit	Credit
2019			
Jul. 1	Notes Receivable—Dorman Builders	2,000	
	Sales Revenue		2,000
Dec. 31	Interest Receivable (\$2,000 × 0.10 × 6/12)	100	
	Interest Revenue		100
2020			
Apr. 1	Cash (\$2,000 + (\$2,000 × 0.10 × 9/12))	2,150	
	Notes Receivable—Dorman Builders		2,000
	Interest Receivable		100
	Interest Revenue (\$2,000 × 0.10 × 3/12)		50

$$\left. \begin{array}{l} A \uparrow \\ Notes \\ Receivable \uparrow \end{array} \right\} = \left\{ \begin{array}{l} L + E \uparrow \\ Sales \\ Revenue \uparrow \end{array} \right.$$

$$\left. \begin{array}{l} A \uparrow \\ Interest \\ Receivable \uparrow \end{array} \right\} = \left\{ \begin{array}{l} L + E \uparrow \\ Interest \\ Revenue \uparrow \end{array} \right.$$

$$\left. \begin{array}{l} A \uparrow \\ Cash \uparrow \\ Notes \\ Receivable \downarrow \\ Interest \\ Receivable \downarrow \end{array} \right\} = \left\{ \begin{array}{l} L + E \uparrow \\ Interest \\ Revenue \uparrow \end{array} \right.$$

A company may accept a note receivable from a credit customer who fails to pay an account receivable. The customer signs a promissory note and gives it to the creditor. Suppose Sports Club cannot pay Blanding Services the amount due on accounts



receivable of \$5,000. Blanding may accept a 60-day, \$5,000 note receivable, with 12% interest, from Sports Club on November 19, 2019. Blanding's entries are as follows:

	Date	Accounts and Explanation	Debit	Credit
$\begin{array}{c} A \uparrow \\ \text{Notes Receivable} \uparrow \\ \text{Accounts} \\ \text{Receivable} \downarrow \end{array}$	2019			
$\begin{array}{c} A \uparrow \\ \text{Interest} \\ \text{Receivable} \uparrow \end{array}$	Nov. 19	Notes Receivable—Sports Club Accounts Receivable—Sports Club	5,000	5,000
$\begin{array}{c} A \uparrow \\ \text{Cash} \uparrow \\ \text{Notes} \\ \text{Receivable} \downarrow \\ \text{Interest} \\ \text{Receivable} \downarrow \end{array}$	Dec. 31	Interest Receivable ($\$5,000 \times 0.12 \times 42/365$)* Interest Revenue	69	69
$\begin{array}{c} A \uparrow \\ \text{Interest} \\ \text{Revenue} \uparrow \end{array}$	2020			
$\begin{array}{c} A \uparrow \\ \text{Interest} \\ \text{Revenue} \uparrow \end{array}$	Jan. 18	Cash ($\$5,000 + (\$5,000 \times 0.12 \times 60/365)$)* Notes Receivable—Sports Club Interest Receivable Interest Revenue ($\$5,000 \times 0.12 \times 18/365$)*	5,099	5,000 69 30

*rounded

Recording Dishonored Notes Receivable

Dishonor a Note

Failure of a note's maker to pay a note receivable at maturity.

If the maker of a note does not pay at maturity, the maker **dishonors a note** (also called *defaulting on a note*). Because the note has expired, it is no longer in force. But the debtor still owes the payee. The payee can transfer the note receivable amount to Accounts Receivable. Suppose Rubinstein Jewelers has a six-month, 10% note receivable for \$1,200 from Mark Adair that was signed on March 3, 2019, and Adair defaults. Rubinstein Jewelers will record the default on September 3, 2019, as follows:

	Date	Accounts and Explanation	Debit	Credit
$\begin{array}{c} A \uparrow \\ \text{Accounts} \\ \text{Receivable} \uparrow \\ \text{Notes Receivable} \downarrow \end{array}$	2019			
$\begin{array}{c} A \uparrow \\ \text{Interest} \\ \text{Revenue} \uparrow \end{array}$	Sep. 3	Accounts Receivable—Adair Notes Receivable—Adair Interest Revenue ($\$1,200 \times 0.10 \times 6/12$)	1,260	1,200 60

Rubinstein will then bill Adair for the account receivable. This also allows Rubinstein to eventually write off the receivable using either the direct write-off method or the allowance method if at a later date Rubinstein can still not collect the account receivable.



Try It!

On August 1, Taylor Company lent \$80,000 to L. King on a 90-day, 5% note.

12. Journalize for Taylor Company the lending of the money on August 1.
13. Journalize the collection of the principal and interest at maturity. Specify the date. Round interest to the nearest dollar.

Check your answers online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercises S8-9 through S8-12. **Pearson MyLab Accounting**

HOW DO WE USE THE ACID-TEST RATIO, ACCOUNTS RECEIVABLE TURNOVER RATIO, AND DAYS' SALES IN RECEIVABLES TO EVALUATE BUSINESS PERFORMANCE?

As discussed earlier in the text, the balance sheet lists assets in the order of liquidity (how quickly an asset can be converted to cash). We can evaluate a company's liquidity by analyzing the company's current assets. The partial balance sheet of **Kohl's Corporation**, shown in Exhibit 8-5, list only three current assets: cash and cash equivalents, merchandise inventories, and other current assets. Kohl's does not list any receivables on its balance sheet. While the company does promote and accept the private label Kohl's credit card, the card is issued by an unrelated third party. When the company accepts the private label Kohl's card, the sales are accounted for similar to other credit card sales, such as American Express, MasterCard, and Visa. Kohl's has transferred the risk of collecting cash from its customers to a third party.

Learning Objective 5

Use the acid-test ratio, accounts receivable turnover ratio, and days' sales in receivables to evaluate business performance

Exhibit 8-5 | Kohl's Corporation Partial Balance Sheet

KOHL'S CORPORATION		
Balance Sheet (Partial)		
January 30, 2016, and January 31, 2015		
(in millions)		
Assets	Jan. 30, 2016	Jan. 31, 2015
Current Assets:		
Cash and Cash Equivalents	\$ 707	\$ 1,407
Merchandise Inventories	4,038	3,814
Other Current Assets	331	359
Total Current Assets	\$ 5,076	\$ 5,580
 Total Current Liabilities	 \$ 2,714	 \$ 2,859



Balance sheet data is useful by showing the relationships among assets, liabilities, and revenues. Because Kohl's does not list receivables on its balance sheet, we will use one of its competitors to examine three important ratios that include receivables in the calculations. **Sears Holdings Corporation** is the parent company of Kmart Holdings Corporation and Sears, Roebuck and Co. The following is a summary of financial information for Sears Holdings Corporation (with all amounts shown in millions):

(In millions)	Jan. 30, 2016	Jan. 31, 2015
Balance sheet—partial		
Current Assets:		
Cash and Cash Equivalents	\$ 238	\$ 250
Accounts Receivable	419	429
Merchandise Inventories	5,172	4,943
Prepaid Expenses and Other Current Assets	216	241
Total Current Assets	6,045	5,863
Total Current Liabilities	5,438	5,595
Income statement—partial		
Merchandise Sales and Services	25,146	31,198

Acid-Test (or Quick) Ratio

Previously we discussed the current ratio, which measures a company's ability to pay current liabilities with current assets, and the cash ratio, which measures a company's ability to meet its short-term obligations with cash and cash equivalents. We now introduce the **acid-test ratio**, also called the *quick ratio*, which is also used to measure a company's ability to pay its current liabilities. The acid-test ratio is a more stringent measure than the current ratio but it is not as stringent as the cash ratio. The acid test is a ratio of the sum of a company's quick assets to total current liabilities. Quick assets are defined as cash including cash equivalents, short-term investments, and net current receivables. The acid-test ratio reveals whether the entity could pay all its current liabilities if they were to become due immediately.

The higher the acid-test ratio, the more able the business is to pay its current liabilities. Sears Holdings Corporation's acid-test ratio of 0.12 as of January 30, 2016, means that the business has \$0.12 of quick assets to pay each \$1.00 of current liabilities.

$$\begin{aligned}
 \text{Acid-test ratio} &= (\text{Cash including cash equivalents} + \text{Short-term investments} + \text{Net current receivables}) / \text{Total current liabilities} \\
 &= (\$238 + \$419) / \$5,438 \\
 &= 0.12 \text{ (rounded)}
 \end{aligned}$$



What is an acceptable acid-test ratio? That depends on the industry. In general, an acid-test ratio of 1.00 or higher is considered safe. It is not uncommon, though, for retail stores such as Sears Holdings Corporation to have low acid-test ratios. Remember, an acceptable acid-test ratio depends on the industry.

Accounts Receivable Turnover Ratio

The **accounts receivable turnover ratio** measures the number of times the company collects the average accounts receivable balance in a year. The higher the ratio, the faster the cash collections. Sears Holdings Corporation's accounts receivable turnover ratio, presented below, indicates that the business turns over its receivables 59.31 times a year.

$$\begin{aligned}\text{Accounts receivable turnover ratio} &= \text{Net credit sales} / \text{Average net accounts receivable} \\ &= \$25,146 / [(\$419 + \$429) / 2] \\ &= 59.31 \text{ times (rounded)}\end{aligned}$$

Accounts Receivable Turnover Ratio

A ratio that measures the number of times the company collects the average accounts receivable balance in a year. Net credit sales / Average net accounts receivable.

In calculating the accounts receivable turnover ratio for Sears Holdings Corporation, we use net sales instead of net credit sales. This is because most companies don't report the level of detail needed to determine net credit sales.

Days' Sales in Receivables

After making a credit sale, the next step is to collect the receivable. **Days' sales in receivables**, also called the *collection period*, indicates how many days it takes to collect the average level of accounts receivable. The number of days' sales in receivables should be close to the number of days customers are allowed to make payment when credit is extended. The shorter the collection period, the more quickly the organization can use its cash. The longer the collection period, the less cash is available for operations. Sears Holdings Corporation's days' sales in receivables can be computed as follows:

$$\begin{aligned}\text{Days' sales in receivables} &= 365 \text{ days} / \text{Accounts receivable turnover ratio} \\ &= 365 \text{ days} / 59.31 \\ &= 6 \text{ days (rounded)}\end{aligned}$$

Days' Sales in Receivables

The ratio of average net accounts receivable to one day's sales. The ratio tells how many days it takes to collect the average level of accounts receivable. 365 days / Accounts receivable turnover ratio.

On average, it takes Sears Holdings Corporation 6 days to collect its accounts receivable. However, this figure is somewhat misleading. We used net sales rather than net credit sales when calculating the accounts receivable turnover. Therefore, our calculation includes both cash and credit sales.

The length of the collection period depends on the credit terms of the sale. For example, sales on net 30 terms should be collected within approximately 30 days. When there is a discount, such as 2/10, net 30, the collection period may be shorter than 30 days. Credit terms of net 45 result in a longer collection period than 30 days.



Try It!

Lovett Company reported the following selected items at March 31, 2018 (last year's—2017—amounts also given as needed):

Accounts Payable	\$ 128,000	Accounts Receivable, net:	
Cash	104,000	March 31, 2018	\$ 108,000
Merchandise Inventory:		March 31, 2017	68,000
March 31, 2018	116,000	Cost of Goods Sold	460,000
March 31, 2017	80,000	Short-term Investments	56,000
Net Credit Sales Revenue	1,168,000	Other Current Assets	48,000
Long-term Assets	168,000	Other Current Liabilities	72,000
Long-term Liabilities	52,000		

14. Compute Lovett's (a) acid-test ratio, (b) accounts receivable turnover ratio, and (c) days' sales in receivables as of March 31, 2018.

Check your answers online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercise S8-13. [Pearson MyLab Accounting](#)

REVIEW

> Things You Should Know

1. What are common types of receivables, and how are credit sales recorded?

- A receivable is a monetary claim against a business or an individual.
- There are three major types of receivables:
 - Accounts receivable—Represent the right to receive cash in the future from customers for goods sold or for services performed.
 - Notes receivable—Represent a written promise that the customer will pay a fixed amount of principal plus interest by a certain date in the future.
 - Other receivables—A miscellaneous category that includes any other type of receivables where there is a right to receive cash in the future.
- A critical component of internal control over receivables is the separation of cash-handling and cash-accounting duties.
- A separate accounts receivable account (called a subsidiary account) must be maintained for each customer in order to account for payments received from the customer and amounts still owed.
- The sum of all balances in the subsidiary accounts receivable will equal a control account balance, Accounts Receivable.
- As a way to receive cash quicker and reduce risk of uncollectibles, businesses can accept credit cards and debit cards and/or factor or pledge their receivables.

2. How are uncollectibles accounted for when using the direct write-off method?

- Writing off uncollectible accounts when using the direct write-off method involves a debit to Bad Debts Expense and a credit to Accounts Receivable.
- Recovery of accounts previously written off is recorded by reversing the write-off entry and then recording an entry to receive the cash.
- The direct write-off method violates the matching principle and is not the method required by GAAP.

3. How are uncollectibles accounted for when using the allowance method?

- When using the allowance method, companies estimate bad debts expense at the end of the period and record an adjusting entry that debits Bad Debts Expense and credits Allowance for Bad Debts. There are three ways to estimate bad debts expense:
 - Percent-of-sales method (income statement approach)—Computes bad debts expense as a percentage of net credit sales.
 - Percent-of-receivables method (balance sheet approach)—Determines the balance of the Allowance for Bad Debts account based on a percentage of accounts receivable.
 - Aging-of-receivables method (balance sheet approach)—Determines the balance of the Allowance for Bad Debts account based on the age of individual accounts receivable.
- Writing off uncollectible accounts involves a debit to Allowance for Bad Debts and a credit to Accounts Receivable.
- Recovery of accounts previously written off is recorded by reversing the write-off entry and then recording an entry to receive the cash.
- The allowance method follows the matching principle and is required by GAAP.

4. How are notes receivable accounted for?

- Notes receivable involve interest that is computed as principal times interest rate times time.
- Interest on notes must be accrued at the end of each period, and an adjusting entry must be recorded by debiting Interest Receivable and crediting Interest Revenue.
- The receipt of cash at a note's maturity includes the principal plus interest.
- When a customer dishonors a note, the business can transfer the note receivable (plus interest earned) to an accounts receivable.

5. How do we use the acid-test ratio, accounts receivable turnover ratio, and days' sales in receivables to evaluate business performance?

- The acid-test ratio reveals whether an entity could pay all its current liabilities if they were due immediately. $(\text{Cash including cash equivalents} + \text{Short-term investments} + \text{Net current receivables}) / \text{Total current liabilities}$.
- Accounts receivable turnover ratio measures the number of times the company collects the average accounts receivable balance in a year. $\text{Net credit sales} / \text{Average net accounts receivable}$.
- The days' sales in receivables indicates how many days it takes to collect the average level of accounts receivable. $365 \text{ days} / \text{Accounts receivable turnover ratio}$.

> Check Your Understanding 8-1

Check your understanding of the chapter by completing this problem and then looking at the solution. Use this practice to help identify which sections of the chapter you need to study more.

Monarch Map Company's balance sheet at December 31, 2017, reported the following:

Accounts Receivable	\$ 60,000
Less: Allowance for bad debts	2,000

Requirements

1. How much of the receivables did Monarch expect to collect? Stated differently, what was the net realizable value of these receivables? (See Learning Objective 3)
2. Journalize, without explanations, 2018 entries for Monarch and post to the Accounts Receivable and Allowance for Bad Debts T-accounts. (See Learning Objectives 1, 3)
 - a. Total credit sales for 2018 were \$80,000 (ignore Cost of Goods Sold).
 - b. Monarch received cash payments on account during 2018 of \$74,300.
 - c. Accounts receivable identified to be uncollectible totaled \$2,700.
3. Record the adjusting entry to recognize bad debts expense using the following independent situations, and then post to the Bad Debts Expense and Allowance for Bad Debts T-accounts. (See Learning Objective 3)
 - a. 3% of credit sales were estimated to be uncollectible.
 - b. An aging of receivables indicates that \$2,200 of the receivables are estimated to be uncollectible.

> Solution

Requirement 1

$$\text{Net realizable value of receivables} = \$60,000 - \$2,000 = \$58,000$$

Requirement 2

Date	Accounts and Explanation	Debit	Credit
2018			
(a)	Accounts Receivable	80,000	
	Sales Revenue		80,000
(b)	Cash	74,300	
	Accounts Receivable		74,300
(c)	Allowance for Bad Debts	2,700	
	Accounts Receivable		2,700

Accounts Receivable				Allowance for Bad Debts	
Jan. 1, 2018, Bal.	60,000			2,000	Jan. 1, 2018, Bal.
(a)	80,000	74,300	(b)	(c) 2,700	
		2,700	(c)		
Unadj. Bal.	63,000			Unadj. Bal.	700

Requirement 3a

$$\text{Bad debts expense} = \text{Net credit sales} \times \% = \$80,000 \times 0.03 = \$2,400$$

Date	Accounts and Explanation	Debit	Credit
2018			
Dec. 31	Bad Debts Expense	2,400	
	Allowance for Bad Debts		2,400

Allowance for Bad Debts		Bad Debts Expense	
	2,000 Jan. 1, 2018, Bal.	Adj. 2,400	
(c)	2,700	Dec. 31, 2018, Bal.	2,400
Unadj. Bal.	700		
	2,400 Adj.		
	1,700 Dec. 31, 2018, Bal.		

Requirement 3b

$$\begin{aligned}\text{Bad debts expense} &= \text{Target balance} + \text{Unadj. debit balance} = \$2,200 + \$700 \\ &= \$2,900\end{aligned}$$

Date	Accounts and Explanation	Debit	Credit
2018			
Dec. 31	Bad Debts Expense	2,900	
	Allowance for Bad Debts		2,900

Allowance for Bad Debts		Bad Debts Expense	
	2,000 Jan. 1, 2018, Bal.	Adj. 2,900	
(c)	2,700	Dec. 31, 2018, Bal.	2,900
Unadj. Bal.	700		
	2,900 Adj.		
	2,200 Dec. 31, 2018, Bal.		

> Check Your Understanding 8-2

Check your understanding of the chapter by completing this problem and then looking at the solution. Use this practice to help identify which sections of the chapter you need to study more.

Suppose First Fidelity Bank engaged in the following transactions:

2018

- Apr. 1 Loaned \$8,000 to Bland, Co. Received a six-month, 10% note.
- Oct. 1 Collected the Bland note at maturity.
- Dec. 1 Loaned \$6,000 to Flores, Inc. on a 180-day, 12% note.
- 31 Accrued interest revenue on the Flores note.

2019

- May 30 Collected the Flores note at maturity.

Journalize the 2018 and 2019 transactions on First Fidelity's books. Explanations are not needed. Use a 365-day year to compute interest. Round interest calculations to the nearest dollar. First Fidelity's accounting period ends on December 31. (See Learning Objective 4)

> Solution

Date	Accounts and Explanation	Debit	Credit
2018			
Apr. 1	Notes Receivable—Bland, Co. Cash	8,000 8,000	
Oct. 1	Cash (\$8,000 + \$400) Notes Receivable—Bland, Co. Interest Revenue (\$8,000 × 0.10 × 6/12)	8,400 8,000 400	
Dec. 1	Notes Receivable—Flores, Inc. Cash	6,000 6,000	
Dec. 31	Interest Receivable Interest Revenue (\$6,000 × 0.12 × 30/365)	59 59	
2019			
May 30	Cash (\$6,000 + (\$6,000 × 0.12 × 180/365)) Notes Receivable—Flores, Inc. Interest Receivable Interest Revenue (\$6,000 × 0.12 × 150/365)	6,355 6,000 59 296	

> Key Terms

Accounts Receivable (p. 459)
Accounts Receivable Turnover Ratio (p. 483)
Acid-Test Ratio (p. 482)
Aging-of-Receivables Method (p. 472)
Allowance for Bad Debts (p. 465)
Allowance Method (p. 465)
Bad Debts Expense (p. 463)

Days' Sales in Receivables (p. 483)
Debtor (p. 459)
Direct Write-off Method (p. 463)
Dishonor a Note (p. 480)
Interest (p. 475)
Interest Period (p. 476)
Interest Rate (p. 476)
Maturity Date (p. 459)

Maturity Value (p. 476)
Net Realizable Value (p. 465)
Notes Receivable (p. 459)
Percent-of-Receivables Method (p. 469)
Percent-of-Sales Method (p. 468)
Principal (p. 475)
Receivable (p. 459)

> Quick Check

1. With good internal controls, the person who handles cash can also
 - a. account for cash payments.
 - b. account for cash receipts from customers.
 - c. issue credits to customers for sales returns.
 - d. None of the above

2. Which of the following is a limitation of the direct write-off method of accounting for uncollectibles?
 - a. The direct write-off method overstates assets on the balance sheet.
 - b. The direct write-off method does not match expenses against revenue very well.
 - c. The direct write-off method does not set up an allowance for uncollectibles.
 - d. All of the above

3. The entry to record a write-off of an uncollectible account when using the direct write-off method involves a
 - a. debit to Allowance for Bad Debts.
 - b. credit to Cash.
 - c. debit to Accounts Receivable.
 - d. debit to Bad Debts Expense.

4. Brickman Corporation uses the allowance method to account for uncollectible receivables. At the beginning of the year, Allowance for Bad Debts had a credit balance of \$1,000. During the year Brickman wrote off uncollectible receivables of \$2,100. Brickman recorded Bad Debts Expense of \$2,700. What is Brickman's year-end balance in Allowance for Bad Debts?

a. \$1,600	b. \$4,800	c. \$3,700	d. \$600
------------	------------	------------	----------

5. Brickman's ending balance of Accounts Receivable is \$19,500. Use the data in the preceding question to compute the net realizable value of Accounts Receivable at year-end.

a. \$16,800	b. \$19,500	c. \$17,400	d. \$17,900
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Learning Objective 1

Learning Objective 2

Learning Objective 2

Learning Objective 3

Learning Objective 3

Learning Objective 3

6. During the year, Bernard Company had net credit sales of \$45,000. At the end of the year, before adjusting entries, the balance in Accounts Receivable was \$12,500 (debit) and the balance in Allowance for Bad Debts was \$650 (credit). If the company uses an income statement approach to estimate bad debts at 5%, what is the ending balance in the Allowance for Bad Debts account?

- a. \$1,275 b. \$1,600 c. \$2,250 d. \$2,900

Learning Objective 4

7. At December 31 year-end, Crain Corporation has an \$8,400 note receivable from a customer. Interest of 10% has accrued for 10 months on the note. What will Crain's financial statements report for this situation at December 31?

- a. The balance sheet will report the note receivable of \$8,400.
b. The balance sheet will report the note receivable of \$8,400 and interest receivable of \$700.
c. Nothing because the business has not received the cash yet.
d. The income statement will report a note receivable of \$8,400.

Learning Objective 4

8. Using the data in the preceding question, what will the income statement for the year ended December 31 report for this situation?

- a. Nothing because the business has not received the cash yet
b. Note receivable of \$8,400
c. Interest revenue of \$700
d. Both b and c

Learning Objective 5

9. At year-end, Schultz, Inc. has cash of \$11,600, current accounts receivable of \$48,900, merchandise inventory of \$37,900, and prepaid expenses totaling \$5,100. Liabilities of \$55,900 must be paid next year. What is Schultz's acid-test ratio?

- a. 1.08
b. 0.21
c. 1.76
d. Cannot be determined from the data given

Learning Objective 5

10. At year-end, Simpson has cash of \$22,000, current accounts receivable of \$80,000, merchandise inventory of \$24,000, and prepaid expenses totaling \$4,200. Liabilities of \$64,000 must be paid next year. Assume accounts receivable had a beginning balance of \$40,000 and net credit sales for the current year totaled \$480,000. How many days did it take Simpson to collect its average level of receivables? (Assume 365 days/year. Round any interim calculations to two decimal places. Round the number of days to the nearest whole number.)

- a. 30 b. 91 c. 46 d. 61

Check your answers at the end of the chapter.

ASSESS YOUR PROGRESS

> Review Questions

1. What is the difference between accounts receivable and notes receivable?
2. List some common examples of other receivables, besides accounts receivable and notes receivable.
3. What is a critical element of internal control in the handling of receivables by a business? Explain how this element is accomplished.
4. When dealing with receivables, give an example of a subsidiary account.
5. What type of account must the sum of all subsidiary accounts be equal to?
6. What are some benefits to a business in accepting credit cards and debit cards?
7. What occurs when a business factors its receivables?
8. What occurs when a business pledges its receivables?
9. What is the expense account associated with the cost of uncollectible receivables called?
10. When is bad debts expense recorded when using the direct write-off method?
11. What are some limitations of using the direct write-off method?
12. When is bad debts expense recorded when using the allowance method?
13. When using the allowance method, how are accounts receivable shown on the balance sheet?
14. When using the allowance method, what account is debited when writing off uncollectible accounts? How does this differ from the direct write-off method?
15. When a receivable is written off under the allowance method, how does it affect the net realizable value shown on the balance sheet?
16. How does the percent-of-sales method compute bad debts expense?
17. How do the percent-of-receivables and aging-of-receivables methods compute bad debts expense?
18. What is the difference between the percent-of-receivables and aging-of-receivables methods?
19. In accounting for bad debts, how do the income statement approach and the balance sheet approach differ?
20. What is the formula to compute interest on a note receivable?
21. Why must companies record accrued interest revenue at the end of the accounting period?
22. How is the acid-test ratio calculated, and what does it signify?
23. What does the accounts receivable turnover ratio measure, and how is it calculated?
24. What does the days' sales in receivables indicate, and how is it calculated?

> Short Exercises

Learning Objective 1

S8-1 Ensuring internal control over the collection of receivables

Consider internal control over receivables collections. What job must be withheld from a company's credit department in order to safeguard its cash? If the credit department does perform this job, what can a credit department employee do to hurt the company?

Learning Objective 1

S8-2 Recording credit sales and collections

Record the following transactions for Trek Consulting. Explanations are not required.

-
- Apr. 15 Provided consulting services to Luke Jacobs and billed the customer \$1,700.
18 Provided consulting services to Sandra Collins and billed the customer \$895.
25 Received \$850 cash from Jacobs.
28 Provided consulting services to Byron Terrell and billed the customer \$645.
28 Received \$895 cash from Collins.
30 Received \$1,495 cash, \$850 from Jacobs and \$645 from Terrell.
-

Learning Objective 2

S8-3 Applying the direct write-off method to account for uncollectibles

Shawna Valley is an attorney in Los Angeles. Valley uses the direct write-off method to account for uncollectible receivables.

At April 30, 2018, Valley's accounts receivable totaled \$19,000. During May, she earned revenue of \$22,000 on account and collected \$15,000 on account. She also wrote off uncollectible receivables of \$1,100 on May 31, 2018.

Requirements

1. Use the direct write-off method to journalize Valley's write-off of the uncollectible receivables.
2. What is Valley's balance of Accounts Receivable at May 31, 2018?

Learning Objective 2

S8-4 Collecting a receivable previously written off—direct write-off method

Jazzy Joe's Music Store had trouble collecting its account receivable from Samantha Michaels. On June 19, 2018, Jazzy Joe's Music Store finally wrote off Michaels' \$700 account receivable. On December 31, Michaels sent a \$700 check to Jazzy Joe's Music Store.

Journalize the entries required for Jazzy Joe's Music Store, assuming Jazzy Joe's Music Store uses the direct write-off method.

Learning Objective 3

S8-5 Applying the allowance method to account for uncollectibles

The Accounts Receivable balance and Allowance for Bad Debts for Signature Lamp Company at December 31, 2017, was \$10,800 and \$2,000 (credit balance), respectively. During 2018, Signature Lamp Company completed the following transactions:

- a. Sales revenue on account, \$273,400 (ignore Cost of Goods Sold).
- b. Collections on account, \$223,000.
- c. Write-offs of uncollectibles, \$5,900.
- d. Bad debts expense of \$5,200 was recorded.

Requirements

1. Journalize Signature Lamp Company's transactions for 2018 assuming Signature Lamp Company uses the allowance method.
2. Post the transactions to the Accounts Receivable, Allowance for Bad Debts, and Bad Debts Expense T-accounts, and determine the ending balance of each account.
3. Show how accounts receivable would be reported on the balance sheet at December 31, 2018.

S8-6 Applying the allowance method (percent-of-sales) to account for uncollectibles

During its first year of operations, Fall Wine Tour earned net credit sales of \$311,000. Industry experience suggests that bad debts will amount to 3% of net credit sales. At December 31, 2018, accounts receivable total \$44,000. The company uses the allowance method to account for uncollectibles.

Requirements

1. Journalize Fall Wine Tour's Bad Debts Expense using the percent-of-sales method.
2. Show how to report accounts receivable on the balance sheet at December 31, 2018.

S8-7 Applying the allowance method (percent-of-receivables) to account for uncollectibles

The Accounts Receivable balance for Lake, Inc. at December 31, 2017, was \$20,000. During 2018, Lake earned revenue of \$454,000 on account and collected \$325,000 on account. Lake wrote off \$5,600 receivables as uncollectible. Industry experience suggests that uncollectible accounts will amount to 5% of accounts receivable.

Requirements

1. Assume Lake had an unadjusted \$2,700 credit balance in Allowance for Bad Debts at December 31, 2018. Journalize Lake's December 31, 2018 adjustment to record bad debts expense using the percent-of-receivables method.
2. Assume Lake had an unadjusted \$2,400 debit balance in Allowance for Bad Debts at December 31, 2018. Journalize Lake's December 31, 2018 adjustment to record bad debts expense using the percent-of-receivables method.

S8-8 Applying the allowance method (aging-of-receivables) to account for uncollectibles

Spring Garden Flowers had the following balances at December 31, 2018, before the year-end adjustments:

Accounts Receivable	Allowance for Bad Debts	
73,000		1,568

The aging of accounts receivable yields the following data:

	Age of Accounts Receivable		
	0–60 Days	Over 60 Days	Total Receivables
Accounts Receivable	\$ 67,000	\$ 6,000	\$ 73,000
Estimated percent uncollectible	× 1%	× 25%	

Learning Objective 3

Learning Objective 3

Learning Objective 3

Requirements

1. Journalize Spring's entry to record bad debts expense for 2018 using the aging-of-receivables method.
2. Prepare a T-account to compute the ending balance of Allowance for Bad Debts.

Learning Objective 4

S8-9 Computing interest amounts on notes receivable

A table of notes receivable for 2018 follows:

	Principal	Interest Rate	Interest Period During 2018
Note 1	\$ 70,000	6%	3 months
Note 2	8,000	12%	45 days
Note 3	28,000	8%	270 days
Note 4	150,000	5%	6 months

For each of the notes receivable, compute the amount of interest revenue earned during 2018. Round to the nearest dollar. (Use a 365-day year for the notes with interest periods in days and a 12-month year for notes with interest periods in months.)

Learning Objective 4

S8-10 Accounting for a note receivable

On June 6, Pilgrims Bank & Trust lent \$80,000 to Sheila Rock on a 30-day, 9% note.

Requirements

1. Journalize for Pilgrims the lending of the money on June 6.
2. Journalize the collection of the principal and interest at maturity. Specify the date. Round to the nearest dollar.

Learning Objective 4

S8-11 Accruing interest revenue and recording collection of a note

On December 1, Krauss Corporation accepted a 120-day, 6%, \$14,600 note receivable from J. Stow in exchange for his account receivable.

Requirements

1. Journalize the transaction on December 1.
2. Journalize the adjusting entry needed on December 31 to accrue interest revenue. Round to the nearest dollar.
3. Journalize the collection of the principal and interest at maturity. Specify the date. Round to the nearest dollar.

Learning Objective 4

S8-12 Recording a dishonored note receivable

McKean Corporation has a three-month, \$22,000, 6% note receivable from L. Noel that was signed on June 1, 2018. Noel defaults on the loan on September 1.

Journalize the entry for McKean to record the default of the loan.

S8-13 Using the acid-test ratio, accounts receivable turnover ratio, and days' sales in receivables to evaluate a company
Learning Objective 5

Silver Clothiers reported the following selected items at April 30, 2018 (last year's—2017—amounts also given as needed):

Accounts Payable	\$ 328,000	Accounts Receivable, net:	
Cash	573,720	April 30, 2018	\$ 11,000
Merchandise Inventory:		April 30, 2017	165,000
April 30, 2018	250,000	Cost of Goods Sold	1,200,000
April 30, 2017	210,000	Short-term Investments	148,000
Net Credit Sales Revenue	3,212,000	Other Current Assets	100,000
Long-term Assets	350,000	Other Current Liabilities	188,000
Long-term Liabilities	130,000		

Compute Silver's (a) acid-test ratio, (b) accounts receivable turnover ratio, and (c) days' sales in receivables for the year ending April 30, 2018. Evaluate each ratio value as strong or weak. Silver sells on terms of net 30. (Round days' sales in receivables to a whole number.)

> Exercises

E8-14 Defining common receivables terms
Learning Objective 1

Match the terms with their correct definition.

Terms	Definitions
1. Accounts receivable	a. The party to a credit transaction who takes on an obligation/payable.
2. Other receivables	b. The party who receives a receivable and will collect cash in the future.
3. Debtor	c. A written promise to pay a specified amount of money at a particular future date.
4. Notes receivable	d. The date when the note receivable is due.
5. Maturity date	e. A miscellaneous category that includes any other type of receivable where there is a right to receive cash in the future.
6. Creditor	f. The right to receive cash in the future from customers for goods sold or for services performed.

Learning Objective 1**E8-15 Identifying and correcting internal control weakness**

Suppose The Right Rig Dealership is opening a regional office in Omaha. Cary Regal, the office manager, is designing the internal control system. Regal proposes the following procedures for credit checks on new customers, sales on account, cash collections, and write-offs of uncollectible receivables:

- The credit department runs a credit check on all customers who apply for credit. When an account proves uncollectible, the credit department authorizes the write-off of the accounts receivable.
- Cash receipts come into the credit department, which separates the cash received from the customer remittance slips. The credit department lists all cash receipts by customer name and amount of cash received.
- The cash goes to the treasurer for deposit in the bank. The remittance slips go to the accounting department for posting to customer accounts.
- The controller compares the daily deposit slip to the total amount posted to customer accounts. Both amounts must agree.

Recall the components of internal control. Identify the internal control weakness in this situation, and propose a way to correct it.

Learning Objective 1**E8-16 Recording credit sales and collections**

Prime Corporation had the following transactions in June:

3. \$695

-
- | | |
|--------|--|
| Jun. 1 | Sold merchandise inventory on account to Cullen Company, \$1,755. |
| 6 | Sold merchandise inventory for cash, \$580. |
| 12 | Received cash from Cullen Company in full settlement of its accounts receivable. |
| 20 | Sold merchandise inventory on account to Indigo Company, \$930. |
| 22 | Sold merchandise inventory on account to Delvo Company, \$110. |
| 28 | Received cash from Indigo Company in partial settlement of its accounts receivable, \$250. |
-

Requirements

1. Journalize the transactions. Ignore Cost of Goods Sold. Omit explanations.
2. Post the transactions to the general ledger and the accounts receivable subsidiary ledger. Assume all beginning balances are \$0.
3. Verify the ending balance in the control Accounts Receivable equals the sum of the balances in the subsidiary ledger.

Learning Objectives 1, 2**E8-17 Journalizing transactions using the direct write-off method**

On June 1, 2018, High Performance Cell Phones sold \$20,000 of merchandise to Ackerman Trucking Company on account. Ackerman fell on hard times and on July 15 paid only \$7,000 of the account receivable. After repeated attempts to collect, High Performance finally wrote off its accounts receivable from Ackerman on September 5. Six months later, March 5, 2019, High Performance received Ackerman's check for \$13,000 with a note apologizing for the late payment.

Requirements

1. Journalize the transactions for High Performance Cell Phones using the direct write-off method. Ignore Cost of Goods Sold.
2. What are some limitations that High Performance will encounter when using the direct write-off method?

Use the following information to answer Exercises E8-18 and E8-19.

At January 1, 2018, Hilltop Flagpoles had Accounts Receivable of \$28,000, and Allowance for Bad Debts had a credit balance of \$3,000. During the year, Hilltop Flagpoles recorded the following:

- a. Sales of \$185,000 (\$164,000 on account; \$21,000 for cash). Ignore Cost of Goods Sold.
- b. Collections on account, \$135,000.
- c. Write-offs of uncollectible receivables, \$2,300.

E8-18 Accounting for uncollectible accounts using the allowance method (percent-of-sales) and reporting receivables on the balance sheet

Requirements

1. Journalize Hilltop's transactions that occurred during 2018. The company uses the allowance method.
2. Post Hilltop's transactions to the Accounts Receivable and Allowance for Bad Debts T-accounts.
3. Journalize Hilltop's adjustment to record bad debts expense assuming Hilltop estimates bad debts as 3% of credit sales. Post the adjustment to the appropriate T-accounts.
4. Show how Hilltop Flagpoles will report net accounts receivable on its December 31, 2018, balance sheet.

Learning Objectives 1, 3

2. AR, Dec. 31 \$54,700

E8-19 Accounting for uncollectible accounts using the allowance method (percent-of-receivables) and reporting receivables on the balance sheet

Requirements

1. Journalize Hilltop's transactions that occurred during 2018. The company uses the allowance method.
2. Post Hilltop's transactions to the Accounts Receivable and Allowance for Bad Debts T-accounts.
3. Journalize Hilltop's adjustment to record bad debts expense assuming Hilltop estimates bad debts as 10% of accounts receivable. Post the adjustment to the appropriate T-accounts.
4. Show how Hilltop Flagpoles will report net accounts receivable on its December 31, 2018, balance sheet.

Learning Objectives 1, 3

3. Bad Debts Expense \$4,770

E8-20 Accounting for uncollectible accounts using the allowance method (aging-of-receivables) and reporting receivables on the balance sheet

At December 31, 2018, the Accounts Receivable balance of Foley Distribution Service is 195,000. The Allowance for Bad Debts account has a \$7,180 debit balance. Foley Distribution Service prepares the following aging schedule for its accounts receivable:

Learning Objective 3

2. Allowance CR Bal. \$25,360

	Age of Accounts			
	1–30 Days	31–60 Days	61–90 Days	Over 90 Days
Accounts Receivable	\$ 90,000	\$ 60,000	\$ 35,000	\$ 10,000
Estimated percent uncollectible	0.2%	2.0%	6.0%	48.0%

Requirements

1. Journalize the year-end adjusting entry for bad debts on the basis of the aging schedule. Show the T-account for the Allowance for Bad Debts at December 31, 2018.
2. Show how Foley Distribution Service will report its net accounts receivable on its December 31, 2018 balance sheet.

Learning Objectives 1, 2, 3**E8-21 Journalizing transactions using the direct write-off method versus the allowance method**

During August 2018, Bingham Company recorded the following:

- Sales of \$112,900 (\$99,000 on account; \$13,900 for cash). Ignore Cost of Goods Sold.
- Collections on account, \$88,800.
- Write-offs of uncollectible receivables, \$1,110.
- Recovery of receivable previously written off, \$1,100.

Requirements

1. Journalize Bingham's transactions during August 2018, assuming Bingham uses the direct write-off method.
2. Journalize Bingham's transactions during August 2018, assuming Bingham uses the allowance method.

Learning Objectives 1, 4**E8-22 Journalizing credit sales, note receivable transactions, and accruing interest**

First Place Running Shoes reports the following:

2018

May 3 Recorded credit sales of \$92,000. Ignore Cost of Goods Sold.

Oct. 1 Loaned \$15,000 to Reed Phillip, an executive with the company, on a one-year, 14% note.

Dec. 31 Accrued interest revenue on the Phillip note.

2019

Oct. 1 Collected the maturity value of the Phillip note.

Journalize all entries required for First Place Running Shoes.

Learning Objective 4**E8-23 Journalizing note receivable transactions including a dishonored note**

On September 30, 2018, Nature Bank loaned \$84,000 to Kaley Kelsing on a one-year, 12% note. Nature's fiscal year ends on December 31.

Requirements

1. Journalize all entries for Nature Bank related to the note for 2018 and 2019.
2. Which party has a
 - a. note receivable?
 - b. note payable?
 - c. interest revenue?
 - d. interest expense?
3. Suppose that Kaley Kelsing defaulted on the note. What entry would Nature record for the dishonored note?

E8-24 Journalizing note receivable transactions

The following selected transactions occurred during 2018 and 2019 for Arabian Importers. The company ends its accounting year on June 30.

Learning Objective 4

Jul. 1, 2019 Cash DR \$17,280

2018

- Apr. 1 Loaned \$20,000 cash to Bob Jewitt on a one-year, 8% note.
- Jun. 6 Sold goods to Turf Masters, receiving a 90-day, 9% note for \$5,000. Ignore Cost of Goods Sold.
- 30 Made a single entry to accrue interest revenue on both notes.
- ? Collected the maturity value of the Turf Masters note.

2019

- Apr. 1 Collected the maturity value of the Jewitt note.

Journalize all required entries. Make sure to determine the missing maturity date. Round to the nearest dollar.

E8-25 Journalizing note receivable transactions

Like New Steam Cleaning performs services on account. When a customer account becomes four months old, Like New converts the account to a note receivable. During 2018, the company completed the following transactions:

Learning Objective 4

Oct. 31 Cash DR \$18,355

-
- Apr. 28 Performed service on account for Beach Club, \$22,000.
 - Sep. 1 Received a \$22,000, 60-day, 12% note from Beach Club in satisfaction of its past-due account receivable.
 - Oct. 31 Collected the Beach Club note at maturity.
-

Record the transactions in Like New's journal. Round to the nearest dollar.

Learning Objective 5**E8-26 Evaluating ratio data**

Pawnee Carpets reported the following amounts in its 2018 financial statements. The 2017 figures are given for comparison.

	2018	2017
Balance sheet—partial		
Current Assets:		
Cash	\$ 4,000	\$ 10,000
Short-term Investments	24,500	13,500
Accounts Receivable	\$ 61,000	\$ 74,000
Less: Allowance for Bad Debts	<u>(5,000)</u>	<u>56,000</u>
Merchandise Inventory	191,000	187,000
Prepaid Insurance	<u>5,000</u>	<u>5,000</u>
Total Current Assets	280,500	285,500
Total Current Liabilities	111,000	113,000
Income statement—partial		
Net Sales (all on account)	737,100	727,000

Requirements

1. Calculate Pawnee's acid-test ratio for 2018. (Round to two decimals.) Determine whether Pawnee's acid-test ratio improved or deteriorated from 2017 to 2018. How does Pawnee's acid-test ratio compare with the industry average of 0.80?
2. Calculate Pawnee's accounts receivable turnover ratio. (Round to two decimals.) How does Pawnee's ratio compare to the industry average accounts receivable turnover of 10?
3. Calculate the days' sales in receivables for 2018. (Round to the nearest day.) How do the results compare with Pawnee's credit terms of net 30?

Learning Objective 5**E8-27 Computing the collection period for receivables**

Groovy Media Sign Incorporated sells on account. Recently, Groovy reported the following figures:

	2018	2017
Net Credit Sales	\$ 552,160	\$ 604,500
Net Receivables at end of year	38,100	43,100

Requirements

1. Compute Groovy's days' sales in receivables for 2018. (Round to the nearest day.)
2. Suppose Groovy's normal credit terms for a sale on account are 2/10, net 30. How well does Groovy's collection period compare to the company's credit terms? Is this good or bad for Groovy?

> Problems Group A

P8-28A Accounting for uncollectible accounts using the allowance (percent-of-sales) and direct write-off methods and reporting receivables on the balance sheet

On August 31, 2018, Melrose Floral Supply had a \$165,000 debit balance in Accounts Receivable and a \$6,600 credit balance in Allowance for Bad Debts. During September, Melrose made:

- Sales on account, \$590,000. Ignore Cost of Goods Sold.
- Collections on account, \$627,000.
- Write-offs of uncollectible receivables, \$6,500.

Requirements

1. Journalize all September entries using the *allowance* method. Bad debts expense was estimated at 2% of credit sales. Show all September activity in Accounts Receivable, Allowance for Bad Debts, and Bad Debts Expense (post to these T-accounts).
2. Using the same facts, assume that Melrose used the direct write-off method to account for uncollectible receivables. Journalize all September entries using the *direct write-off* method. Post to Accounts Receivable and Bad Debts Expense, and show their balances at September 30, 2018.
3. What amount of Bad Debts Expense would Melrose report on its September income statement under each of the two methods? Which amount better matches expense with revenue? Give your reason.
4. What amount of *net* accounts receivable would Melrose report on its September 30, 2018, balance sheet under each of the two methods? Which amount is more realistic? Give your reason.

P8-29A Accounting for uncollectible accounts using the allowance method (aging-of-receivables) and reporting receivables on the balance sheet

At September 30, 2018, the accounts of East Terrace Medical Center (ETMC) include the following:

Accounts Receivable	\$ 141,000
Allowance for Bad Debts (credit balance)	3,600

During the last quarter of 2018, ETMC completed the following selected transactions:

- Sales on account, \$400,000. Ignore Cost of Goods Sold.
- Collections on account, \$335,200.
- Wrote off accounts receivable as uncollectible: Rouge, Co., \$1,500; Oscar Weiss, \$1,200; and Paradise, Inc., \$300.
- Recorded bad debts expense based on the aging of accounts receivable, as follows:

	Age of Accounts			
	1–30 Days	31–60 Days	61–90 Days	Over 90 Days
Accounts Receivable	\$ 105,000	\$ 42,000	\$ 13,000	\$ 42,800
Estimated percent uncollectible	0.2%	2%	20%	25%

Learning Objectives 1, 2, 3

1. Bad Debts Expense \$11,000

Learning Objectives 1, 3

2. Allowance CR Bal. \$8,482 at Dec. 31, 2018

Requirements

1. Open T-accounts for Accounts Receivable and Allowance for Bad Debts. Journalize the transactions (omit explanations) and post to the two accounts.
2. Show how East Terrace Medical Center should report net accounts receivable on its December 31, 2018, balance sheet.

Learning Objectives 1, 3

2. Net AR \$119,800

P8-30A Accounting for uncollectible accounts using the allowance method (percent-of-sales) and reporting receivables on the balance sheet

Richy Watches completed the following selected transactions during 2018 and 2019:

2018

- Dec. 31 Estimated that bad debts expense for the year was 1% of credit sales of \$400,000 and recorded that amount as expense. The company uses the allowance method.
- 31 Made the closing entry for bad debts expense.

2019

- Jan. 17 Sold merchandise inventory to Michael Smith, \$900, on account. Ignore Cost of Goods Sold.
- Jun. 29 Wrote off Michael Smith's account as uncollectible after repeated efforts to collect from him.
- Aug. 6 Received \$900 from Michael Smith, along with a letter apologizing for being so late. Reinstated Smith's account in full and recorded the cash receipt.
- Dec. 31 Made a compound entry to write off the following accounts as uncollectible: Bruce Kelly, \$1,200; Martha Manny, \$1,100; and Russel Weatherby, \$650.
- 31 Estimated that bad debts expense for the year was 1% on credit sales of \$550,000 and recorded the expense.
- 31 Made the closing entry for bad debts expense.

Requirements

1. The T-accounts for Allowance for Bad Debts and Bad Debts Expense have been opened for you, assuming the accounts begin with a zero balance. Record the transactions in the general journal (omit explanations), and post to the two T-accounts.
2. Assume the December 31, 2019 balance of Accounts Receivable is \$135,000. Show how net accounts receivable would be reported on the balance sheet at that date.

P8-31A Accounting for uncollectible accounts (aging-of-receivables method), notes receivable, and accrued interest revenue

Sleepy Recliner Chairs completed the following selected transactions:

2018

- Jul. 1 Sold merchandise inventory to Stan-Mart, receiving a \$41,000, nine-month, 8% note. Ignore Cost of Goods Sold.
- Oct. 31 Recorded cash sales for the period of \$24,000. Ignore Cost of Goods Sold.
- Dec. 31 Made an adjusting entry to accrue interest on the Stan-Mart note.
- 31 Made an adjusting entry to record bad debts expense based on an aging of accounts receivable. The aging schedule shows that \$13,800 of accounts receivable will not be collected. Prior to this adjustment, the credit balance in Allowance for Bad Debts is \$11,800.

2019

- Apr. 1 Collected the maturity value of the Stan-Mart note.
- Jun. 23 Sold merchandise inventory to Appeal, Corp., receiving a 60-day, 6% note for \$7,000. Ignore Cost of Goods Sold.
- Aug. 22 Appeal, Corp. dishonored its note at maturity; the business converted the maturity value of the note to an account receivable.
- Nov. 16 Loaned \$17,000 cash to Crosby, Inc., receiving a 90-day, 16% note.
- Dec. 5 Collected in full on account from Appeal, Corp.
- 31 Accrued the interest on the Crosby, Inc. note.

Record the transactions in the journal of Sleepy Recliner Chairs. Explanations are not required. (Round to the nearest dollar.)

P8-32A Accounting for notes receivable and accruing interest

Carley Realty loaned money and received the following notes during 2018.

Note	Date	Principal Amount	Interest Rate	Term
(1)	Apr. 1	\$ 6,000	7%	1 year
(2)	Sep. 30	12,000	6%	6 months
(3)	Sep. 19	18,000	8%	90 days

Requirements

- Determine the maturity date and maturity value of each note.
- Journalize the entries to establish each Note Receivable and to record collection of principal and interest at maturity. Include a single adjusting entry on December 31, 2018, the fiscal year-end, to record accrued interest revenue on any applicable note. Explanations are not required. Round to the nearest dollar.

Learning Objectives 1, 3, 4

Dec. 31, 2018 Interest Receivable
\$1,640

Learning Objective 4

1. Note 3 Dec. 18, 2018

Learning Objective 4

Dec. 31, 2018 Income Summary
CR \$74

P8-33A Accounting for notes receivable, dishonored notes, and accrued interest revenue

Consider the following transactions for CC Publishing.

2018

- Dec. 6 Received a \$18,000, 90-day, 6% note in settlement of an overdue accounts receivable from Go Go Publishing.
- 31 Made an adjusting entry to accrue interest on the Go Go Publishing note.
- 31 Made a closing entry for interest revenue.

2019

- Mar. 6 Collected the maturity value of the Go Go Publishing note.
- Jun. 30 Loaned \$11,000 cash to Lincoln Music, receiving a six-month, 20% note.
- Oct. 2 Received a \$2,400, 60-day, 20% note for a sale to Tusk Music. Ignore Cost of Goods Sold.
- Dec. 1 Tusk Music dishonored its note at maturity.
- 1 Wrote off the receivable associated with Tusk Music. (Use the allowance method.)
- 30 Collected the maturity value of the Lincoln Music note.

Journalize all transactions for CC Publishing. Round all amounts to the nearest dollar.

Learning Objective 5

1. Acid-test ratio (2018) 0.88

P8-34A Using ratio data to evaluate a company's financial position

The comparative financial statements of Norfolk Cosmetic Supply for 2018, 2017, and 2016 include the data shown here:

	2018	2017	2016
Balance sheet—partial			
Current Assets:			
Cash	\$ 70,000	\$ 60,000	\$ 50,000
Short-term investments	140,000	170,000	120,000
Accounts Receivable, Net	280,000	240,000	260,000
Merchandise Inventory	355,000	330,000	310,000
Prepaid Expenses	70,000	35,000	35,000
Total Current Assets	915,000	835,000	775,000
Total Current Liabilities	560,000	630,000	640,000
Income statement—partial			
Net Sales (all on account)	5,890,000	5,130,000	4,210,000

Requirements

1. Compute these ratios for 2018 and 2017:
 - a. Acid-test ratio (Round to two decimals.)
 - b. Accounts receivable turnover (Round to two decimals.)
 - c. Days' sales in receivables (Round to the nearest whole day.)
2. Considering each ratio individually, which ratios improved from 2017 to 2018 and which ratios deteriorated? Is the trend favorable or unfavorable for the company?

> Problems Group B

P8-35B Accounting for uncollectible accounts using the allowance (percent-of-sales) and direct write-off methods and reporting receivables on the balance sheet

On August 31, 2018, Camilla Floral Supply had a \$165,000 debit balance in Accounts Receivable and a \$6,600 credit balance in Allowance for Bad Debts. During September, Camilla made the following transactions:

- Sales on account, \$540,000. Ignore Cost of Goods Sold.
- Collections on account, \$581,000.
- Write-offs of uncollectible receivables, \$6,500.

Requirements

1. Journalize all September entries using the *allowance* method. Bad debts expense was estimated at 3% of credit sales. Show all September activity in Accounts Receivable, Allowance for Bad Debts, and Bad Debts Expense (post to these T-accounts).
2. Using the same facts, assume that Camilla used the direct write-off method to account for uncollectible receivables. Journalize all September entries using the *direct write-off* method. Post to Accounts Receivable and Bad Debts Expense, and show their balances at September 30, 2018.
3. What amount of Bad Debts Expense would Camilla report on its September income statement under each of the two methods? Which amount better matches expense with revenue? Give your reason.
4. What amount of *net* accounts receivable would Camilla report on its September 30, 2018, balance sheet under each of the two methods? Which amount is more realistic? Give your reason.

P8-36B Accounting for uncollectible accounts using the allowance method (aging-of-receivables) and reporting receivables on the balance sheet

At September 30, 2018, the accounts of Spring Mountain Medical Center (SMMC) include the following:

Accounts Receivable	\$145,000
Allowance for Bad Debts (credit balance)	3,400

Learning Objectives 1, 2, 3

1. Sep. 30 Bal. Accounts Receivable \$91,000

Learning Objectives 1, 3

2. Dec. 31, 2018 Allowance CR Bal. \$11,401

During the last quarter of 2018, SMMC completed the following selected transactions:

- Sales on account, \$475,000. Ignore Cost of Goods Sold.
- Collections on account, \$451,800.
- Wrote off accounts receivable as uncollectible: Randall, Co., \$1,800; Oliver Welch, \$900; and Rain, Inc., \$500
- Recorded bad debts expense based on the aging of accounts receivable, as follows:

	Age of Accounts			
	1–30 Days	31–60 Days	61–90 Days	Over 90 Days
Accounts Receivable	\$ 97,000	\$ 37,000	\$ 17,000	\$ 14,000
Estimated percent uncollectible	0.3%	3%	30%	35%

Requirements

1. Open T-accounts for Accounts Receivable and Allowance for Bad Debts. Journalize the transactions (omit explanations) and post to the two accounts.
2. Show how Spring Mountain Medical Center should report net accounts receivable on its December 31, 2018, balance sheet.

Learning Objectives 1, 3

1. Dec. 31, 2018, Allowance CR
Bal. \$12,300

P8-37B Accounting for uncollectible accounts using the allowance method (percent-of-sales) and reporting receivables on the balance sheet

Alpha Watches completed the following selected transactions during 2018 and 2019:

2018

- Dec. 31 Estimated that bad debts expense for the year was 1% of credit sales of \$480,000 and recorded that amount as expense. The company uses the allowance method.
31 Made the closing entry for bad debts expense.

2019

- Jan. 17 Sold merchandise inventory to Matt Jayco, \$800, on account. Ignore Cost of Goods Sold.
Jun. 29 Wrote off Matt Jayco's account as uncollectible after repeated efforts to collect from him.
Aug. 6 Received \$800 from Matt Jayco, along with a letter apologizing for being so late. Reinstated Jayco's account in full and recorded the cash receipt.
Dec. 31 Made a compound entry to write off the following accounts as uncollectible: Bill Kappy, \$1,200; Martha Manny, \$1,000; and Rick Johnson, \$100.
31 Estimated that bad debts expense for the year was 1% on credit sales of \$530,000 and recorded the expense.
31 Made the closing entry for bad debts expense.

Requirements

1. Open T-accounts for Allowance for Bad Debts and Bad Debts Expense, assuming the accounts begin with a zero balance. Record the transactions in the general journal (omit explanations), and post to the two T-accounts.
2. Assume the December 31, 2019 balance of Accounts Receivable is \$133,000. Show how net accounts receivable would be reported on the balance sheet at that date.

P8-38B Accounting for uncollectible accounts (aging-of-receivables method), notes receivable, and accrued interest revenue

Quality Recliner Chairs completed the following selected transactions:

Learning Objectives 1, 3, 4

Dec. 31, 2018 Bad Debts Expense
\$4,200

2018

- Jul. 1 Sold merchandise inventory to Gray Mart, receiving a \$42,000, nine-month, 14% note. Ignore Cost of Goods Sold.
- Oct. 31 Recorded cash sales for the period of \$23,000. Ignore Cost of Goods Sold.
- Dec. 31 Made an adjusting entry to accrue interest on the Gray Mart note.
- 31 Made an adjusting entry to record bad debts expense based on an aging of accounts receivable. The aging schedule shows that \$14,200 of accounts receivable will not be collected. Prior to this adjustment, the credit balance in Allowance for Bad Debts is \$11,200.

2019

- Apr. 1 Collected the maturity value of the Gray Mart note.
- Jun. 23 Sold merchandise inventory to Ambiance, Corp., receiving a 60-day, 12% note for \$13,000. Ignore Cost of Goods Sold.
- Aug. 22 Ambiance, Corp. dishonored its note at maturity; the business converted the maturity value of the note to an account receivable.
- Nov. 16 Loaned \$24,000 cash to Creed, Inc., receiving a 90-day, 10% note.
- Dec. 5 Collected in full on account from Ambiance, Corp.
- 31 Accrued the interest on the Creed, Inc. note.

Record the transactions in the journal of Quality Recliner Chairs. Explanations are not required. (Round to the nearest dollar.) (Record debits first, then credits. Exclude explanations from journal entries. For notes stated in days, use a 365-day year.)

P8-39B Accounting for notes receivable and accruing interest

Bethany Realty loaned money and received the following notes during 2018.

Learning Objective 4

1. Note 2 Maturity Value \$20,430

Note	Date	Principal Amount	Interest Rate	Term
(1)	Apr. 1	\$ 24,000	10%	1 year
(2)	Sep. 30	14,000	7%	6 months
(3)	Jun. 19	15,000	5%	180 days

Requirements

- Determine the maturity date and maturity value of each note.
- Journalize the entries to establish each Note Receivable and to record collection of principal and interest at maturity. Include a single adjusting entry on December 31, 2018, the fiscal year-end, to record accrued interest revenue on any applicable note. Explanations are not required. Round to the nearest dollar.

Learning Objective 4

March 6, 2019 Interest Revenue
\$128

P8-40B Accounting for notes receivable, dishonored notes, and accrued interest revenue

Consider the following transactions for Smith Publishing.

2018

- Dec. 6 Received a \$6,000, 90-day, 8% note in settlement of an overdue accounts receivable from BoE Publishing.
- 31 Made an adjusting entry to accrue interest on the BoE Publishing note.
- 31 Made a closing entry for interest revenue.

2019

- Mar. 6 Collected the maturity value of the BoE Publishing note.
- Jun. 30 Loaned \$15,000 cash to Jonathan's Publishing, receiving a six-month, 12% note.
- Oct. 2 Received a \$4,000, 60-day, 12% note for a sale to Voice Publishing. Ignore Cost of Goods Sold.
- Dec. 1 Voice Publishing dishonored its note at maturity.
- 1 Wrote off the receivable associated with Voice Publishing. (Use the allowance method.)
- 30 Collected the maturity value of the Jonathan's Publishing note.

Journalize all transactions for Smith's Publishing. Round all amounts to the nearest dollar. (For notes stated in days, use a 365-day year. Round your final answers to the nearest whole dollar. Record debits first, then credits. Exclude explanations from journal entries.)

Learning Objective 5

1. Days' sales in receivables (2018)
18 days

P8-41B Using ratio data to evaluate a company's financial position

The comparative financial statements of Perfection Cosmetic Supply for 2018, 2017, and 2016 include the data shown here:

	2018	2017	2016
Balance sheet—partial			
Current Assets:			
Cash	\$ 95,000	\$ 50,000	\$ 40,000
Short-term investment	125,000	185,000	115,000
Accounts Receivable, Net	265,000	245,000	255,000
Merchandise Inventory	345,000	315,000	300,000
Prepaid Expenses	80,000	50,000	60,000
Total Current Assets	<u>910,000</u>	<u>845,000</u>	<u>770,000</u>
Total Current Liabilities	550,000	610,000	665,000
Income statement—partial			
Net Sales (all on account)	5,850,000	5,140,000	4,240,000

Requirements

- Compute these ratios for 2018 and 2017:
 - Acid-test ratio (Round to two decimals.)
 - Accounts receivable turnover (Round to two decimals.)
 - Days' sales in receivables (Round to the nearest whole day.)
- Considering each ratio individually, which ratios improved from 2017 to 2018 and which ratios deteriorated? Is the trend favorable or unfavorable for the company?

CRITICAL THINKING

> Using Excel

P8-42 Using Excel for Aging Accounts Receivable

Download an Excel template for this problem online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

The Lake Lucerne Company uses the allowance method of estimating bad debts expense. An aging schedule is prepared in order to calculate the balance in the allowance account. The percentage uncollectible is calculated as follows:

1–30 Days	1%
31–60 Days	2%
61–90 Days	5%
91–365 Days	50%

After 365 days, the account is written off.

Requirements

1. Calculate the number of days each receivable is outstanding.
2. Complete the Schedule of Accounts Receivable.
3. Journalize the adjusting entry for Bad Debts Expense.

> Continuing Problem

P8-43 Accounting for uncollectible accounts using the allowance method

This problem continues the Let's Bike Company situation from Chapter 7. Let's Bike Company has experienced rapid growth in its first few months of operations and has had a significant increase in customers renting bikes and purchasing backpacks. Many of these customers are asking for credit terms. Cho and Lee, stockholders and company managers, have decided that it is time to review their business transactions and update some of their business practices. Their first step is to make decisions about handling accounts receivable.

So far, year to date credit sales have been \$36,000. A review of outstanding receivables resulted in the following aging schedule:

Age of Accounts as of June 30, 2019					
Customer Name	1–30 Days	31–60 Days	61–90 Days	Over 90 Days	Total Balance
Alpha Center	\$ 320				\$ 320
Diamond Backpackers	100	\$ 80			180
Forest Explorer				\$ 490	490
Island Associates	725				725
Pack Your Trip			\$ 290		290
Sports & Fitness Company	455				455
Unicorn's Center	820	160			980
Yoga Club	120	120	120		360
Totals	\$ 2,540	\$ 360	\$ 410	\$ 490	\$ 3,800

Requirements

1. The company wants to use the allowance method to estimate bad debts. Determine the estimated bad debts expense under the following methods at June 30, 2019. Assume a zero beginning balance for Allowance for Bad Debts. Round to the nearest dollar.
 - a. Percent-of-sales method, assuming 2.5% of credit sales will not be collected.
 - b. Percent-of-receivables method, assuming 24% of receivables will not be collected.
 - c. Aging-of-receivables method, assuming 10% of invoices 1–30 days will not be collected, 15% of invoices 31–60 days, 50% of invoices 61–90 days, and 80% of invoices over 90 days.
2. Journalize the entry at June 30, 2019, to adjust for bad debts expense using the aging-of-receivable method.
3. Journalize the entry at June 30, 2019, to record the write-off of the Forest Explorer invoice.
4. At June 30, 2019, open T-accounts for Accounts Receivable and Allowance for Bad Debts before Requirements 2 and 3. Post entries from Requirements 2 and 3 to those accounts. Assume a zero beginning balance for Allowance for Bad Debts.
5. Show how Let's Bike Company will report net accounts receivable on the balance sheet on June 30, 2019.

> Tying It All Together Case 8-1

Before you begin this assignment, review the *Tying It All Together* feature in the chapter. It will also be helpful if you review **Sears Holdings Corporation's** 2015 annual report (<https://www.sec.gov/Archives/edgar/data/1310067/000131006716000059/shld201510k.htm>).

Sears Holdings Corporation is the parent company of Kmart Holding Corporation and Sears, Roebuck and Co. The corporation operates more than 1,600 retail stores in the United States and offers online shopping through both sears.com and kmart.com.

Requirements

1. On which financial statement would you find Accounts Receivable?
2. What was the amount of Accounts Receivable as of January 30, 2016? As of January 31, 2015?
3. Review the notes to the financial statements and read the note labeled Allowance for Doubtful Accounts in Note 1—Summary of Significant Accounting Policies. What was the amount of Allowance for Doubtful Accounts as of January 30, 2016? As of January 31, 2015?
4. Using the information from requirements 2 and 3, determine the gross amount of Accounts Receivable as of January 30, 2016. As of January 31, 2015.
5. Find Schedule II—Valuation and Qualifying Accounts included in the notes to the financial statements. Draw a T-account that details the changes in the Allowance for Doubtful Accounts account for 2015. What would additions charged to costs and expenses represent? What would deductions from the account represent?

> Decision Cases

Decision Case 8-1

Weddings on Demand sells on account and manages its own receivables. Average experience for the past three years has been as follows:

Sales	\$ 350,000
Cost of Goods Sold	210,000
Bad Debts Expense	4,000
Other Expenses	61,000

Unhappy with the amount of bad debts expense she has been experiencing, Aledia Sanchez, controller, is considering a major change in the business. Her plan would be to stop selling on account altogether but accept either cash, credit cards, or debit cards from her customers. Her market research indicates that if she does so, her sales will increase by 10% (i.e., from \$350,000 to \$385,000), of which \$200,000 will be credit or debit card sales and the rest will be cash sales. With a 10% increase in sales, there will also be a 10% increase in Cost of Goods Sold. If she adopts this plan, she will no longer have bad debts expense, but she will have to pay a fee on debit/credit card transactions of 2% of applicable sales. She also believes this plan will allow her to save \$5,000 per year in other operating expenses.

Should Sanchez start accepting credit cards and debit cards? Show the computations of net income under her present arrangement and under the plan.

Decision Case 8-2

Pauline's Pottery has always used the direct write-off method to account for uncollectibles. The company's revenues, bad debt write-offs, and year-end receivables for the most recent year follow:

Year	Revenues	Write-offs	Receivables at Year-end
2018	\$ 150,000	\$ 3,900	\$ 14,000

The business is applying for a bank loan, and the loan officer requires figures based on the allowance method of accounting for bad debts. In the past, bad debts have run about 4% of revenues.

Requirements

Pauline must give the banker the following information:

- How much more or less would net income be for 2018 if Pauline's Pottery were to use the allowance method for bad debts? Assume Pauline uses the percent-of-sales method.
- How much of the receivables balance at the end of 2018 does Pauline's Pottery actually expect to collect? (Disregard beginning account balances for the purpose of this question.)
- Explain why net income is more or less using the allowance method versus the direct write-off method for uncollectibles.

> Fraud Case 8-1

Dylan worked for a propane gas distributor as an accounting clerk in a small Midwestern town. Last winter, his brother Mike lost his job at the machine plant. By January, temperatures were sub-zero, and Mike had run out of money. Dylan saw that Mike's account was overdue, and he knew Mike needed another delivery to heat his home. He decided to credit Mike's account and debit the balance to the parts inventory because he knew the parts manager, the owner's son, was incompetent and would never notice the extra entry. Months went by, and Dylan repeated the process until an auditor ran across the charges by chance. When the owner fired Dylan, he said, "If you had only come to me and told me about Mike's situation, we could have worked something out."

Requirements

- What can a business like this do to prevent employee fraud of this kind?
- What effect would Dylan's actions have on the balance sheet? The income statement?
- How much discretion does a business have with regard to accommodating hardship situations?

> Financial Statement Case 8-1

Use **Target Corporation's** Fiscal 2015 Annual Report and the Note 9 data on "Credit Card Receivables Transaction" to answer the following questions. Visit <http://www.pearsonglobaleditions.com/Sitemap/Horngren/> to view a link to Target Corporation's annual report.

Requirements

1. How much accounts receivable did Target report on its balance sheet as of January 30, 2016? As of January 31, 2015?
2. Target accepts customer payments via Target brand credit cards. Refer to Note 9, "Credit Card Receivables Transaction." How does Target account for these credit card sales?
3. Refer to Note 9. What are the advantages to Target in handling Target brand credit card transactions as it does? What are Target's responsibilities concerning these credit cards?
4. Compute Target's acid-test ratio as of January 30, 2016 and January 31, 2015. Did the ratio improve or deteriorate? For each date, if all the current liabilities came due immediately, could Target pay them?

Pearson MyLab Accounting

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> Quick Check Answers

1. a 2. d 3. d 4. a 5. d 6. d 7. b 8. c 9. a 10. c

9

Plant Assets, Natural Resources, and Intangibles



What Do I Do with This Equipment?

Jerry Drake has been working hard at a new landscaping business for several months. Things are great—sales are increasing every month, and the customer base is increasing. So far, Jerry has been renting lawn equipment or borrowing equipment from his friends. Jerry is now considering buying several new lawn mowers, trimmers, and leaf blowers.

Jerry is trying to figure out how to record the purchase of these items on his books. Should he expense them all or set up asset accounts for each of the items? Jerry is also considering how long each item will last before he needs to purchase new equipment. He knows that his accountant will ask him about depreciation. She

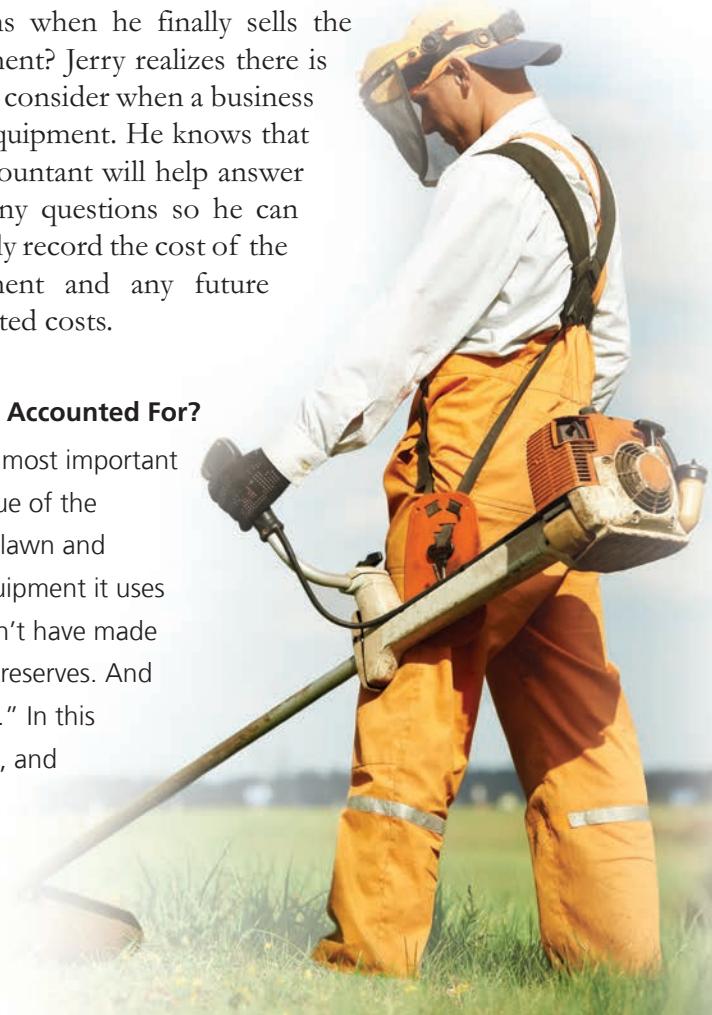
has told him there are several methods he should consider. Jerry knows he wants a depreciation method that will match the cost of the equipment with the revenue that the business earns.

In addition, Jerry plans on keeping the equipment as long as he can, which means that he will be making repairs and maintaining the equipment. He is wondering how the cost of the repairs should be recorded. And what happens when he finally sells the equipment? Jerry realizes there is a lot to consider when a business buys equipment. He knows that his accountant will help answer his many questions so he can properly record the cost of the equipment and any future associated costs.



How Are Plant Assets, Natural Resources, and Intangibles Accounted For?

Plant assets, natural resources, and intangibles are some of the most important assets on the balance sheet. These assets help create the revenue of the business. For example, TruGreen, a company that specializes in lawn and landscape services, wouldn't earn a profit without the lawn equipment it uses to service its customers' lawns. ExxonMobil Corporation wouldn't have made a \$16.2 billion profit in 2015 without its natural resource of oil reserves. And we are all familiar with **McDonald's** trademark "golden arches." In this chapter, we discuss how to record the purchase, cost allocation, and disposal of these assets.





Chapter 9 Learning Objectives



- | | |
|---|--|
| <ol style="list-style-type: none"> 1 Measure the cost of property, plant, and equipment 2 Account for depreciation using the straight-line, units-of-production, and double-declining-balance methods 3 Journalize entries for the disposal of plant assets 4 Account for natural resources | <ol style="list-style-type: none"> 5 Account for intangible assets 6 Use the asset turnover ratio to evaluate business performance 7 Journalize entries for the exchange of plant assets (Appendix 9A) |
|---|--|

HOW DOES A BUSINESS MEASURE THE COST OF PROPERTY, PLANT, AND EQUIPMENT?

Property, plant, and equipment (PP&E) are long-lived, tangible assets used in the operations of a business. Examples include land, buildings, equipment, furniture, and automobiles. Often, property, plant, and equipment are referred to as *plant assets*, *operational assets*, or *fixed assets* in financial statements. Many businesses use the heading Property, Plant, and Equipment on their classified balance sheets when reporting on these assets. However, the term *plant assets* is commonly used in conversation. We will use the terms interchangeably.

Plant assets are unique from other assets, such as office supplies, because plant assets are long term (lasting several years). This requires a business to allocate the cost of the asset over the years that the asset is expected to be used. This allocation of a plant asset's cost over its useful life is called **depreciation** and follows the matching principle. The matching principle ensures that all expenses are matched against the revenues of the period. Because plant assets are used over several years, a business will record a portion of the cost of the asset as an expense in each of those years. All plant assets except land are depreciated. We record no depreciation for land because it does not have a definitive or clearly estimable life, so it is difficult to allocate the cost of land.

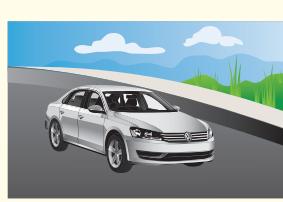
Plant assets are used in the operations of the business. This means that they are not specifically acquired for resale, but instead they are used to help create the business's revenue. For example, a business that has a vacant building that is not currently being used would classify this asset as a long-term investment instead of as a plant asset. This is because the vacant building is sitting idle and not currently being used in the operations of the business.

Exhibit 9-1 summarizes the life cycle of a plant asset in a business. The business begins by acquiring the asset and recording the asset on its books. This involves determining the

Exhibit 9-1 | Life Cycle of a Plant Asset



1. Acquisition of asset



2. Usage of asset



3. Disposal of asset

Learning Objective 1

Measure the cost of property, plant, and equipment

Property, Plant, and Equipment (PP&E)

Long-lived, tangible assets, such as land, buildings, and equipment, used in the operation of a business.

Depreciation

The process by which businesses spread the allocation of a plant asset's cost over its useful life.



asset cost that is reported on the balance sheet. As the business uses the asset, it must record depreciation expense. In addition, the business also incurs additional expenses (such as repairs and maintenance) related to the asset. And lastly, when the asset has reached the end of its useful life, the business disposes of the asset. Each of these stages in the life of a plant asset must be recorded on the business's books.

Cost Principle

A principle that states that acquired assets and services should be recorded at their actual cost.

Plant assets are recorded at historical cost—the amount paid for the asset. This follows the **cost principle**, which states that acquired assets (and services) should be recorded at their actual cost. The *actual cost of a plant asset* is its purchase price plus taxes, purchase commissions, and all other amounts paid to ready the asset for its intended use. Let's begin by reviewing the different categories of plant assets.

Land and Land Improvements

The cost of land includes the following amounts paid by the purchaser:

- Purchase price
- Brokerage commission
- Survey and legal fees
- Delinquent property taxes
- Taxes assessed to transfer the ownership (title) on the land
- Cost of clearing the land and removing unwanted buildings

The cost of land does *not* include the following costs:

- Fencing
- Paving
- Sprinkler systems
- Lighting
- Signs

These separate plant assets (fencing, paving, and so on) are called **land improvements**.

Unlike land, land improvements are subject to depreciation.

Suppose Smart Touch Learning needs property and purchases land on August 1, 2019, for \$50,000 with a note payable for the same amount. The company also pays cash as follows: \$4,000 in delinquent property taxes, \$2,000 in transfer taxes, \$5,000 to remove an old building, and a \$1,000 survey fee. What is the company's cost of this land? Exhibit 9-2 shows all the costs incurred to bring the land to its intended use.

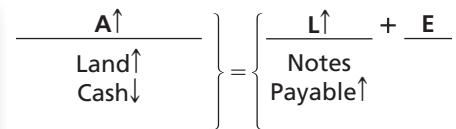
Exhibit 9-2 | Measuring the Cost of Land

Purchase price of land		\$ 50,000
Add related costs:		
Property taxes	\$ 4,000	
Transfer taxes	2,000	
Removal of building	5,000	
Survey fee	1,000	12,000
Total cost of land		<u><u>\$ 62,000</u></u>



The entry to record the purchase of the land on August 1, 2019, follows:

Date	Accounts and Explanation	Debit	Credit
Aug. 1	Land	62,000	
	Notes Payable		50,000
	Cash		12,000
<i>To record purchase of land with cash and note payable.</i>			

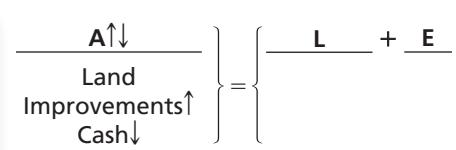


We would say that Smart Touch Learning *capitalized* the cost of the land at \$62,000.

Capitalized means that an asset account was debited (increased) because the company acquired an asset. So, for our land example, Smart Touch Learning debited the Land account for \$62,000, the capitalized cost of the asset.

Suppose Smart Touch Learning then pays \$20,000 for fences, paving, lighting, and signs on August 15, 2019. The following entry records the cost of these land improvements:

Date	Accounts and Explanation	Debit	Credit
Aug. 15	Land Improvements	20,000	
	Cash		20,000
<i>To record purchase of land improvements for cash.</i>			



Land and land improvements are two entirely separate assets. Recall that land is not depreciated. However, the cost of land improvements *is* depreciated over that asset's useful life.

Buildings

The cost of a building depends on whether the company is constructing the building itself or is buying an existing one. These costs include the following:

Constructing a Building	Purchasing an Existing Building
<ul style="list-style-type: none"> • Architectural fees • Building permits • Contractor charges • Payments for materials, labor, and miscellaneous costs 	<ul style="list-style-type: none"> • Purchase price • Costs to renovate the building to ready the building for use, which may include any of the charges listed under the "Constructing a Building" column

Machinery and Equipment

The cost of machinery and equipment includes the following:

- Purchase price (less any discounts)
- Transportation charges
- Insurance while in transit
- Sales tax and other taxes
- Purchase commission
- Installation costs
- Testing costs (prior to use of the asset)

Capitalize

Recording the acquisition of land, building, or other assets by debiting (increasing) an asset account.



After the asset is up and running, the company no longer capitalizes the cost of insurance, taxes, ordinary repairs, and maintenance to the Equipment account. From that point on, insurance, taxes, repairs, and maintenance costs are recorded as expenses.

Furniture and Fixtures

Furniture and fixtures include desks, chairs, file cabinets, display racks, shelving, and so forth. The cost of furniture and fixtures includes the basic cost of each asset (less any discounts), plus all other costs to ready the asset for its intended use. For example, for a desk, this may include the cost to ship the desk to the business and the cost paid to a laborer to assemble the desk.

Lump-Sum Purchase

A company may pay a single price for several assets as a group—a lump-sum purchase (sometimes called a *basket purchase*). For example, Smart Touch Learning may pay a single price for land and a building. For accounting purposes, the company must identify the cost of each asset purchased. The total cost paid (100%) is divided among the assets according to their relative market values. This is called the **relative-market-value method**.

Relative-Market-Value Method
A method of allocating the total cost (100%) of multiple assets purchased at one time. Total cost is divided among the assets according to their relative market values.

Suppose Smart Touch Learning paid a combined purchase price of \$100,000 on August 1, 2019, for the land and building. An appraisal indicates that the land's market value is \$30,000, and the building's market value is \$90,000. It is clear that the company got a good deal, paying less than fair market value, which is \$120,000 for the combined assets. But how will the accountant allocate the \$100,000 paid for both assets?

First, calculate the ratio of each asset's market value to the total market value for both assets. The total appraised value is \$120,000.

$$\begin{aligned}\text{Total market value} &= \text{Land market value} + \text{Building market value} \\ &= \$30,000 + \$90,000 \\ &= \$120,000\end{aligned}$$

The land makes up 25% of the total market value and the building 75%, as follows:

$$\begin{aligned}\text{Percentage of total value} &= \text{Land market value} / \text{Total market value} \\ &= \$30,000 / \$120,000 \\ &= 25\% \\ \text{Percentage of total value} &= \text{Building market value} / \text{Total market value} \\ &= \$90,000 / \$120,000 \\ &= 75\%\end{aligned}$$

For Smart Touch Learning, the land is assigned the cost of \$25,000 and the building is assigned the cost of \$75,000. The calculations follow:

Asset	Market Value	Percentage of Total Value	× Total Purchase Price	= Assigned Cost of Each Asset
Land	\$ 30,000	\$30,000 / \$120,000 = 25%	× \$100,000	= \$ 25,000
Building	90,000	\$90,000 / \$120,000 = 75%	× \$100,000	= 75,000
Total	<u><u>\$ 120,000</u></u>	<u><u>100%</u></u>		<u><u>\$ 100,000</u></u>



Suppose the company purchased the assets by signing a note payable. The entry to record the purchase of the land and building is as follows:

Date	Accounts and Explanation	Debit	Credit
Aug. 1	Land	25,000	
	Building	75,000	
	Notes Payable		100,000
<i>To record purchase of land and building in exchange for note payable.</i>			

$$\frac{A \uparrow}{\text{Land} \uparrow \text{Building} \uparrow} = \left\{ \begin{array}{l} L \uparrow \\ \text{Notes} \\ \text{Payable} \uparrow \end{array} \right\} + E$$

Capital and Revenue Expenditures

Accountants divide spending on plant assets after the acquisition into two categories:

- Capital expenditures
- Revenue expenditures

A **capital expenditure** is debited to an asset account because it increases the asset's capacity or efficiency or extends the asset's useful life. A capital expenditure is also called a *balance sheet expenditure* because the cost of the expenditure is reported on the balance sheet as an asset.

Examples of capital expenditures include the purchase price plus all the other costs to bring an asset to its intended use, as discussed in the preceding sections. Also, an **extraordinary repair** is a capital expenditure because it extends the asset's capacity or useful life. An example of an extraordinary repair would be spending \$3,000 to rebuild the engine on a five-year-old truck. This extraordinary repair would extend the asset's life past the normal expected life. As a result, its cost would be debited to the asset account for the truck as follows:

Date	Accounts and Explanation	Debit	Credit
	Truck	3,000	
	Cash		3,000
<i>To record cost of rebuilding engine on truck.</i>			

$$\frac{A \downarrow}{\text{Truck} \uparrow \text{Cash} \downarrow} = \left\{ \begin{array}{l} L \\ + \\ E \end{array} \right\}$$

Expenses incurred to maintain the asset in working order, such as repair or maintenance expense, are *not* debited to an asset account. Examples include the costs of maintaining equipment, such as repairing the air conditioner on a truck, changing the oil filter, and replacing its tires. These ordinary repairs are called **revenue expenditures** and are debited to an expense account, such as Repairs and Maintenance Expense. Revenue expenditures, often called *income statement expenditures*, do not increase the capacity or efficiency of an asset or extend its useful life and are reported on the income statement as an expense in the period incurred.

Suppose that Smart Touch Learning paid \$500 cash to replace tires on the truck. This expenditure does not extend the useful life of the truck or increase its efficiency. The company's accounting clerk records this transaction as a revenue expenditure as shown:

Date	Accounts and Explanation	Debit	Credit
	Repairs and Maintenance Expense	500	
	Cash		500
<i>To record repairs and maintenance costs incurred.</i>			

$$\frac{A \downarrow}{\text{Cash} \downarrow} = \left\{ \begin{array}{l} L \\ + \\ E \downarrow \\ \text{Repairs and} \\ \text{Maintenance} \\ \text{Expense} \uparrow \end{array} \right\}$$

Capital Expenditure

An expenditure that increases the capacity or efficiency of a plant asset or extends its useful life. Capital expenditures are debited to an asset account.

Extraordinary Repair

Repair work that generates a capital expenditure because it extends the asset's life past the normal expected life.

Revenue Expenditure

An expenditure that does not increase the capacity or efficiency of an asset or extend its useful life. Revenue expenditures are debited to an expense account.



Exhibit 9-3 shows some capital expenditures and revenue expenditures for a delivery truck.

Exhibit 9-3 | Delivery Truck Expenditures—Capital Expenditure and Revenue Expenditure

CAPITAL EXPENDITURE: Debit an Asset Account	REVENUE EXPENDITURE: Debit an Expense Account
<i>Capital Expenditures:</i> Major engine or transmission overhaul Modification for new use Addition to storage capacity Anything that increases the life of the asset	<i>Revenue Expenditures:</i> Repair of transmission or engine Oil change, lubrication, and so on Replacement of tires or windshield Paint job

Treating a capital expenditure as an expense, or vice versa, creates an accounting error. Suppose a business replaces the engine in the truck. This would be an extraordinary repair because it increases the truck's life. If the company expenses the cost by debiting Repairs and Maintenance Expense rather than capitalizing it (debiting the asset), the company would be making an accounting error. This error has the following effects:

- Overstates Repairs and Maintenance Expense on the income statement
- Understates net income on the income statement
- Understates Retained Earnings (stockholders' equity) on the balance sheet
- Understates the Truck account (asset) on the balance sheet

Incorrectly capitalizing an expense creates the opposite error. Assume a minor repair, such as replacing the water pump on the truck, was incorrectly debited to the asset account. The error would result in expenses being understated and net income being overstated on the income statement. Additionally, the cost of the truck would be overstated on the balance sheet by the amount of the repair bill.

Try It!

- Budget Banners pays \$200,000 cash for a group purchase of land, building, and equipment. At the time of acquisition, the land has a market value of \$22,000, the building \$187,000, and the equipment \$11,000. Journalize the lump-sum purchase.

Check your answer online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercises S9-1 and S9-2. [Pearson MyLab Accounting](#)

WHAT IS DEPRECIATION, AND HOW IS IT COMPUTED?

Learning Objective 2

Account for depreciation using the straight-line, units-of-production, and double-declining-balance methods

As we learned earlier, depreciation is the allocation of a plant asset's cost to expense over its useful life. Depreciation matches the expense against the revenue generated from using the asset to measure net income.

All assets, except land, wear out as they are used. For example, a business's delivery truck can only go so many miles before it is worn out. As the truck is driven, this use is part of what causes depreciation. Additionally, physical factors, like age and weather, can cause depreciation of assets.



Some assets, such as computers and software, may become *obsolete* before they wear out. An asset is **obsolete** when a newer asset can perform the job more efficiently. As a result, an asset's useful life may be shorter than its physical life. In all cases, the asset's cost is depreciated over its useful life.

Now that we have discussed causes of depreciation, let's discuss what depreciation is *not*.

1. *Depreciation is not a process of valuation.* Businesses do not record depreciation based on changes in the asset's market value.
2. *Depreciation does not mean that the business sets aside cash to replace an asset when it is used up.* Depreciation has nothing to do with cash.

Obsolete

An asset is considered obsolete when a newer asset can perform the job more efficiently.

Factors in Computing Depreciation

Depreciation of a plant asset is based on three main factors:

1. Capitalized cost
2. Estimated useful life
3. Estimated residual value

Capitalized cost is a known cost and, as mentioned earlier in this chapter, includes all items paid for the asset to perform its intended function. The other two factors are estimates.

Estimated **useful life** is how long the company expects it will use the asset. Useful life may be expressed in time, such as months or years, or usage, such as units produced, hours used (for machinery), or miles driven (for a vehicle). A company's useful life estimate might be shorter than the actual life of the asset. For example, a business might estimate a useful life of five years for a delivery truck because it has a policy that after five years the truck will be traded in for a new vehicle. The business knows that the truck will last longer than five years, but the business uses a useful life of only five years because this is how long the company expects to use the asset.

Useful life is an estimate based on a company's experience and judgment. The goal is to define estimated useful life with the measure (years, units, and so on) that best matches the asset's decline or use. When determining useful life, a company considers how long it will use the asset and when the asset will become obsolete.

Estimated **residual value**, also called *salvage value*, is the asset's expected value at the end of its useful life. When a company decides to dispose of an asset, the company will sell or scrap it. The residual value is the amount the company expects to receive when the company disposes of the asset. Residual value can sometimes be zero if a company does not expect to receive anything when disposing of the asset. If a company plans on trading the asset in for a new asset, the residual value will be the expected trade-in value. Estimated residual value is *not* depreciated because the company expects to receive this amount at the end. Cost minus estimated residual value is called **depreciable cost**.

$$\text{Depreciable cost} = \text{Cost} - \text{Estimated residual value}$$

Useful Life

Length of the service period expected from an asset. May be expressed in time or usage.

Residual Value

The expected value of a depreciable asset at the end of its useful life.

Depreciable Cost

The cost of a plant asset minus its estimated residual value.

Depreciation Methods

There are many depreciation methods for plant assets, but three are used most commonly:

1. Straight-line method
2. Units-of-production method
3. Double-declining-balance method



These methods work differently in *how* they derive the yearly depreciation amount, but they all result in the same total depreciation over the total life of the asset. Exhibit 9-4 gives the data we will use for a truck that Smart Touch Learning purchases and places in service on January 1, 2019.

Exhibit 9-4 | Data for Truck

Data Item	Amount
Cost of truck	\$ 41,000
Less: Estimated residual value	1,000
Depreciable cost	<u><u>\$ 40,000</u></u>
Estimated useful life—Years	5 years
Estimated useful life—Units	100,000 miles

Straight-Line Method

Straight-Line Method

A depreciation method that allocates an equal amount of depreciation each year.
 $(\text{Cost} - \text{Residual value}) / \text{Useful life}$.

The **straight-line method** allocates an equal amount of depreciation each year and is calculated as follows:

$$\begin{aligned}\text{Straight-line depreciation} &= (\text{Cost} - \text{Residual value}) / \text{Useful life} \\ &= (\$41,000 - \$1,000) / 5 \text{ years} \\ &= \$8,000 \text{ per year}\end{aligned}$$

Because the asset was placed in service on the first day of the year, the adjusting entry to record each year's depreciation is as follows:

$$\frac{\text{A}\downarrow}{\text{Accumulated}} + \left\{ \frac{\text{L}}{\text{Depreciation}} + \frac{\text{E}\downarrow}{\text{Expense}} \right\} = \frac{\text{Truck}\uparrow}{\text{Truck}\uparrow}$$

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Depreciation Expense—Truck	8,000	
	Accumulated Depreciation—Truck		8,000
<i>To record depreciation on truck.</i>			

Depreciation Expense is reported on the income statement. Accumulated Depreciation is a contra asset that is reported on the balance sheet following the Truck account. The **book value** of the plant asset, cost minus accumulated depreciation, is reported on the balance sheet at December 31, 2019, as follows:

Property, Plant, and Equipment	
Truck	\$ 41,000
Less: Accumulated Depreciation—Truck	(8,000)
Truck, Net	<u><u>\$ 33,000</u></u>

A straight-line depreciation schedule for this truck is shown in Exhibit 9-5. The final column on the right shows the asset's book value, which is cost less accumulated depreciation. Notice that the depreciation expense amount is the same every year and that the accumulated depreciation is the sum of all depreciation expense recorded to date for the depreciable asset.


Exhibit 9-5 | Straight-Line Depreciation Schedule

Date	Asset Cost	Depreciation for the Year			Accumulated Depreciation	Book Value
		Depreciable Cost	Useful Life	Depreciation Expense		
1-1-2019	\$ 41,000				\$ 41,000	
12-31-2019		(\$41,000 – \$1,000) / 5 years	=	\$ 8,000	\$ 8,000	33,000
12-31-2020		(\$41,000 – \$1,000) / 5 years	=	8,000	16,000	25,000
12-31-2021		(\$41,000 – \$1,000) / 5 years	=	8,000	24,000	17,000
12-31-2022		(\$41,000 – \$1,000) / 5 years	=	8,000	32,000	9,000
12-31-2023		(\$41,000 – \$1,000) / 5 years	=	8,000	40,000	1,000

As an asset is used, accumulated depreciation increases and book value decreases. (See the Accumulated Depreciation and Book Value columns in Exhibit 9-5.) At the end of its estimated useful life, the asset is said to be fully depreciated. An asset's final book value is its residual value (\$1,000 in this example).

Units-of-Production Method

The **units-of-production method** allocates a varying amount of depreciation each year based on an asset's usage. Units-of-production depreciates by units rather than by years. As we noted earlier, a unit of output can be miles, units, hours, or output, depending on which unit type best defines the asset's use. When a plant asset's usage varies every year, the units-of-production method does a better job of matching expenses with revenues.

The truck in our example is estimated to be driven 20,000 miles the first year, 30,000 the second, 25,000 the third, 15,000 the fourth, and 10,000 during the fifth (for a total useful life of 100,000 miles). The units-of-production depreciation for each period varies with the number of units (miles, in the case of the truck) the asset produces. Units-of-production depreciation is calculated as follows:

Step 1:

$$\begin{aligned}\text{Depreciation per unit} &= (\text{Cost} - \text{Residual value}) / \text{Useful life in units} \\ &= (\$41,000 - \$1,000) / 100,000 \text{ miles} \\ &= \$0.40 \text{ per mile}\end{aligned}$$

Step 2:

$$\begin{aligned}\text{Units-of-production depreciation} &= \text{Depreciation per unit} \times \text{Current year usage} \\ &= \$0.40 \text{ per mile} \times 20,000 \text{ miles} \\ &= \$8,000 (\text{year 1})\end{aligned}$$

Units-of-Production Method

A depreciation method that allocates a varying amount of depreciation each year based on an asset's usage.



Units-of-production depreciation for the truck is illustrated in Exhibit 9-6.

Exhibit 9-6 | Units-of-Production Depreciation Schedule

Date	Asset Cost	Depreciation for the Year			Accumulated Depreciation	Book Value
		Depreciation Per Unit	Number of Units	Depreciation Expense		
1-1-2019	\$ 41,000				\$ 41,000	
12-31-2019		\$ 0.40	× 20,000	= \$ 8,000	\$ 8,000	33,000
12-31-2020		0.40	× 30,000	= 12,000	20,000	21,000
12-31-2021		0.40	× 25,000	= 10,000	30,000	11,000
12-31-2022		0.40	× 15,000	= 6,000	36,000	5,000
12-31-2023		0.40	× 10,000	= 4,000	40,000	1,000

Residual value

Double-Declining-Balance Method

Accelerated Depreciation Method

A depreciation method that expenses more of the asset's cost near the start of its useful life and less at the end of its useful life.

Double-Declining-Balance Method

An accelerated depreciation method that computes annual depreciation by multiplying the depreciable asset's decreasing book value by a constant percent that is two times the straight-line depreciation rate.

$$\text{Double-declining-balance depreciation} = (\text{Cost} - \text{Accumulated depreciation}) \times 2 \times (1 / \text{Useful life})$$

For the first year of the truck, the calculation would be as shown:

$$\begin{aligned}\text{Double-declining-balance depreciation} &= (\text{Cost} - \text{Accumulated depreciation}) \times 2 \times (1 / \text{Useful life}) \\ &= (\$41,000 - \$0) \times 2 \times (1 / 5 \text{ years}) \\ &= \$16,400 (\text{Year 1})\end{aligned}$$

In Year 2, the amount of depreciation would decline because the asset has accumulated some depreciation (the \$16,400 for the first year). For the second year of the truck, therefore, the calculation would be as shown:

$$\begin{aligned}\text{Double-declining-balance depreciation} &= (\text{Cost} - \text{Accumulated depreciation}) \times 2 \times (1 / \text{Useful life}) \\ &= (\$41,000 - \$16,400) \times 2 \times (1 / 5 \text{ years}) \\ &= \$9,840 (\text{Year 2})\end{aligned}$$

Note that residual value is not included in the formula. Residual value is ignored until the depreciation expense takes the book value below the residual value. When this occurs, the final year depreciation is calculated as the amount needed to bring the asset to its residual value. In the case of the truck, residual value was given at \$1,000. In the double-declining-balance schedule in Exhibit 9-7, notice that, after Year 4 (December 31, 2022), the truck's



book value is \$5,314. By definition, the truck is to last five years, which ends on December 31, 2023. At the end of the asset's life, its book value should equal the residual value. Therefore, in the final year, depreciation is book value, \$5,314, less the \$1,000 residual value, or \$4,314 in depreciation expense.

Exhibit 9-7 | Double-Declining-Balance Depreciation Schedule

Date	Asset Cost	Depreciation for the Year			Accumulated Depreciation	Book Value
		Book Value	DDB Rate	Depreciation Expense		
1-1-2019	\$ 41,000				\$ 41,000	
12-31-2019		\$41,000	\times $2 \times (1 / 5 \text{ years})$	= \$ 16,400	\$ 16,400	24,600
12-31-2020		24,600	\times $2 \times (1 / 5 \text{ years})$	= 9,840	26,240	14,760
12-31-2021		14,760	\times $2 \times (1 / 5 \text{ years})$	= 5,904	32,144	8,856
12-31-2022		8,856	\times $2 \times (1 / 5 \text{ years})$	= 3,542	35,686	5,314
12-31-2023				4,314*	40,000	1,000 Residual value

*Last year depreciation is the “plug figure” needed to reduce book value to the residual amount (\$5,314 – \$1,000 = \$4,314).

Comparing Depreciation Methods

Let's compare the depreciation methods. Annual depreciation expense amounts vary, but total accumulated depreciation is \$40,000 for all three methods.

Year	AMOUNT OF DEPRECIATION PER YEAR		
	Straight-Line	Units-of-Production	Accelerated Method
1	\$ 8,000	\$ 8,000	\$ 16,400
2	8,000	12,000	9,840
3	8,000	10,000	5,904
4	8,000	6,000	3,542
5	8,000	4,000	4,314
Total Accumulated Depreciation	<u>\$ 40,000</u>	<u>\$ 40,000</u>	<u>\$ 40,000</u>

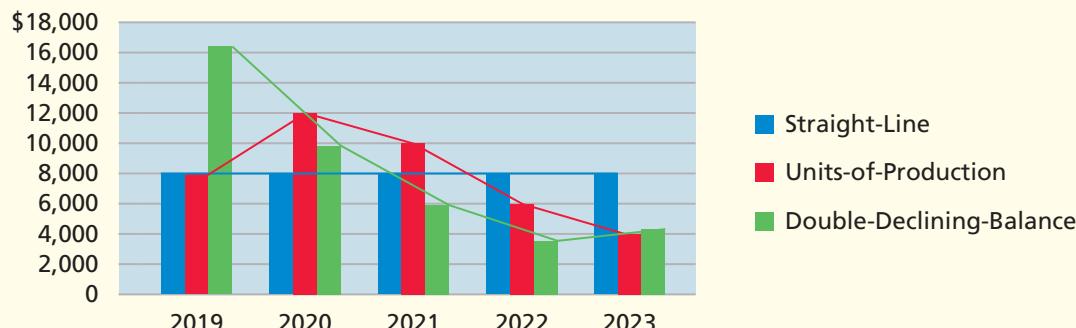
Deciding which method is best depends on the asset. A business should match an asset's expense against the revenue that the asset produces. The following are some guidelines for which method to use:

Method	Asset Characteristics	Effect on Depreciation	Example Assets
Straight-line	Generates revenue evenly over time	Equal amount each period	Building
Units-of-production	Depreciates due to wear and tear rather than obsolescence	More usage causes larger depreciation	Vehicles (miles) Machinery (machine hours)
Double-declining-balance	Produces more revenue in early years	Higher depreciation in early years, less later	Computers



Exhibit 9-8 shows the three methods in one graph for additional comparison. Notice that the straight-line method produces a straight line on the graph because there is an equal amount of depreciation expense each year. The double-declining-balance method produces a line that is decreasing, and the units-of-production method's line varies based on usage.

Exhibit 9-8 | Annual Depreciation by Method



DECISIONS

Which depreciation method should be selected?

Three Junes Weaving has just purchased an automated weaving machine and is trying to figure out which depreciation method to use: straight-line, units-of-production, or double-declining-balance. Ira Glasier, the controller, is interested in using a depreciation method that approximates the usage of the weaving machine. He also expects that the weaving machine will have increasing repairs and maintenance as the asset ages. Which method should Ira choose?

Solution

If Ira is interested in using a depreciation method that approximates the usage of the weaving machine, he should use the units-of-production method to depreciate the asset. He could use number of machine hours as the unit of output. This method

would best match the usage of the machine to the amount of expense recorded. Ira should be aware, though, that this method could produce varying amounts of depreciation expense each year. For example, if Three Junes Weaving does not use the weaving machine in one year, no depreciation expense would be recorded. This could cause net income to vary significantly from year to year. Because Ira expects the weaving machine to need more repairs as the asset ages, Ira might consider using the double-declining-balance method instead. The double-declining-balance method records a higher amount of depreciation in the early years and less later. This method works well for assets that are expected to have increasing repairs and maintenance in their later years because the total expense (depreciation and repairs and maintenance) can be spread out equally over the life of the asset.

Depreciation for Tax Purposes

The Internal Revenue Service (IRS) requires that companies use a specific depreciation method for tax purposes. This method is the **Modified Accelerated Cost Recovery System (MACRS)**.

Under MACRS, assets are divided into specific classes, such as 3-year, 5-year, 7-year, and 39-year property. Businesses do not get to choose the useful life of the asset. Instead, the IRS specifies the useful life based on the specific classes. For example, office furniture has a 7-year life for tax purposes but might only be depreciated for five years for book purposes.

Modified Accelerated Cost Recovery System (MACRS)

A depreciation method that is used for tax purposes.



In addition, the MACRS method ignores residual value. For tax purposes, an asset is fully depreciated to a book value of zero. **MACRS is not acceptable for financial reporting under GAAP.** This requires that businesses record depreciation for plant assets under two methods—book method (straight-line, units-of-production, or double-declining-balance) and tax method (MACRS).

Partial-Year Depreciation

In the previous examples, we calculated depreciation for the entire year. What would happen if the business placed the truck in service on July 1, 2019, instead of January 1, 2019? Would the depreciation for any of the methods change? Yes, but only the methods that are calculated based on a time period, which means only straight-line and double-declining-balance would change. Units-of-production does not consider years in its formula; thus, that calculation remains the same.

When a business purchases an asset during the year (other than January 1), the business should record depreciation for only the portion of the year that the asset was used in the operations of the business. This partial-year depreciation could be calculated to the nearest day, but this is unnecessary. In this book, we will assume a method called *modified half-month convention*, which means if an asset is purchased on or before the 15th of the month, the asset will be depreciated for the whole month. If the asset is purchased after the 15th of the month, the asset will not be depreciated until the following month.

Returning to our example, assume that the truck was placed into service on July 1, 2019. Therefore, the truck was in service for six months in 2019, from July 1 through December 31. The revised straight-line calculation for 2019 under the altered in-service date is as follows:

$$\begin{aligned}\text{Straight-line depreciation} &= [(\text{Cost} - \text{Residual value}) / \text{Useful life}] \times (\text{Number of months} / 12 \text{ months}) \\ &= [(\$41,000 - \$1,000) / 5 \text{ years}] \times (6 / 12) \\ &= \$4,000\end{aligned}$$

Because the business used the asset for six months of the year, we only record 6/12 (6 out of 12 months) of straight-line depreciation expense, or \$4,000, in 2019.

Partial-year depreciation also applies to disposals of assets (which we will cover later in this chapter). If an asset is disposed of during the year, the business must calculate depreciation for only the time period the asset was in service before the asset was disposed, not the entire year.

Changing Estimates of a Depreciable Asset

Estimating the useful life and residual value of a plant asset poses a challenge. As the asset is used, the business may change its estimated useful life or estimated residual value. If this happens, the business must recalculate depreciation expense. For example, the business may find that its truck lasts eight years instead of five. This is a change in estimated useful life. Accounting changes like this are common because useful life and residual value are estimates and, as a result, are not based on perfect foresight. When a company makes an accounting change, Generally Accepted Accounting Principles require the business to recalculate the depreciation for the asset in the year of change and in future periods. They do not require that businesses restate prior years' financial statements for this change in estimate.

For a change in either estimated asset life or residual value, the asset's remaining depreciable book value is spread over the asset's remaining life. Suppose Smart Touch Learning used the truck purchased on January 1, 2019, for two full years. Under the straight-line method, accumulated depreciation would be \$16,000. (Refer to Exhibit 9-5.)

Can the MACRS method be used for financial reporting in accordance with GAAP?





$$\begin{aligned}
 \text{Straight-line depreciation} &= (\text{Cost} - \text{Residual value}) / \text{Useful life} \\
 &= (\$41,000 - \$1,000) / 5 \text{ years} \\
 &= \$8,000 \text{ per year} \times 2 \text{ years} \\
 &= \$16,000
 \end{aligned}$$

Remaining depreciable book value (cost *less* accumulated depreciation) is \$25,000 (\$41,000 – \$16,000). Suppose Smart Touch Learning believes the truck will remain useful for six more years (for a total of eight years). Residual value is unchanged. At the start of 2021, the company would recompute depreciation as follows:

$$\begin{aligned}
 \text{Revised depreciation} &= (\text{Book value} - \text{Revised residual value}) / \text{Revised useful life remaining} \\
 &= (\$25,000 - \$1,000) / 6 \text{ years} \\
 &= \$4,000 \text{ per year}
 \end{aligned}$$

*Make sure to use the useful life **remaining** as the denominator in the formula.*

In years 2021 to 2026, the yearly depreciation entry based on the new useful life would be as follows:

$$\begin{array}{c}
 A \downarrow \\
 \text{Accumulated} \\
 \text{Depreciation} \\
 \text{Truck} \uparrow
 \end{array}
 \left\{
 \begin{array}{l}
 L \quad + \\
 \text{Depreciation} \\
 \text{Expense} \\
 \text{Truck} \uparrow
 \end{array}
 \right.$$

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Depreciation Expense—Truck Accumulated Depreciation—Truck	4,000	4,000
<i>To record depreciation on truck.</i>			



IFRS permits the presentation of plant assets at their fair market value because market value may be more relevant and thus more useful to readers of financial statements.

Reporting Property, Plant, and Equipment

Property, plant, and equipment are reported at book value on the balance sheet. Companies may choose to report plant assets as a single amount, with a note to the financial statements that provides detailed information, or companies may provide detailed information on the face of the statement. The cost of the asset and the related accumulated depreciation should be disclosed. Exhibit 9-9 shows the two alternative reporting treatments for plant assets.

**Exhibit 9-9 | Reporting Property, Plant, and Equipment**

Treatment 1: Property, Plant, and Equipment on the Balance Sheet of Smart Touch Learning (December 31)			Treatment 2: Property, Plant, and Equipment on the Balance Sheet of Smart Touch Learning (December 31)		
Property, Plant, and Equipment:			Property, Plant, and Equipment, Net (See Note 8)		
Land		\$ 20,000			
Building		\$ 60,000			
Less: Accumulated Depreciation—Building	(250)	59,750			
Furniture		18,000			
Less: Accumulated Depreciation—Furniture	(300)	17,700			
Property, Plant, and Equipment, Net		\$ 97,450			

Try It!

2. On January 1, Alamo Cranes purchased a crane for \$140,000. Alamo expects the crane to remain useful for six years (1,000,000 lifts) and to have a residual value of \$2,000. The company expects the crane to be used for 80,000 lifts the first year.

Compute the first-year depreciation expense on the crane using the following methods:

- a. Straight-line
- b. Units-of-production (Round *depreciation per unit* to two decimals. Round depreciation expense to the nearest whole dollar.)

Compute the first-year and second-year depreciation expense on the crane using the following method:

- c. Double-declining-balance (Round depreciation expense to the nearest whole dollar.)

Check your answers online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercises S9-3 through S9-6. **Pearson MyLab Accounting**

HOW ARE DISPOSALS OF PLANT ASSETS RECORDED?

Eventually, an asset wears out or becomes obsolete. The business then has several options regarding property, plant and equipment:

- Discard the plant asset.
- Sell the plant asset.
- Exchange the plant asset for another plant asset.

In this section, we discuss the first two options. Exchanging a plant asset for another asset is covered in the appendix to this chapter (Appendix 9A).

Plant assets remain on the business's books until they are disposed of. For example, a fully depreciated asset, one that has reached the end of its estimated useful life and is still in service, will still be reported as an asset on the balance sheet. If the asset is still useful, the company may continue using it even though no additional depreciation is recorded. If the asset is no longer useful, it is disposed of. This requires the business to remove the asset and associated accumulated depreciation from the books. In addition, a gain or loss might be recognized by the company.

Learning Objective 3

Journalize entries for the disposal of plant assets



Regardless of the type of disposal, there are four steps:

1. Bring the depreciation up to date.
2. Remove the old, disposed-of asset and associated accumulated depreciation from the books.
3. Record the value of any cash received (or paid) in the disposal of the asset.
4. Finally, determine the amount of any gain or loss. Gain or loss is determined by comparing the cash received and the market value of any other assets received with the book value of the asset disposed of.

Discarding Plant Assets

Discarding of plant assets involves disposing of the asset for no cash. If an asset is disposed of when it is fully depreciated and has no residual value, then the business simply removes the asset and contra asset, Accumulated Depreciation, from the books (Step 2). There is no need to bring the depreciation up to date (Step 1) because the asset is already fully depreciated. In addition, no cash was received or paid and no gain or loss is recognized (Steps 3 and 4).

For example, assume that on July 1, Smart Touch Learning discards equipment with a cost of \$10,000 and accumulated depreciation of \$10,000. The asset and contra asset accounts are shown below before disposal.

Equipment	Accumulated Depreciation—Equipment
10,000	10,000

To dispose of the equipment, Smart Touch Learning will need to credit the asset account, Equipment, and debit Accumulated Depreciation—Equipment. The accounting clerk will record the transaction as follows:

$A \uparrow$ Equipment Accumulated Depreciation— Equipment \downarrow	L + E	$=$	$\left\{ \quad \right.$

Date	Accounts and Explanation	Debit	Credit
Jul. 1	Accumulated Depreciation—Equipment	10,000	
	Equipment		10,000
	<i>Discarded fully depreciated equipment.</i>		

Equipment		Accumulated Depreciation—Equipment	
10,000	10,000	July 1	July 1
Bal.	0	0	Bal.

After disposal, notice that the Equipment and Accumulated Depreciation—Equipment accounts now have a zero balance. These accounts will no longer be reported on the financial statements because Smart Touch Learning no longer owns the equipment.

Suppose, instead, that on July 1, Smart Touch Learning discarded the equipment, which has a cost of \$10,000 but it is not fully depreciated. As of December 31 of the previous year, accumulated depreciation was \$8,000. Annual depreciation expense is \$1,000 per year.



The first step in recording the disposal is to bring the asset up to date on depreciation. Because Smart Touch Learning disposes of the asset on July 1 and the asset was in service from January 1 through July 1 since the last recording of depreciation, one-half of a year's depreciation will be recorded ($\$1,000 \times 1/2 = \500) as follows:

Date	Accounts and Explanation	Debit	Credit	$A \downarrow$	L	$E \downarrow$
Jul. 1	Depreciation Expense—Equipment Accumulated Depreciation—Equipment <i>To record depreciation on equipment.</i>	500	500	Accumulated Depreciation—Equipment↑	=	Depreciation Expense—Equipment↑

Steps 2 through 4 involve recording the disposal of the equipment and accumulated depreciation and calculating any gain or loss. In this situation, there is a \$1,500 loss calculated as follows:

Market value of assets received	\$ 0
Less: Book value of asset disposed of:	
Cost	\$ 10,000
Less: Accumulated Depreciation (\$8,000 + \$500)	(8,500) <u> </u>
Gain or (Loss)	1,500 \$ (1,500) =====

When calculating gain or loss, don't forget to update the Accumulated Depreciation account. In this example, before recording depreciation, the Accumulated Depreciation account was \$8,000; \$500 of additional depreciation was recorded at disposal, bringing the total accumulated depreciation to \$8,500.

The account, Loss on Disposal, will be used. This account has a normal debit balance and is reported in the Other Income and (Expenses) section of the income statement which includes gains and losses on the sale of plant assets.

Smart Touch Learning records the following entry to dispose of the equipment:

Date	Accounts and Explanation	Debit	Credit	$A \downarrow$	L	$E \downarrow$
Jul. 1	Accumulated Depreciation—Equipment Loss on Disposal Equipment <i>Discarded equipment with a book value of \$1,500.</i>	8,500 1,500 10,000		Equipment↓ Accumulated Depreciation—Equipment↓	=	Loss on Disposal↑

Equipment			Accumulated Depreciation—Equipment			Loss on Disposal		
10,000	10,000	July 1		8,000		July 1	1,500	
Bal.	0		July 1	8,500	500	July 1		0 Bal.



Selling Plant Assets

Companies will often sell a plant asset for cash. We will again use Smart Touch Learning as an example. On July 1, the company sells equipment with a historical cost of \$10,000 and accumulated depreciation, as of December 31 of the previous year, of \$8,000. Annual depreciation is \$1,000. The first step is to bring the depreciation up to date for the six months from the last recording of depreciation through the date of disposal.

$A \downarrow$	L	$E \downarrow$	Date	Accounts and Explanation	Debit	Credit
Accumulated Depreciation—Equipment↑	=	Depreciation Expense—Equipment↑	Jul. 1	Depreciation Expense—Equipment Accumulated Depreciation—Equipment	500	500
				<i>To record depreciation on equipment.</i>		

This entry brings the accumulated depreciation to \$8,500 (\$8,000 + \$500). The equipment now has a book value of \$1,500 (\$10,000 – \$8,500). Now that we have recorded Step 1, let's look at Steps 2 through 4 for several different scenarios.

Selling a Plant Asset at Book Value

Suppose that Smart Touch Learning sells the equipment for \$1,500. Notice that the cash received is equal to the book value of the asset. When a business sells an asset for book value, no gain or loss is recorded. This is because the cash received is equal to the book value of the asset sold.

Market value of assets received	\$ 1,500
Less: Book value of asset disposed of:	
Cost	\$ 10,000
Less: Accumulated Depreciation	(8,500)
Gain or (Loss)	<u>1,500</u>
	<u><u>\$ 0</u></u>

In recording the journal entry, Smart Touch Learning will debit cash for \$1,500 and then take the equipment and accumulated depreciation off the books as follows:

$A \uparrow \downarrow$	L	E	Date	Accounts and Explanation	Debit	Credit
Cash↑ Equipment↓ Accumulated Depreciation—Equipment↓	=		Jul. 1	Cash Accumulated Depreciation—Equipment Equipment	1,500 8,500 10,000	
				<i>Sold equipment for cash.</i>		

Cash		Equipment			Accumulated Depreciation—Equipment	
July 1	1,500	10,000	10,000	July 1	8,000	
Bal.	0	Bal.	0	Bal.	500	



Selling a Plant Asset Above Book Value

If Smart Touch Learning sells the equipment for \$4,000, the company will record a gain on sale of the equipment. Notice that the cash received is more than the book value of the asset. When a business sells an asset for more than its book value, a gain is recorded.

Market value of assets received	\$ 4,000
Less: Book value of asset disposed of:	
Cost	\$ 10,000
Less: Accumulated Depreciation	(8,500)
	1,500
Gain or (Loss)	\$ 2,500
	<u><u>\$ 2,500</u></u>

The account, Gain on Disposal, will be used. This account has a normal credit balance and is reported in the Other Income and (Expenses) section of the income statement.

In recording the journal entry, Smart Touch Learning will remove the old equipment and accumulated depreciation from the books (Step 2), record a debit to Cash for \$4,000 (Step 3), and then record a credit to Gain on Disposal (Step 4) as follows:

Date	Accounts and Explanation	Debit	Credit
Jul. 1	Cash	4,000	
	Accumulated Depreciation—Equipment	8,500	
	Equipment		10,000
	Gain on Disposal		2,500

Sold equipment for cash.

$$\left. \begin{array}{c} A \uparrow \\ \text{Cash} \uparrow \\ \text{Equipment} \downarrow \\ \text{Accumulated} \\ \text{Depreciation} \downarrow \\ \text{Equipment} \downarrow \end{array} \right\} = \left. \begin{array}{c} L \\ + \\ E \uparrow \\ \text{Gain} \\ \text{on} \\ \text{Disposal} \uparrow \end{array} \right\}$$

After you have recorded the transaction for disposal of plant assets, it's always a good idea to check that debits equal credits in the journal entry.

Cash		Equipment			Accumulated Depreciation—Equipment	
July 1	4,000		10,000	10,000	July 1	
		Bal.	0			
Gain on Disposal						
			2,500		July 1	



Selling a Plant Asset Below Book Value

If Smart Touch Learning sells the equipment for \$500, the company will record a loss on the sale of the equipment. Notice that the cash received is less than the book value of the asset. When a business sells an asset for less than its book value, a loss is recorded.

Market value of assets received	\$ 500
Less: Book value of asset disposed of:	
Cost	\$ 10,000
Less: Accumulated Depreciation	(8,500)
Gain or (Loss)	<u>1,500</u>
	<u><u>\$ (1,000)</u></u>

In recording the journal entry, Smart Touch Learning will remove the old equipment and accumulated depreciation from the books (Step 2), record a debit to Cash for \$500 (Step 3), and then record a debit to Loss on Disposal (Step 4) as follows:

$$\begin{array}{c} \text{A} \downarrow \\ \text{Cash} \uparrow \\ \text{Equipment} \downarrow \\ \text{Accumulated} \\ \text{Depreciation—} \\ \text{Equipment} \downarrow \end{array} \left\{ \begin{array}{l} \text{L} \quad + \quad \text{E} \downarrow \\ \text{Loss on} \\ \text{Disposal} \uparrow \end{array} \right.$$

Date	Accounts and Explanation	Debit	Credit
Jul. 1	Cash	500	
	Accumulated Depreciation—Equipment	8,500	
	Loss on Disposal	1,000	
	Equipment		10,000
<i>Sold equipment for cash.</i>			

Cash		Equipment			Accumulated Depreciation—Equipment	
July 1	500		10,000	10,000	July 1	8,000
		Bal.	0			
Loss on Disposal					July 1	8,500
July 1	1,000				500	0
						Bal.



Summary

In each disposal illustrated, the company has decreased net income over the life of the asset by recording depreciation expense each year prior to the disposal. When the company records the disposal, the company will record a gain, a loss, or neither. Gains recorded at disposal increase net income and losses recorded at disposal decrease net income. Over the life of the asset, the company records a net decrease in net income equal to the net cost of the asset. The net cost of the asset is the amount paid for the asset when it was purchased less the cash received at disposal. For each scenario, let's compare the effect on net income to the net cost, as shown in the table below:

	Asset Discarded		Asset Sold		
	Fully Depreciated	Not Fully Depreciated	At Book Value	Above Book Value	Below Book Value
Accumulated depreciation	\$ 10,000	\$ 8,500	\$ 8,500	\$ 8,500	\$ 8,500
Plus: Loss on disposal	0	1,500	0	0	1,000
Less: Gain on disposal	0	0	0	2,500	0
Net decrease in net income	\$ 10,000	\$ 10,000	\$ 8,500	\$ 6,000	\$ 9,500
<hr/>					
Cost	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000
Less: Cash received at disposal	0	0	1,500	4,000	500
Net cost	\$ 10,000	\$ 10,000	\$ 8,500	\$ 6,000	\$ 9,500

Notice in each case that the net decrease in net income is equal to the net cost of the asset. We have, in effect, expensed the net cost of the asset over its life.

In this section, we have also reviewed the journal entries for discarding and selling of plant assets. Exhibit 9-10 (on the next page) summarizes what you have learned. Before moving on, take a moment to review the exhibit.

**Exhibit 9-10 | Disposals of Plant Assets****Discarding of a fully depreciated plant asset:**

Date	Accounts and Explanation	Debit	Credit
	Accumulated Depreciation	10,000	
	Plant Asset		10,000

Discarding of a plant asset that is not fully depreciated:

Date	Accounts and Explanation	Debit	Credit
	Accumulated Depreciation	8,500	
	Loss on Disposal	1,500	
	Plant Asset		10,000

Selling a plant asset at book value:

Date	Accounts and Explanation	Debit	Credit
	Cash	1,500	
	Accumulated Depreciation		8,500
	Plant Asset		10,000

Selling a plant asset above book value:

Date	Accounts and Explanation	Debit	Credit
	Cash	4,000	
	Accumulated Depreciation		8,500
	Plant Asset		10,000
	Gain on Disposal		2,500

Selling a plant asset below book value:

Date	Accounts and Explanation	Debit	Credit
	Cash	500	
	Accumulated Depreciation		8,500
	Loss on Disposal		1,000
	Plant Asset		10,000

Try It!

3. Counselors of Atlanta purchased equipment on January 1, 2017, for \$20,000. Counselors of Atlanta expected the equipment to last for four years and have a residual value of \$2,000. Suppose Counselors of Atlanta sold the equipment for \$8,000 on December 31, 2019, after using the equipment for three full years. Assume depreciation for 2019 has been recorded. Journalize the sale of the equipment, assuming straight-line depreciation was used.

Check your answer online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.



HOW ARE NATURAL RESOURCES ACCOUNTED FOR?

Natural resources are assets that come from the earth that are consumed. Examples include iron ore, oil, natural gas, diamonds, gold, coal, and timber. Natural resources are expensed through depletion. **Depletion** is the process by which businesses spread the allocation of a natural resource's cost to expense over its usage. It's called depletion because the company is depleting (using up) a natural resource such that at some point in time, there is nothing left to extract. Depletion expense is computed by the units-of-production method.

For example, an oil well cost \$700,000 and is estimated to hold 70,000 barrels of oil. There is no residual value. If 3,000 barrels are extracted and sold during the year, then depletion expense is calculated as follows:

Step 1:

$$\begin{aligned}\text{Depletion per unit} &= (\text{Cost} - \text{Residual value}) / \text{Estimated total units} \\ &= (\$700,000 - \$0) / 70,000 \text{ barrels} \\ &= \$10 \text{ per barrel}\end{aligned}$$

Step 2:

$$\begin{aligned}\text{Depletion expense} &= \text{Depletion per unit} \times \text{Number of units extracted} \\ &= \$10 \text{ per barrel} \times 3,000 \text{ barrels} \\ &= \$30,000 \text{ (Year 1)}\end{aligned}$$

The depletion entry for the year is as follows:

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Depletion Expense—Oil Reserves	30,000	
	Accumulated Depletion—Oil Reserves		30,000
<i>To record depletion.</i>			

$$\text{A} \downarrow \left. \begin{array}{l} \text{Accumulated} \\ \text{Depletion} \\ \text{—} \\ \text{Oil Reserves} \uparrow \end{array} \right\} = \left\{ \begin{array}{l} \text{L} \quad + \\ \text{E} \downarrow \\ \text{Depletion} \\ \text{Expense} \\ \text{—} \\ \text{Oil Reserves} \uparrow \end{array} \right\}$$

Accumulated Depletion is a contra asset account similar to Accumulated Depreciation. Natural resources can be reported on the balance sheet as shown for oil reserves in the following example:

Oil Reserves	\$ 700,000
Less: Accumulated Depletion—Oil Reserves	(30,000)

Learning Objective 4

Account for natural resources

Natural Resource

An asset that comes from the earth and is consumed.

Depletion

The process by which businesses spread the allocation of a natural resource's cost over its usage.



Try It!

4. Amplify Petroleum holds huge reserves of oil. Assume that at the end of 2017, Amplify Petroleum's cost of oil reserves totaled \$80,000,000, representing 100,000,000 barrels of oil. Suppose Amplify Petroleum removed and sold 20,000,000 barrels of oil during 2018. Journalize depletion expense for 2018.

Check your answer online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercise S9-11. [Pearson MyLab Accounting](#)

HOW ARE INTANGIBLE ASSETS ACCOUNTED FOR?

Learning Objective 5

Account for intangible assets

Intangible Asset

An asset with no physical form that is valuable because of the special rights it carries.

Amortization

The process by which businesses spread the allocation of an intangible asset's cost over its useful life.

Impairment

A permanent decline in asset value.

Patent

An intangible asset that is a federal government grant conveying an exclusive 20-year right to produce and sell a process, product, or formula.

Intangible assets are assets that have no physical form. Instead, these assets convey special rights from patents, copyrights, trademarks, and other creative works.

In our technology-driven economy, intangibles are very important. The intellectual property of a business is difficult to measure. However, when one company buys another, we get a glimpse of the value of the intellectual property of the acquired company. For example, in 2006, Google acquired YouTube. Google said it would pay \$1.65 billion for YouTube even though YouTube had never had a profitable year. Why so much for so little? Because YouTube's intangible assets were extremely valuable. Intangibles can account for most of a company's market value, so companies must value their intangibles just as they value other assets, such as merchandise inventory and equipment.

Accounting for Intangibles

Intangible assets that are purchased are recorded at cost. If an intangible is not purchased, only some limited costs can be capitalized. Most purchased intangibles are expensed through **amortization**, the allocation of the cost of an intangible asset to expense over its useful life. Amortization applies to intangibles exactly as depreciation applies to equipment and depletion to oil and timber.

Intangibles either have a definite life or an indefinite life. Intangibles with an indefinite life have no factors (such as legal and contractual obligations) that limit the usage of the intangible asset. Only intangibles that have a definite life are amortized. Intangible assets with an indefinite life are tested for impairment annually. **Impairment** occurs when the fair value of an asset is less than the book value. In other words, there has been a permanent decline in the value of the asset. If an impairment occurs, the company records a loss in the period that the decline is identified.

Specific Intangibles

As noted earlier, patents, copyrights, and trademarks are intangible assets. The accounting for the purchase and amortization of each asset is similar.

Patents

A **patent** is an intangible asset that is a federal government grant conveying an exclusive 20-year right to produce and sell an invention. The invention may be a process, product, or formula—for example, the Dolby noise-reduction process or a prescription drug formula. The acquisition cost of a patent is debited to the Patent account.



Like any other asset, a patent may be purchased. Suppose Smart Touch Learning pays \$200,000 to acquire a patent on January 1. The accounting clerk records the following entry at acquisition:

Date	Accounts and Explanation	Debit	Credit	
Jan. 1	Patent	200,000		
	Cash		200,000	
<i>To record purchase of patent.</i>				$\frac{A \uparrow}{\text{Patent} \uparrow} + \frac{L}{\text{Cash} \downarrow} = \frac{E}{}$

Smart Touch Learning believes this patent's useful life is only five years because it is likely that a new, more efficient process will be developed within that time. Amortization expense is calculated using the straight-line method as follows:

$$\begin{aligned}
 \text{Amortization expense} &= (\text{Cost} - \text{Residual value}) / \text{Useful life} \\
 &= (\$200,000 - \$0) / 5 \text{ years} \\
 &= \$40,000 \text{ per year}
 \end{aligned}$$

For most intangibles, the residual value will be zero.

The company's accounting clerk would record the following adjusting entry for amortization:

Date	Accounts and Explanation	Debit	Credit	
Dec. 31	Amortization Expense—Patent	40,000		
	Patent		40,000	
<i>To record amortization of patent.</i>				$\frac{A \downarrow}{\text{Patent} \downarrow} + \frac{L}{\text{Amortization Expense—Patent} \uparrow} = \frac{E \downarrow}{}$

Notice that Smart Touch Learning credited the amortization directly to the intangible asset, Patent, instead of using an Accumulated Amortization account. A company may credit an intangible asset directly when recording amortization expense, or it may use the account Accumulated Amortization. **Companies frequently choose to credit the asset account directly because the residual value is generally zero and there is no physical asset to dispose of at the end of its useful life, so the asset essentially removes itself from the books through the process of amortization.**

At the end of the first year, Smart Touch Learning will report this patent at \$160,000 (\$200,000 cost minus first-year amortization of \$40,000), the next year at \$120,000, and so forth. Each year for five years the value of the patent will be reduced until the end of its five-year life, at which point its book value will be \$0.

Why was the account Patent credited instead of Accumulated Amortization—Patent?



Copyrights and Trademarks

A **copyright** is the exclusive right to reproduce and sell a book, musical composition, film, other work of art, or intellectual property. Copyrights also protect computer software programs, such as Microsoft® Windows® and the Microsoft® Excel® spreadsheet software. Issued by the federal government, a copyright is granted for the life of the creator plus 70 years.

Copyright

Exclusive right to reproduce and sell a book, musical composition, film, other work of art, or intellectual property.



A company may pay a large sum to purchase an existing copyright. For example, the publisher Simon & Schuster may pay \$1 million for the copyright on a popular novel because it thinks it will be able to profit from selling the novel. Even though copyrights have a long legal life (life of creator plus 70 years), most copyrights have short useful lives. Copyrights are amortized over their legal life or useful life, whichever is shorter.

Trademark

An asset that represents distinctive identifications of a product or service.

A **trademark** (also called *trade name*) is an asset that represents distinctive identifications of products or services, such as the Nike “swoosh” or the McDonald’s “golden arches.” Legally protected slogans include Chevrolet’s “Like a Rock” and De Beers’s “A Diamond Is Forever.” The cost of a trademark or trade name is amortized over its useful life.

Franchises and Licenses

Franchise

Privilege granted by a business to sell a product or service under specified conditions.

License

Privilege granted by a government to use public property in performing services.

Goodwill

Excess of the cost of an acquired company over the sum of the market values of its net assets (assets minus liabilities).

Franchises are privileges granted by a business to sell goods or services under specified conditions. The Dallas Cowboys football organization is a franchise granted by the National Football League. McDonald’s and Subway are well-known business franchises. **Licenses** are privileges granted by a government to use public property in performing services. A radio station might be granted permission by the federal government to use the airwaves to broadcast its music. The acquisition cost of a franchise or license is amortized over its useful life.

Goodwill

In accounting, **goodwill** is the excess of the cost to purchase another company over the market value of its net assets (assets minus liabilities). Goodwill is the value paid above the net worth of the company’s assets and liabilities.

Suppose White Corporation acquired Mocha, Inc. on January 1, 2018. The sum of the market values of Mocha’s assets was \$9 million and its liabilities totaled \$1 million, so Mocha’s net assets totaled \$8 million. Suppose White paid \$10 million to purchase Mocha. In this case, White paid \$2 million above the market value of Mocha’s net assets. Therefore, that \$2 million is considered goodwill and is computed as follows:

Purchase price to acquire Mocha	\$ 10,000,000
Market value of Mocha's assets	\$ 9,000,000
Less: Market value of Mocha's liabilities	(1,000,000)
Less: Market value of Mocha's net assets	8,000,000
Goodwill	\$ 2,000,000

White’s entry to record the purchase of Mocha, including the goodwill that White purchased, would be as follows:

$$\begin{array}{c} A \uparrow \\ Assets \uparrow \\ Goodwill \uparrow \\ Cash \downarrow \end{array} = \left\{ \begin{array}{c} L \uparrow \\ Liabilities \uparrow \end{array} \right\} + E$$

Date	Accounts and Explanation	Debit	Credit
Jan. 1	Assets	9,000,000	
	Goodwill	2,000,000	
	Liabilities		1,000,000
	Cash		10,000,000
<i>To record purchase of Mocha Company.</i>			



Goodwill has some special features:

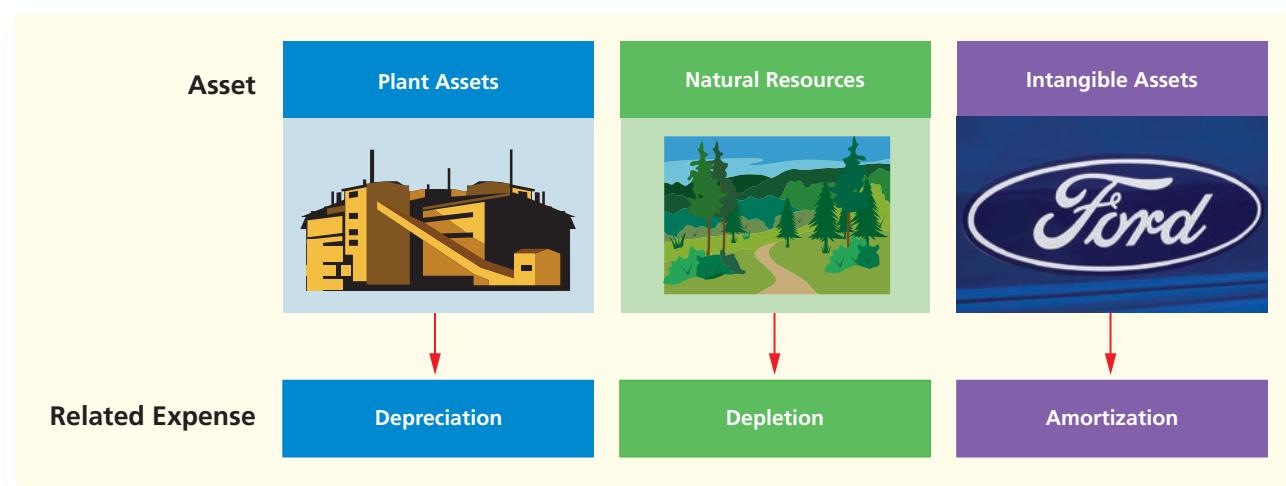
- Goodwill is recorded only by an acquiring company when it purchases another company and pays more for that company than the market value of the net assets acquired (as in our entry above where White purchased Mocha for \$2 million more than the market value of Mocha's net assets). An outstanding reputation may create goodwill, but that company never records goodwill for its own business.
- According to Generally Accepted Accounting Principles (GAAP), goodwill is *not* amortized. Instead, the acquiring company measures the fair value of its acquired goodwill each year. If the goodwill has increased in fair value, there is nothing to record. But if goodwill's fair value has decreased, then the company records an impairment loss and writes the goodwill down by debiting (increasing) the Impairment Loss on Goodwill account and crediting (decreasing) the Goodwill account.

Reporting of Intangible Assets

Intangible assets are reported on the balance sheet similarly to plant assets. If a company uses the contra account, Accumulated Amortization, this account is not typically shown on the balance sheet. Instead, intangible assets are shown only at their net book value. Amortization expense is reported on the income statement as part of operations.

Exhibit 9-11 summarizes our coverage of plant assets, natural resources, and intangibles. Remember that plant assets are those assets that have physical characteristics and are used in operations. Natural resources are assets that come from the physical earth and can be ultimately used up, and intangible assets are assets whose value is not derived from their physical substance.

Exhibit 9-11 | Assets and Their Related Expenses





TYING IT ALL TOGETHER

Most of us, at one time or another, have visited a McDonald's. Widely known for its "golden arches," **McDonald's Corporation** is the world's leading global food service retailer with more than 36,000 locations worldwide in more than 100 countries. The corporation operates and franchises McDonald's restaurants, which serve menu items such as the Big Mac, Chicken McNuggets, and McFlurry desserts. In addition, McDonald's also serves McCafe beverages and pastries.

Would McDonald's Corporation report plant assets on its financial statements?

Yes, McDonald's Corporation reports plant assets including buildings, leasehold improvements, and equipment on its balance sheet. The corporation owns real estate in connection with its

restaurants and in many cases owns the building. In addition, McDonald's owns the equipment inside restaurants such as the fryers, ovens, and tables.

How do franchises affect McDonald's Corporation?

In addition to owning McDonald's restaurants, the company also franchises restaurants. Approximately 80% of McDonald's restaurants are owned and operated by independent franchisees. When an individual franchises a McDonald's restaurant, the franchisee maintains control over personnel, purchasing, marketing, and pricing decisions while still benefiting from McDonald's global brand. Under a conventional franchise arrangement, McDonald's Corporation owns the land and building. The franchisee purchases the equipment, signs, seating, and décor.

Try It!

- On January 1, Orange Manufacturing paid \$40,000 for a patent. Although it gives legal protection for 20 years, the patent is expected to provide a competitive advantage for only eight years. Assuming the straight-line method of amortization, record the journal entry for amortization for Year 1.

Check your answer online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercises S9-12 and S9-13. [Pearson MyLab Accounting](#)

HOW DO WE USE THE ASSET TURNOVER RATIO TO EVALUATE BUSINESS PERFORMANCE?

Learning Objective 6

Use the asset turnover ratio to evaluate business performance

Asset Turnover Ratio

Measures how efficiently a business uses its average total assets to generate sales. Net sales revenue / Average total assets.

The **asset turnover ratio** measures the amount of net sales revenue generated for each average dollar of total assets invested. This ratio measures how well a company is using its assets to generate net sales revenue. To compute this ratio, we divide net sales revenue by average total assets. Using net sales revenue and total assets (in millions) from **Kohl's Corporation's** 2015 Annual Report (see <http://www.pearsonglobaleditions.com/Sitemap/Horngren/> for a link to the 2015 Annual Report), we can calculate the asset turnover ratio.

	January 30, 2016	January 31, 2015
Net sales revenue	\$ 19,204	\$ 19,023
Total assets	13,606	14,333

$$\begin{aligned}
 \text{Asset turnover ratio} &= \text{Net sales revenue} / \text{Average total assets} \\
 &= \$19,204 / [(\$13,606 + \$14,333) / 2] \\
 &= 1.37 \text{ times (rounded)}
 \end{aligned}$$



Suppose that the asset turnover ratio for the industry is 1.9 times. Kohl's asset turnover ratio of 1.37 times is significantly lower than the industry average. This tells us that Kohl's is only producing \$1.37 of net sales revenue for each dollar (\$1.00) of assets invested while the average company in this industry is producing \$1.90 in net sales revenue for every dollar invested in assets. Kohl's should evaluate ways to improve its efficiency and increase its asset turnover ratio, such as increasing net sales revenue or decreasing average total assets. A high asset turnover ratio is desirable.

Try It!

6. Maxim Company reported beginning and ending total assets of \$140,000 and \$160,000, respectively. Its net sales revenue for the year was \$240,000. What was Maxim's asset turnover ratio?

Check your answer online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercise S9-14.

Pearson MyLab Accounting

APPENDIX 9A: Exchanging Plant Assets

HOW ARE EXCHANGES OF PLANT ASSETS ACCOUNTED FOR?

Earlier in the chapter, we discussed ways that businesses could dispose of plant assets. One way is for a business to exchange a plant asset for another plant asset. In this section, we evaluate how to account for exchanges that have *commercial substance*. An exchange has **commercial substance** if the future cash flows change as a result of the transaction. In other words, an exchange has commercial substance if, in the future, cash flows (receipts of revenue or payment of expenses) of the business will change because of the exchange. For example, exchanging an older asset for a new asset will increase productivity, thereby creating more revenue for the business. Therefore, this exchange has commercial substance.

Exchanges that have commercial substance require any gain or loss on the transaction to be recognized. The old asset will be removed from the books, and the new asset will be recorded at its market value. Exchanges that lack commercial substance ignore any gain or loss on the transaction, except in limited situations. The new asset is recorded at the old asset's book value plus cash paid and minus cash received instead of at market value.

Exchange of Plant Assets—Gain Situation

Suppose that on December 31, Smart Touch Learning exchanges used equipment for new equipment. The old equipment has a historical cost of \$10,000 and accumulated depreciation of \$9,000. Its current book value is \$1,000 ($\$10,000 - \$9,000$). The company acquires the new equipment with a market value of \$8,000 and pays cash of \$2,000. Assuming this exchange has commercial substance, the gain will be calculated as follows:

Learning Objective 7

Journalize entries for the exchange of plant assets

Commercial Substance

A characteristic of a transaction that causes a change in future cash flows.

Market value of assets received	\$ 8,000
Less:	
Book value of asset exchanged	\$ 1,000
Cash paid	2,000
Gain or (Loss)	<u>3,000</u>
	<u><u>\$ 5,000</u></u>

The accounting clerk records the following entry:

A↑	L	E↑	Date	Accounts and Explanation	Debit	Credit
Equipment (new)↑			Dec. 31	Equipment (new)	8,000	
Accumulated Depreciation—Equipment	=			Accumulated Depreciation—Equipment	9,000	
Equipment↓				Equipment (old)	10,000	
Equipment (old)↓				Cash	2,000	
Cash↓				Gain on Disposal	5,000	
				<i>Exchanged old equipment and cash for new equipment.</i>		

Cash	Equipment (new)
2,000 Dec. 31	Dec. 31 8,000
Equipment (old)	
10,000 10,000 Dec. 31	Dec. 31 9,000
Bal. 0	0 Bal.
Gain on Disposal	
5,000 Dec. 31	

Exchange of Plant Assets—Loss Situation

Suppose instead that on December 31, Smart Touch Learning exchanges used equipment for new equipment. The old equipment has a historical cost of \$10,000 and accumulated depreciation of \$9,000. Its current book value is \$1,000 (\$10,000 – \$9,000). The company acquires the new equipment with a market value of \$3,000 and pays cash of \$2,500. Assuming this exchange has commercial substance, the loss will be calculated as follows:

Market value of assets received	\$ 3,000
Less:	
Book value of asset exchanged	\$ 1,000
Cash paid	2,500
Gain or (Loss)	<u>3,500</u>
	<u><u>\$ (500)</u></u>

The accounting clerk records the following entry:

Date	Accounts and Explanation	Debit	Credit	A↓	L + E↓
Dec. 31	Equipment (new)	3,000		Equipment (new)↑	Loss on Disposal↑
	Accumulated Depreciation—Equipment	9,000		Accumulated Depreciation—Equipment↓	
	Loss on Disposal	500		Equipment (old)↓	
	Equipment (old)		10,000	Cash↓	
	Cash		2,500		
	<i>Exchanged old equipment and cash for new equipment.</i>				

Cash			Equipment (new)		
	2,500	Dec. 31	Dec. 31 3,000		
Equipment (old)					
10,000	10,000	Dec. 31			
Bal.	0		9,000		
Loss on Disposal			Dec. 31 9,000	0	Bal.
Dec. 31	500				

Try It!

- 7A. Arca Salvage, Inc. purchased equipment for \$10,000. Arca recorded total depreciation of \$8,000 on the equipment. Assume that Arca exchanged the old equipment for new equipment, paying \$4,000 cash. The fair market value of the new equipment is \$5,000. Journalize Arca's exchange of equipment. Assume this exchange has commercial substance.

Check your answer online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercises S9A-15 and S9A-16. Pearson MyLab Accounting

REVIEW

> Things You Should Know

1. How does a business measure the cost of property, plant, and equipment?

- Property, plant, and equipment are long-lived, tangible assets used in the operations of a business. They are commonly referred to as plant assets.
- Plant assets are recorded at historical cost—the amount paid for the asset. This includes the purchase price plus taxes, purchase commissions, and all other amounts paid to ready the asset for its intended use.

- A lump-sum purchase involves paying a single price for multiple assets. The cost of each asset purchased must be identified based on the relative-market-value method.
- Two additional types of expenditures are often incurred on plant assets:
 - Capital expenditures—debited to an asset account because they increase the asset's capacity or efficiency or extends the asset's useful life
 - Revenue expenditures—debited to an expense account, such as Repairs and Maintenance Expense, because they are incurred to maintain the asset in working order

2. What is depreciation, and how is it computed?

- Depreciation is the allocation of a plant asset's cost to expense over its useful life.
- Three common depreciation methods are:
 - Straight-line method—allocates an equal amount of depreciation to each year
 - Units-of-production method—allocates a varying amount of depreciation each year based on an asset's usage
 - Double-declining-balance method—an accelerated depreciation method that computes annual depreciation by multiplying the depreciable asset's book value by a constant percent that is two times the straight-line rate
- Modified Accelerated Cost Recovery System (MACRS) is used for tax purposes.
- Occasionally a business may change its estimated residual value or estimated useful life of a depreciable asset. This change requires depreciation to be recalculated in the year of change and moving forward.
- Plant assets are reported on the balance sheet in the Property, Plant, and Equipment section at book value (cost – accumulated depreciation).

3. How are disposals of plant assets recorded?

- There are four steps to recording disposals.
 - Step 1: Bring the depreciation up to date.
 - Step 2: Remove the old, disposed-of asset and associated accumulated depreciation from the books.
 - Step 3: Record the value of any cash received (or paid) in the disposal of the asset.
 - Step 4: Determine the amount of any gain or loss. (Market value of assets received compared to the book value of the asset disposed of.)
- Review Exhibit 9-10 for a summary of disposal of plant assets journal entries.

4. How are natural resources accounted for?

- Natural resources are assets that come from the earth and are consumed. Examples include iron ore, oil, natural gas, diamonds, gold, and timber.
- Depletion is the process by which businesses spread the allocation of a natural resource's cost over its usage.
- Depletion expense is computed by the units-of-production method.

5. How are intangible assets accounted for?

- Intangible assets are assets that have no physical form and are valuable because of special rights they carry. Examples include patents, copyrights, trademarks, franchises, licenses, and goodwill.
- Amortization is the process by which businesses spread the allocation of an intangible asset's cost over its useful life.
- Amortization expense is computed by the straight-line method.

6. How do we use the asset turnover ratio to evaluate business performance?

- The asset turnover ratio measures the amount of net sales generated for each average dollar of total assets invested.
- Net sales / Average total assets.

7. How are exchanges of plant assets accounted for? (Appendix 9A)

- Exchanges that have commercial substance require the recording of any gain or loss on the transaction.
- Exchanges that lack commercial substance ignore any gain or loss on the transaction, except in a few limited cases.

> Check Your Understanding

Check your understanding of the chapter by completing this problem and then looking at the solution. Use this practice to help identify which sections of the chapter you need to study more.

Latté On Demand purchased a coffee drink machine on January 1, 2018, for \$44,000. Expected useful life is 10 years or 100,000 drinks. In 2018, 3,000 drinks were sold, and in 2019, 14,000 drinks were sold. Residual value is \$4,000.

Requirements

1. Determine the depreciation expense for 2018 and 2019 using the following methods (See Learning Objective 2):
 - a. Straight-line
 - b. Units-of-production
 - c. Double-declining-balance
2. Prepare a schedule that shows annual depreciation expense, accumulated depreciation, and book value for 2018 and 2019 using the following methods (See Learning Objective 2):
 - a. Straight-line
 - b. Units-of-production
 - c. Double-declining-balance
3. Assume that Latté On Demand sold the equipment for \$27,000 cash on July 1, 2020. Assume that management has depreciated the equipment by using the double-declining-balance method. Record Latté On Demand's depreciation for 2020 and the sale of the equipment on July 1, 2020. (See Learning Objective 3)

> Solution

Requirement 1

a.

$$\begin{aligned} 2018: (\$44,000 - \$4,000) / 10 \text{ years} &= \$4,000 \\ 2019: (\$44,000 - \$4,000) / 10 \text{ years} &= \$4,000 \end{aligned}$$

b.

$$\begin{aligned} \text{Depreciation per unit} &= (\$44,000 - \$4,000) / 100,000 \text{ drinks} = \$0.40 \text{ per drink} \\ 2018: \$0.40 \text{ per drink} \times 3,000 \text{ drinks} &= \$1,200 \\ 2019: \$0.40 \text{ per drink} \times 14,000 \text{ drinks} &= \$5,600 \end{aligned}$$

c.

$$\begin{aligned} 2018: (\$44,000 - \$0) \times 2 \times (1 / 10 \text{ years}) &= \$8,800 \\ 2019: (\$44,000 - \$8,800) \times 2 \times (1 / 10 \text{ years}) &= \$7,040 \end{aligned}$$

Requirement 2

a.

Year	Annual Depreciation Expense	Accumulated Depreciation	Book Value
1-1-2018			\$ 44,000
12-31-2018	\$ 4,000	\$ 4,000	40,000
12-31-2019	4,000	8,000	36,000

b.

Year	Annual Depreciation Expense	Accumulated Depreciation	Book Value
1-1-2018			\$ 44,000
12-31-2018	\$ 1,200	\$ 1,200	42,800
12-31-2019	5,600	6,800	37,200

c.

Year	Annual Depreciation Expense	Accumulated Depreciation	Book Value
1-1-2018			\$ 44,000
12-31-2018	\$ 8,800	\$ 8,800	35,200
12-31-2019	7,040	15,840	28,160

Requirement 3

Depreciation expense for 2020:

$$(\$44,000 - \$15,840) \times 2 \times (1 / 10 \text{ years}) \times (6 / 12) = \$2,816$$

Date	Accounts and Explanation	Debit	Credit
2020			
Jul. 1	Depreciation Expense—Equipment Accumulated Depreciation—Equipment <i>To record depreciation on equipment.</i>	2,816	2,816
1	Cash Accumulated Depreciation—Equipment (\$15,840 + \$2,816) Gain on Disposal Equipment <i>Sold equipment for cash.</i>	27,000 18,656 1,656 44,000	

> Key Terms

Accelerated Depreciation Method (p. 524)
 Amortization (p. 538)
 Asset Turnover Ratio (p. 542)
 Book Value (p. 522)
 Capital Expenditure (p. 519)
 Capitalize (p. 517)
 Commercial Substance (p. 543) (Appendix 9A)
 Copyright (p. 539)
 Cost Principle (p. 516)
 Depletion (p. 537)
 Depreciable Cost (p. 521)

Depreciation (p. 515)
 Double-Declining-Balance Method (p. 524)
 Extraordinary Repair (p. 519)
 Franchise (p. 540)
 Goodwill (p. 540)
 Impairment (p. 538)
 Intangible Asset (p. 538)
 Land Improvement (p. 516)
 License (p. 540)
 Modified Accelerated Cost Recovery System (MACRS) (p. 526)
 Natural Resource (p. 537)

Obsolete (p. 521)
 Patent (p. 538)
 Property, Plant, and Equipment (PP&E) (p. 515)
 Relative-Market-Value Method (p. 518)
 Residual Value (p. 521)
 Revenue Expenditure (p. 519)
 Straight-Line Method (p. 522)
 Trademark (p. 540)
 Units-of-Production Method (p. 523)
 Useful Life (p. 521)

> Quick Check

Learning Objective 1

1. Which cost is *not* recorded as part of the cost of a building?
 - a. Real estate commission paid to buy the building
 - b. Construction materials and labor
 - c. Concrete for the building's foundation
 - d. Annual building maintenance

2. How should you record a capital expenditure?

a. Debit a liability	c. Debit an expense
b. Debit capital	d. Debit an asset

3. Which method almost always produces the most depreciation in the first year?
 - a. Units-of-production
 - b. Straight-line
 - c. Double-declining-balance
 - d. All produce the same depreciation in the first year.

4. A Tel Ex jet costs \$52,000,000 and is expected to fly 400,000,000 miles during its 10-year life. Residual value is expected to be zero because the plane was used when acquired. If the plane travels 52,000,000 miles the first year, how much depreciation should Tel Ex record under the units-of-production method? (Round the depreciation per unit to two decimal places.)
 - a. \$10,400,000
 - b. \$6,760,000
 - c. \$5,200,000
 - d. Cannot be determined from the data given

Learning Objective 2

5. A copy machine costs \$45,000 when new and has accumulated depreciation of \$44,000. Suppose Print and Photo Center discards this machine and receives nothing. What is the result of the disposal transaction?

a. No gain or loss	c. Loss of \$1,000
b. Gain of \$1,000	d. Loss of \$45,000

Learning Objective 3

6. A copy machine cost \$41,000 when new and has accumulated depreciation of \$40,000. Suppose this machine is sold for \$1,000. What is the result of this disposal transaction?

a. Loss of \$1,000	c. Gain of \$1,000
b. Loss of \$40,000	d. No gain or loss

Learning Objective 4

7. Which method is used to compute depletion?

a. Double-declining-balance method	c. Depletion method
b. Straight-line method	d. Units-of-production method

Learning Objective 5

8. Which intangible asset is recorded only as part of the acquisition of another company?

a. Patent	b. Goodwill	c. Copyright	d. Franchise
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9. Liberty Corporation reported beginning and ending total assets of \$25,000 and \$22,000, respectively. Its net sales for the year were \$18,800. What was Liberty's asset turnover ratio?
- a. 0.75 b. 0.85 c. 0.80 d. 1.25
- 10A. A truck costs \$50,000 when new and has accumulated depreciation of \$35,000. Suppose Wilson Towing exchanges the truck for a new truck. The new truck has a market value of \$60,000, and Wilson pays cash of \$40,000. Assume the exchange has commercial substance. What is the result of this exchange?
- a. No gain or loss c. Loss of \$5,000
b. Gain of \$5,000 d. Gain of \$45,000

Check your answers at the end of the chapter.

Learning Objective 6

Learning Objective 7
Appendix 9A

ASSESS YOUR PROGRESS

> Review Questions

1. Define property, plant, and equipment. Provide some examples.
2. Plant assets are recorded at historical cost. What does the historical cost of a plant asset include?
3. How do land improvements differ from land?
4. What does the word *capitalize* mean?
5. What is a lump-sum purchase, and how is it accounted for?
6. What is the difference between a capital expenditure and a revenue expenditure? Give an example of each.
7. What is depreciation? Define useful life, residual value, and depreciable cost.
8. Which depreciation method ignores residual value until the last year of depreciation? Why?
9. How does a business decide which depreciation method is best to use?
10. What is the depreciation method that is used for tax accounting purposes? How is it different than the methods that are required by GAAP to be used for financial accounting purposes?
11. If a business changes the estimated useful life or estimated residual value of a plant asset, what must the business do in regard to depreciation expense?
12. What financial statement are property, plant, and equipment reported on, and how?
13. How is discarding of a plant asset different from selling a plant asset?
14. How is gain or loss determined when disposing of plant assets? What situation constitutes a gain? What situation constitutes a loss?
15. What is a natural resource? What is the process by which businesses spread the allocation of a natural resource's cost over its usage?
16. What is an intangible asset? Provide some examples.

17. What is the process by which businesses spread the allocation of an intangible asset's cost over its useful life?
18. What is goodwill? Is goodwill amortized? What happens if the value of goodwill has decreased at the end of the year?
19. What does the asset turnover ratio measure, and how is it calculated?
- 20A. What does it mean if an exchange of plant assets has commercial substance? Are gains and losses recorded on the books because of the exchange?

> Short Exercises

Learning Objective 1

S9-1 Determining the cost of an asset

Highland Clothing purchased land, paying \$96,000 cash and signing a \$300,000 note payable. In addition, Highland paid delinquent property tax of \$1,100, title insurance costing \$600, and \$4,600 to level the land and remove an unwanted building. Record the journal entry for purchase of the land.

Learning Objective 1

S9-2 Making a lump-sum asset purchase

Concord Pet Care Clinic paid \$210,000 for a group purchase of land, building, and equipment. At the time of the acquisition, the land had a market value of \$110,000, the building \$88,000, and the equipment \$22,000. Journalize the lump-sum purchase of the three assets for a total cost of \$210,000, the amount for which the business signed a note payable.

Learning Objective 2

S9-3 Computing first-year depreciation and book value

On January 1, 2018, Air Canadians purchased a used airplane for \$37,000,000. Air Canadians expects the plane to remain useful for five years (4,000,000 miles) and to have a residual value of \$5,000,000. The company expects the plane to be flown 1,400,000 miles during the first year.

Requirements

1. Compute Air Canadians's *first-year* depreciation expense on the plane using the following methods:
 - a. Straight-line
 - b. Units-of-production
 - c. Double-declining-balance
2. Show the airplane's book value at the end of the first year for all three methods.

Learning Objective 2

S9-4 Computing second-year depreciation and accumulated depreciation

On January 1, 2018, Foley Airline purchased a used airplane at a cost of \$53,000,000. Foley Airline expects the plane to remain useful for eight years (6,000,000 miles) and to have a residual value of \$5,000,000. Foley Airline expects the plane to be flown 1,200,000 miles the first year and 1,400,000 miles the second year.

Requirements

1. Compute *second-year* (2019) depreciation expense on the plane using the following methods:
 - a. Straight-line
 - b. Units-of-production
 - c. Double-declining-balance
2. Calculate the balance in Accumulated Depreciation at the end of the second year for all three methods.

S9-5 Calculating partial-year depreciation

On February 28, 2017, Rural Tech Support purchased a copy machine for \$53,400. Rural Tech Support expects the machine to last for six years and have a residual value of \$3,000. Compute depreciation expense on the machine for the year ended December 31, 2017, using the straight-line method.

S9-6 Changing the estimated life of an asset

Assume that Mill Creek Golf Club paid \$48,000 for equipment with a 16-year life and zero expected residual value. After using the equipment for six years, the company determines that the asset will remain useful for only five more years.

Requirements

1. Record depreciation expense on the equipment for Year 7 by the straight-line method.
2. What is accumulated depreciation at the end of Year 7?

S9-7 Discarding of a fully depreciated asset

On June 15, 2017, Family Furniture discarded equipment that had a cost of \$27,000, a residual value of \$0, and was fully depreciated. Journalize the disposal of the equipment.

S9-8 Discarding an asset

On October 31, 2018, Just Right Landscapes discarded equipment that had a cost of \$26,100. Accumulated Depreciation as of December 31, 2017, was \$24,000. Assume annual depreciation on the equipment is \$2,100. Journalize the partial-year depreciation expense and disposal of the equipment.

S9-9 Selling an asset at gain or loss

Alpha Communication purchased equipment on January 1, 2018, for \$27,500. Suppose Alpha Communication sold the equipment for \$20,000 on December 31, 2020. Accumulated Depreciation as of December 31, 2020, was \$10,000. Journalize the sale of the equipment, assuming straight-line depreciation was used.

S9-10 Selling an asset at gain or loss

Peyman Company purchased equipment on January 1, 2018, for \$38,000. Suppose Peyman Company sold the equipment for \$18,000 on December 31, 2019. Accumulated Depreciation as of December 31, 2019, was \$13,000. Journalize the sale of the equipment, assuming straight-line depreciation was used.

Learning Objective 2

Learning Objective 2

Learning Objective 3

Learning Objective 3

Learning Objective 3

Learning Objective 3

Learning Objective 4**S9-11 Accounting for depletion of natural resources**

West Coast Petroleum holds huge reserves of oil assets. Assume that at the end of 2018, West Coast Petroleum's cost of oil reserves totaled \$48,000,000, representing 8,000,000 barrels of oil.

Requirements

1. Which method does West Coast Petroleum use to compute depletion?
2. Suppose West Coast Petroleum removed and sold 900,000 barrels of oil during 2019. Journalize depletion expense for 2019.

Learning Objective 5**S9-12 Accounting for an intangible asset**

On March 1, 2018, Advance Company purchased a patent for \$64,800 cash. Although the patent gives legal protection for 20 years, the patent is expected to be used for only three years.

Requirements

1. Journalize the purchase of the patent.
2. Journalize the amortization expense for the year ended December 31, 2018. Assume straight-line amortization.

Learning Objective 5**S9-13 Accounting for goodwill**

Up Country Publishing paid \$180,000 to acquire *Concord Weekly*, a weekly advertising paper. At the time of the acquisition, *Concord Weekly*'s balance sheet reported total assets of \$140,000 and liabilities of \$80,000. The fair market value of *Concord Weekly*'s assets was \$110,000. The fair market value of *Concord Weekly*'s liabilities was \$80,000.

Requirements

1. How much goodwill did Up Country Publishing purchase as part of the acquisition of *Concord Weekly*?
2. Journalize Up Country Publishing's acquisition of *Concord Weekly*.

Learning Objective 6**S9-14 Computing the asset turnover ratio**

Baglini, Inc. had net sales of \$52,600,000 for the year ended May 31, 2018. Its beginning and ending total assets were \$55,200,000 and \$95,800,000, respectively. Determine Baglini's asset turnover ratio for year ended May 31, 2018. (Round the asset turnover ratio to two decimal places, X.XX.)

**Learning Objective 7
Appendix 9A****S9A-15 Exchanging plant assets**

Micron Precision, Inc. purchased a computer for \$2,500, debiting Computer Equipment. During 2016 and 2017, Micron Precision, Inc. recorded total depreciation of \$1,600 on the computer. On January 1, 2018, Micron Precision, Inc. traded in the computer for a new one, paying \$2,100 cash. The fair market value of the new computer is \$3,900. Journalize Micron Precision, Inc.'s exchange of computers. Assume the exchange had commercial substance.

**Learning Objective 7
Appendix 9A****S9A-16 Exchanging plant assets**

Pink Corporation purchased equipment for \$25,000. Pink recorded total depreciation of \$16,000 on the equipment. On January 1, 2018, Pink traded in the equipment for new equipment, paying \$19,500 cash. The fair market value of the new equipment is \$28,100. Journalize Pink Corporation's exchange of equipment. Assume the exchange had commercial substance.

> Exercises

E9-17 Determining the cost of assets

Ogden Furniture purchased land, paying \$70,000 cash and signing a \$290,000 note payable. In addition, Ogden paid delinquent property tax of \$1,000, title insurance costing \$5,000, and \$7,000 to level the land and remove an unwanted building. The company then constructed an office building at a cost of \$350,000. It also paid \$46,000 for a fence around the property, \$12,000 for a sign near the entrance, and \$10,000 for special lighting of the grounds.

Requirements

1. Determine the cost of the land, land improvements, and building.
2. Which of these assets will Ogden depreciate?

Learning Objective 1

1. Land \$333,000

E9-18 Making a lump-sum purchase of assets

Maplewood Properties bought three lots in a subdivision for a lump-sum price. An independent appraiser valued the lots as follows:

Lot	Appraised Value
1	\$ 144,000
2	96,000
3	240,000

Maplewood paid \$355,000 in cash. Record the purchase in the journal, identifying each lot's cost in a separate Land account. Round decimals to two places, and use the computed percentages throughout.

Learning Objective 1

- Lot 3 \$177,500

E9-19 Distinguishing capital expenditures from revenue expenditures

Consider the following expenditures:

Learning Objective 1

- a. Replace the engine of a vehicle, which leads to an extension of its expected life.
- b. Replace the oil filter due to wear and tear.
- c. Repaint the surface of the vehicle due to scratch.
- d. Replace its air-conditioning system due to wear and tear.
- e. Purchase commission.
- f. Insurance after the vehicle is placed in service.
- g. Insurance while the vehicle is in transit from seller to buyer.
- h. Regular maintenance of the vehicle to keep the vehicle in good working condition.
- i. Freight charge for transiting the vehicle from seller to buyer.

Classify each of the expenditures as a capital expenditure or a revenue expenditure related to a vehicle.

Learning Objective 2

1. Double-declining-balance,
12/31/19, Exp. \$8,250

Learning Objective 2

Yr. 16 \$14,350

Learning Objectives 2, 3

Depr. Exp. \$3,400

Learning Objectives 2, 3

Loss \$(2,000)

Learning Objective 4

\$1.30 per ton

Learning Objectives 2, 5

2. Amort. Exp. \$50,000

E9-20 Computing depreciation—three methods

Delicious Fried Chicken bought equipment on January 2, 2018, for \$15,000. The equipment was expected to remain in service for four years and to operate for 4,000 hours. At the end of the equipment's useful life, Delicious estimates that its residual value will be \$3,000. The equipment operated for 400 hours the first year, 1,200 hours the second year, 1,600 hours the third year, and 800 hours the fourth year.

Requirements

1. Prepare a schedule of *depreciation expense, accumulated depreciation, and book value* per year for the equipment under the three depreciation methods: straight-line, units-of-production, and double-declining-balance. Show your computations. *Note: Three depreciation schedules must be prepared.*
2. Which method tracks the wear and tear on the equipment most closely?

E9-21 Changing an asset's useful life and residual value

Just-for-You Hardware Consultants purchased a building for \$798,000 and depreciated it on a straight-line basis over a 35-year period. The estimated residual value is \$98,000. After using the building for 15 years, Just-for-You realized that wear and tear on the building would wear it out before 35 years and that the estimated residual value should be \$82,000. Starting with the 16th year, Just-for-You began depreciating the building over a revised total life of 25 years using the new residual value. Journalize depreciation expense on the building for Years 15 and 16.

E9-22 Recording partial-year depreciation and sale of an asset

On January 2, 2017, Comfy Clothing Consignments purchased showroom fixtures for \$17,000 cash, expecting the fixtures to remain in service for five years. Comfy has depreciated the fixtures on a double-declining-balance basis, with zero residual value. On October 31, 2018, Comfy sold the fixtures for \$7,600 cash. Record both depreciation expense for 2018 and sale of the fixtures on October 31, 2018.

E9-23 Recording partial-year depreciation and sale of an asset

On January 2, 2016, Royal Pet purchased fixtures for \$35,800 cash, expecting the fixtures to remain in service for six years. Royal has depreciated the fixtures on a straight-line basis, with \$7,000 residual value. On May 31, 2018, Royal Pet sold the fixtures for \$21,700 cash. Record both depreciation expense for 2018 and sale of the fixtures on May 31, 2018.

E9-24 Journalizing natural resource depletion

Horizon Mountain Mining paid \$681,000 for the right to extract mineral assets from a 400,000-ton deposit. In addition to the purchase price, Horizon also paid a \$1,200 filing fee, a \$2,100 license fee to the state of Nevada, and \$75,000 for a geological survey of the property. Because Horizon purchased the rights to the minerals only and did not purchase the land, it expects the asset to have zero residual value. During the first year, Horizon removed and sold 20,000 tons of the minerals. Make journal entries to record (a) purchase of the minerals (debit Minerals), (b) payment of fees and other costs, and (c) depletion for the first year.

E9-25 Handling acquisition of patent, amortization, and change in useful life

Melbourn Printers (MP) manufactures printers. Assume that MP recently paid \$200,000 for a patent on a new laser printer. Although it gives legal protection for 20 years, the patent is expected to provide a competitive advantage for only eight years.

Requirements

- Assuming the straight-line method of amortization, make journal entries to record (a) the purchase of the patent and (b) amortization for the first full year.
- After using the patent for four years, MP learns at an industry trade show that another company is designing a more efficient printer. On the basis of this new information, MP decides, starting with Year 5, to amortize the remaining cost of the patent over two remaining years, giving the patent a total useful life of six years. Record amortization for Year 5.

E9-26 Measuring and recording goodwill

Princeton has acquired several other companies. Assume that Princeton purchased Kelleher for \$9,000,000 cash. The book value of Kelleher's assets is \$19,000,000 (market value, \$20,000,000), and it has liabilities of \$12,000,000 (market value, \$12,000,000).

Learning Objective 5

- Goodwill \$1,000,000

Requirements

- Compute the cost of the goodwill purchased by Princeton.
- Record the purchase of Kelleher by Princeton.

E9-27 Computing asset turnover ratio

Winky Flash Photo reported the following figures on its December 31, 2018 income statement and balance sheet:

Net sales	\$ 461,000	
	Dec. 31, 2018	Dec. 31, 2017
Cash	\$ 28,000	\$ 38,000
Accounts Receivable	55,000	62,000
Merchandise Inventory	75,000	76,000
Prepaid Expenses	7,000	8,000
Property, plant, and equipment, net	145,000	11,000

Compute the asset turnover ratio for 2018. Round to two decimal places.

Learning Objective 6

E9A-28 Exchanging assets—two situations

Circle Bank recently traded in office fixtures. Here are the facts:

Old fixtures:	New fixtures:
Cost, \$94,000	Cash paid, \$101,000
Accumulated depreciation, \$70,000	Market value, \$125,000

Learning Objective 7 Appendix 9A

- Loss \$(7,000)

Requirements

- Record Circle Bank's trade-in of old fixtures for new ones. Assume the exchange had commercial substance.
- Now let's change one fact. Circle Bank feels compelled to do business with Lakeside Furniture, a bank customer, even though the bank can get the fixtures elsewhere at a better price. Circle Bank is aware that the new fixtures' market value is only \$117,000. Record the trade-in. Assume the exchange had commercial substance.

Learning Objectives 1, 2, 7
Appendix 9A

1. \$11,880

E9A-29 Measuring asset cost, units-of-production depreciation, and asset trade

Wimot Trucking Corporation uses the units-of-production depreciation method because units-of-production best measures wear and tear on the trucks. Consider these facts about one Mack truck in the company's fleet.

When acquired in 2015, the rig cost \$360,000 and was expected to remain in service for 10 years or 1,000,000 miles. Estimated residual value was \$90,000. The truck was driven 80,000 miles in 2015, 120,000 miles in 2016, and 160,000 miles in 2017. After 44,000 miles, on March 15, 2018, the company traded in the Mack truck for a less expensive Freightliner. Wimot also paid cash of \$20,000. Fair market value of the Mack truck was equal to its net book value on the date of the trade.

Requirements

1. Record the journal entry for depreciation expense in 2018.
2. Determine Wimot's cost of the new truck.
3. Record the journal entry for the exchange of assets on March 15, 2018. Assume the exchange had commercial substance.

> Problems Group A**Learning Objectives 1, 2**

1. Bldg. \$461,100

P9-30A Determining asset cost and recording partial-year depreciation, straight-line

Drive and Fly, near an airport, incurred the following costs to acquire land, make land improvements, and construct and furnish a small building:

a. Purchase price of three acres of land	\$ 83,000
b. Delinquent real estate taxes on the land to be paid by Drive and Fly	6,100
c. Additional dirt and earthmoving	8,800
d. Title insurance on the land acquisition	3,300
e. Fence around the boundary of the property	9,200
f. Building permit for the building	600
g. Architect's fee for the design of the building	20,500
h. Signs near the front of the property	9,600
i. Materials used to construct the building	212,000
j. Labor to construct the building	173,000
k. Interest cost on construction loan for the building	9,700
l. Parking lots on the property	28,500
m. Lights for the parking lots	10,100
n. Salary of construction supervisor (75% to building; 25% to parking lot and concrete walks)	40,000
o. Furniture	11,700
p. Transportation of furniture from seller to the building	2,000
q. Additional fencing	6,300

Drive and Fly depreciates land improvements over 15 years, buildings over 30 years, and furniture over 8 years, all on a straight-line basis with zero residual value.

Requirements

1. Columns for Land, Land Improvements, Building, and Furniture have been set up.
Show how to account for each cost by listing the cost under the correct account.
Determine the total cost of each asset.
2. All construction was complete and the assets were placed in service on July 1. Record partial year depreciation for the year ended December 31. Round to the nearest dollar.

P9-31A Determining asset cost, preparing depreciation schedules (3 methods), and identifying depreciation results that meet management objectives

On January 3, 2018, Rapid Delivery Service purchased a truck at a cost of \$100,000. Before placing the truck in service, Rapid spent \$3,000 painting it, \$600 replacing tires, and \$10,400 overhauling the engine. The truck should remain in service for five years and have a residual value of \$12,000. The truck's annual mileage is expected to be 32,000 miles in each of the first four years and 8,000 miles in the fifth year—136,000 miles in total. In deciding which depreciation method to use, Andy Sargeant, the general manager, requests a depreciation schedule for each of the depreciation methods (straight-line, units-of-production, and double-declining-balance).

Requirements

1. Prepare a depreciation schedule for each depreciation method, showing asset cost, depreciation expense, accumulated depreciation, and asset book value.
2. Rapid prepares financial statements using the depreciation method that reports the highest net income in the early years of asset use. Consider the first year that Rapid uses the truck. Identify the depreciation method that meets the company's objectives.

P9-32A Recording lump-sum asset purchases, depreciation, and disposals

Granny Carney Associates surveys American eating habits. The company's accounts include Land, Buildings, Office Equipment, and Communication Equipment, with a separate Accumulated Depreciation account for each depreciable asset. During 2018, Granny Carney Associates completed the following transactions:

-
- | | |
|---------|--|
| Jan. 1 | Purchased office equipment, \$114,000. Paid \$70,000 cash and financed the remainder with a note payable. |
| Apr. 1 | Acquired land and communication equipment in a lump-sum purchase. Total cost was \$350,000 paid in cash. An independent appraisal valued the land at \$275,625 and the communication equipment at \$91,875. |
| Sep. 1 | Sold a building that cost \$540,000 (accumulated depreciation of \$240,000 through December 31 of the preceding year). Granny Carney Associates received \$330,000 cash from the sale of the building. Depreciation is computed on a straight-line basis. The building has a 40-year useful life and a residual value of \$60,000. |
| Dec. 31 | Recorded depreciation as follows:

Communication equipment is depreciated by the straight-line method over a five-year life with zero residual value.

Office equipment is depreciated using the double-declining-balance method over five years with a \$2,000 residual value. |
-

Record the transactions in the journal of Granny Carney Associates.

Learning Objectives 1, 2

-
1. Units-of-production, 12/31/18,
Dep. Exp. \$24,000

Learning Objectives 1, 2, 3

-
- Sep. 1 Gain \$193,250

Learning Objective 4

Depl. Exp. \$548,640

Learning Objective 5

1. Goodwill \$230,000

P9-33A Accounting for natural resources

Conseco Oil, Inc. has an account titled Oil and Gas Properties. Conseco paid \$6,600,000 for oil reserves holding an estimated 1,000,000 barrels of oil. Assume the company paid \$570,000 for additional geological tests of the property and \$450,000 to prepare for drilling. During the first year, Conseco removed and sold 72,000 barrels of oil. Record all of Conseco's transactions, including depletion for the first year.

P9-34A Accounting for intangibles

Midland States Telecom provides communication services in Iowa, Nebraska, the Dakotas, and Montana. Midland States Telecom purchased goodwill as part of the acquisition of Sheldon Wireless Enterprises, which had the following figures:

Book value of assets	\$ 900,000
Market value of assets	1,400,000
Market value of liabilities	530,000

Requirements

1. Journalize the entry to record Midland States Telecom's purchase of Sheldon Wireless for \$440,000 cash plus a \$660,000 note payable.
2. What special asset does Midland States Telecom's acquisition of Sheldon Wireless identify? How should Midland States Telecom account for this asset after acquiring Sheldon Wireless? Explain in detail.

**Learning Objectives 2, 3, 7
Appendix 9A**

Jan. 1 Gain \$8,000

P9A-35A Journalizing partial-year depreciation and asset disposals and exchanges

During 2018, Mora Corporation completed the following transactions:

Jan. 1 Traded in old office equipment with book value of \$55,000 (cost of \$127,000 and accumulated depreciation of \$72,000) for new equipment. Mora also paid \$70,000 in cash. Fair value of new equipment is \$133,000. Assume the exchange had commercial substance.

Apr. 1 Sold equipment that cost \$18,000 (accumulated depreciation of \$8,000 through December 31 of the preceding year). Mora received \$6,100 cash from the sale of the equipment. Depreciation is computed on a straight-line basis. The equipment has a five-year useful life and a residual value of \$0.

Dec. 31 Recorded depreciation as follows:

Office equipment is depreciated using the double-declining-balance method over four years with a \$9,000 residual value.

Record the transactions in the journal of Mora Corporation.

> Problems Group B

P9-36B Determining asset cost and recording partial-year depreciation

Safe Parking, near an airport, incurred the following costs to acquire land, make land improvements, and construct and furnish a small building:

a. Purchase price of three acres of land	\$ 86,000
b. Delinquent real estate taxes on the land to be paid by Safe Parking	6,300
c. Additional dirt and earthmoving	8,400
d. Title insurance on the land acquisition	3,400
e. Fence around the boundary of the property	9,600
f. Building permit for the building	900
g. Architect's fee for the design of the building	20,100
h. Signs near the front of the property	9,000
i. Materials used to construct the building	217,000
j. Labor to construct the building	172,000
k. Interest cost on construction loan for the building	9,500
l. Parking lots on the property	29,400
m. Lights for the parking lots	11,600
n. Salary of construction supervisor (80% to building; 20% to parking lot and concrete walks)	80,000
o. Furniture	11,700
p. Transportation of furniture from seller to the building	1,900
q. Additional fencing	6,900

Safe Parking depreciates land improvements over 15 years, buildings over 40 years, and furniture over 10 years, all on a straight-line basis with zero residual value.

Requirements

- Set up columns for Land, Land Improvements, Building, and Furniture. Show how to account for each cost by listing the cost under the correct account. Determine the total cost of each asset.
- All construction was complete and the assets were placed in service on September 1. Record partial-year depreciation expense for the year ended December 31. Round to the nearest dollar.

P9-37B Determining asset cost, preparing depreciation schedules (3 methods), and identifying depreciation results that meet management objectives

On January 3, 2018, Speedy Delivery Service purchased a truck at a cost of \$67,000. Before placing the truck in service, Speedy spent \$3,000 painting it, \$1,200 replacing tires, and \$3,500 overhauling the engine. The truck should remain in service for five years and have a residual value of \$5,100. The truck's annual mileage is expected to be 20,000 miles in each of the first four years and 12,800 miles in the fifth year—92,800 miles in total. In deciding which depreciation method to use, Alec Rivera, the general manager, requests a depreciation schedule for each of the depreciation methods (straight-line, units-of-production, and double-declining-balance).

Learning Objectives 1, 2

- Bldg. \$483,500

Learning Objectives 1, 2

- Units-of-production, 12/31/18, Dep. Exp. \$15,000

Requirements

1. Prepare a depreciation schedule for each depreciation method, showing asset cost, depreciation expense, accumulated depreciation, and asset book value.
2. Speedy prepares financial statements using the depreciation method that reports the highest net income in the early years of asset use. Consider the first year that Speedy uses the truck. Identify the depreciation method that meets the company's objectives.

Learning Objectives 1, 2, 3

Sep. 1 Gain \$163,250

P9-38B Recording lump-sum asset purchases, depreciation, and disposals

Whitney Plumb Associates surveys American eating habits. The company's accounts include Land, Buildings, Office Equipment, and Communication Equipment, with a separate Accumulated Depreciation account for each asset. During 2018, Whitney Plumb completed the following transactions:

- | | |
|---------|---|
| Jan. 1 | Purchased office equipment, \$117,000. Paid \$77,000 cash and financed the remainder with a note payable. |
| Apr. 1 | Acquired land and communication equipment in a lump-sum purchase. Total cost was \$350,000 paid in cash. An independent appraisal valued the land at \$275,625 and the communication equipment at \$91,875. |
| Sep. 1 | Sold a building that cost \$520,000 (accumulated depreciation of \$285,000 through December 31 of the preceding year). Whitney Plumb received \$390,000 cash from the sale of the building. Depreciation is computed on a straight-line basis. The building has a 40-year useful life and a residual value of \$25,000. |
| Dec. 31 | Recorded depreciation as follows:
Communication equipment is depreciated by the straight-line method over a five-year life with zero residual value.
Office equipment is depreciated using the double-declining-balance method over five years with a \$2,000 residual value. |

Record the transactions in the journal of Whitney Plumb Associates.

Learning Objective 4

Depl. Exp. \$1,383,750

P9-39B Accounting for natural resources

Conseco Oil, Inc. has an account titled Oil and Gas Properties. Conseco paid \$6,000,000 for oil reserves holding an estimated 500,000 barrels of oil. Assume the company paid \$560,000 for additional geological tests of the property and \$460,000 to prepare for drilling. During the first year, Conseco removed and sold 90,000 barrels of oil. Record all of Conseco's transactions, including depletion for the first year.

Learning Objective 5

1. Goodwill \$210,000

P9-40B Accounting for intangibles

Core Telecom provides communication services in Iowa, Nebraska, the Dakotas, and Montana. Core purchased goodwill as part of the acquisition of Samson Wireless Company, which had the following figures:

Book value of assets	\$ 950,000
Market value of assets	1,000,000
Market value of liabilities	560,000

Requirements

1. Journalize the entry to record Core Telecom's purchase of Samson's Wireless for \$480,000 cash plus a \$720,000 note payable.
2. What special asset does Core Telecom's acquisition of Samson Wireless identify? How should Core Telecom account for this asset after acquiring Samson Wireless? Explain in detail.

P9A-41B Journalizing partial-year depreciation and asset disposals and exchanges

During 2018, Sukiora Corporation completed the following transactions:

Learning Objectives 2, 3, 7 Appendix 9A

Jan. 1 Gain \$6,000

- | | |
|---------|---|
| Jan. 1 | Traded in old office equipment with book value of \$60,000 (cost of \$148,000 and accumulated depreciation of \$88,000) for new equipment. Sukiora also paid \$65,000 in cash. Fair value of new equipment is \$129,000. Assume the exchange had commercial substance. |
| Apr. 1 | Sold equipment that cost \$24,000 (accumulated depreciation of \$14,500 through December 31 of the preceding year). Sukiora received \$6,500 cash from the sale of the equipment. Depreciation is computed on a straight-line basis. The equipment has a five-year useful life and a residual value of \$0. |
| Dec. 31 | Recorded depreciation as follows:

Office equipment is depreciated using the double-declining-balance method over four years with a \$4,000 residual value. |
-

Record the transactions in the journal of Sukiora Company.

CRITICAL THINKING

> Using Excel

P9-42 Using Excel to prepare depreciation schedules

Download an Excel template for this problem online in MyAccountingLab or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

The Fraser River Corporation has purchased a new piece of factory equipment on January 1, 2018, and wishes to compare three depreciation methods: straight-line, double-declining-balance, and units-of-production.

The equipment costs \$400,000 and has an estimated useful life of four years, or 8,000 hours. At the end of four years, the equipment is estimated to have a residual value of \$20,000.

Requirements

1. Use Excel to prepare depreciation schedules for straight-line, double-declining-balance, and units-of-production methods. Use cell references from the Data table.
2. Prepare a second depreciation schedule for double-declining-balance method, using the Excel function DDB. The DDB function cannot be used in the last year of the asset's useful life.
3. At December 31, 2018, Fraser River is trying to determine if it should sell the factory equipment. Fraser River will only sell the factory equipment if the company earns a gain of at least \$6,000. For each of the three depreciation methods, what is the minimum amount that Fraser River will sell the factory equipment for in order to have a gain of \$6,000?

> Continuing Problem

P9-43 Calculating and journalizing partial-year depreciation

This problem continues the Let's Bike Company situation from Chapter 8. Cho and Lee are continuing to review business practices. Currently, they are reviewing the company's property, plant, and equipment and have gathered the following information:

Asset	Acquisition Date	Cost	Estimated Life	Estimated Residual Value	Depreciation Method*	Monthly Depreciation Expense
Bikes	Nov. 2, 2018	\$ 5,400	3 years	\$ 0	SL	\$ 150
Land	Dec. 1, 2018	94,000			n/a	
Building	Dec. 1, 2018	40,000	5 years	4,000	SL	600
Bikes	Dec. 1, 2018	6,120	3 years	0	SL	170
Computers	Apr. 1, 2019	2,700	3 years	200	DDB	
Office Furniture	Jun. 2, 2019	4,200	4 years	360	SL	

*SL = Straight-line; DDB = Double-declining-balance

Requirements

1. Calculate the amount of monthly depreciation expense for the computer and office furniture for 2019.
2. For each asset, determine the book value as of December 31, 2018. Then, calculate the depreciation expense for the first six months of 2019 and the book value as of June 30, 2019.
3. Prepare a partial balance sheet showing Property, Plant, and Equipment as of June 30, 2019.

COMPREHENSIVE PROBLEM

> Comprehensive Problem for Chapters 7, 8, and 9

Top Quality Appliance—Long Beach has just purchased a franchise from Top Quality Appliance (TQA). TQA is a manufacturer of kitchen appliances. TQA markets its products via retail stores that are operated as franchises. As a TQA franchisee, Top Quality Appliance—Long Beach will receive many benefits, including having the exclusive right to sell TQA brand appliances in Long Beach. TQA appliances have an excellent reputation and the TQA name and logo are readily recognized by consumers. TQA also manages national television advertising campaigns that benefit the franchisees. In exchange for these benefits, Top Quality Appliance—Long Beach will pay an annual franchise fee to TQA based on a percentage of sales. The annual franchise fee is a separate cost and in addition to the purchase of the franchise.

In addition to purchasing the franchise, Top Quality Appliance—Long Beach will also purchase land with an existing building to use for its retail store, store fixtures, and office equipment. The business will purchase appliances from TQA and resell them in its store, primarily to local building contractors for installation in new homes.

Following is the chart of accounts for Top Quality Appliance—Long Beach. As a new business, all beginning balances are \$0.

**Top Quality Appliance—Long Beach
Chart of Accounts**

Cash	Common Stock
Petty Cash	Retained Earnings
Accounts Receivable	Dividends
Allowance for Bad Debts	Sales Revenue
Merchandise Inventory	Interest Revenue
Office Supplies	Cost of Goods Sold
Prepaid Insurance	Franchise Fee Expense
Interest Receivable	Salaries Expense
Notes Receivable	Utilities Expense
Land	Insurance Expense
Building	Supplies Expense
Accumulated Depreciation—Building	Bad Debt Expense
Store Fixtures	Bank Expense
Accumulated Depreciation—Store Fixtures	Credit Card Expense
Office Equipment	Depreciation Expense—Building
Accumulated Depreciation—Office Equipment	Depreciation Expense—Store Fixtures
Franchise	Depreciation Expense—Office Equipment
Accounts Payable	Amortization Expense—Franchise
Interest Payable	Interest Expense
Notes Payable	Cash Short and Over

Top Quality Appliance—Long Beach completed the following transactions during 2018, its first year of operations:

- Received \$500,000 cash and issued common stock. Opened a new checking account at Long Beach National Bank and deposited the cash received from the stockholders.
- Paid \$50,000 cash for a TQA franchise.
- Paid \$200,000 cash and issued a \$400,000, 10-year, 5% notes payable for land with an existing building. The assets had the following market values: Land, \$100,000; Building, \$500,000.
- Paid \$75,000 for store fixtures.

- e. Paid \$45,000 for office equipment.
- f. Paid \$600 for office supplies.
- g. Paid \$3,600 for a two-year insurance policy.
- h. Purchased appliances from TQA (merchandise inventory) on account for \$425,000.
- i. Established a petty cash fund for \$150.
- j. Sold appliances on account to B&B Contractors for \$215,000, terms n/30 (cost, \$86,000).
- k. Sold appliances to Davis Contracting for \$150,000 (cost, \$65,000), receiving a 6-month, 8% note.
- l. Recorded credit card sales of \$80,000 (cost, \$35,000), net of processor fee of 2%.
- m. Received payment in full from B&B Contractors.
- n. Purchased appliances from TQA on account for \$650,000.
- o. Made payment on account to TQA, \$300,000.
- p. Sold appliances for cash to LB Home Builders for \$350,000 (cost, \$175,000).
- q. Received payment in full on the maturity date from Davis Contracting for the note.
- r. Sold appliances to Leard Contracting for \$265,000 (cost, \$130,000), receiving a 9-month, 8% note.
- s. Made payment on account to TQA, \$500,000.
- t. Sold appliances on account to various businesses for \$985,000, terms n/30 (cost, \$395,000).
- u. Collected \$715,000 cash on account.
- v. Paid cash for expenses: Salaries, \$180,000; Utilities, \$12,650
- w. Replenished the petty cash fund when the fund had \$62 in cash and petty cash tickets for \$85 for office supplies.
- x. Paid dividends, \$5,000.
- y. Paid the franchise fee to TQA of 5% of total sales of \$2,045,000.

Requirements

1. Record the transactions in the general journal. Omit explanations.
2. Post to the general ledger.
3. It is a common business practice to reconcile the bank accounts on a monthly basis. However, in this problem, the reconciliation of the company's checking account will be done at the end of the year, based on an annual summary.

Reconcile the bank account by comparing the following annual summary statement from Long Beach National Bank to the Cash account in the general ledger. Record journal entries as needed and post to the general ledger. Use transaction z as the posting reference.

Beginning Balance, January 1, 2018	\$	0
Deposits and other credits:		
\$ 500,000		
78,400		
215,000		
350,000		
715,000		
Interest Revenue	1,565	1,859,965
Checks and other debits:		
EFT to Bank Checks ⁽¹⁾	125	
Checks:	50,000	
200,000		
45,000		
75,000		
150		
3,600		
600		
300,000		
500,000		
192,650		
Bank service charge	2,340	(1,369,465)
Ending balance, December 31, 2018		\$ 490,500

⁽¹⁾ Bank Checks is a company that prints business checks (considered a bank expense) for Top Quality Appliance—Long Beach

4. In preparation for preparing the adjusting entries, complete depreciation schedules for the first five years for the depreciable plant assets, assuming the assets were purchased on January 2, 2018:
 - a. Building, straight-line, 30 years, \$50,000 residual value.
 - b. Store Fixtures, straight-line, 15 years, no residual value.
 - c. Office Equipment, double-declining-balance, 5 years, \$5,000 residual value.
5. Record adjusting entries for the year ended December 31, 2018:
 - a. One year of the prepaid insurance has expired.
 - b. Management estimates that 5% of Accounts Receivable will be uncollectible.
 - c. An inventory of office supplies indicates \$475 of supplies have been used.
 - d. Calculate the interest earned on the outstanding Leard Contracting note receivable. Assume the note was received on October 31. Round to the nearest dollar.
 - e. Record depreciation expense for the year.
 - f. Record amortization expense for the year on the franchise, which has a 10-year life.
 - g. Calculate the interest owed on the note payable. Assume the note was issued on January 1.
6. Post adjusting entries and prepare an adjusted trial balance.

7. Prepare a multi-step income statement and statement of retained earnings for the year ended December 31, 2018. Prepare a classified balance sheet as of December 31, 2018. Assume Interest Receivable is a current asset and Interest Payable is a current liability.
8. Evaluate the company's success for the first year of operations by calculating the following ratios. Round to two decimal places. Comment on the results.
 - a. Liquidity:
 - i. Current ratio
 - ii. Acid-test ratio
 - iii. Cash ratio
 - b. Efficiency:
 - i. Accounts receivable turnover
 - ii. Day's sales in receivables
 - iii. Asset turnover
 - iv. Rate of return on total assets

> Tying It All Together Case 9-1

Before you begin this assignment, review the *Tying It All Together* feature in the chapter. It will also be helpful if you review McDonald's Corporation 2015 annual report (<https://www.sec.gov/Archives/edgar/data/63908/000006390816000103/mcd-12312015x10k.htm>).

McDonald's Corporation is the world's leading global food service retailer with more than 36,000 locations worldwide in more than 100 countries. The corporation operates and franchises McDonald's restaurants, which serve menu items such as the Big Mac, Chicken McNuggets, and McFlurry desserts. In addition, McDonald's also serves McCafe beverages and pastries.

Requirements

1. Where would McDonald's Corporation report plant assets on its financial statements? How are plant assets reported and what is the value as of December 31, 2015?
2. Does McDonald's Corporation depreciate its plant assets? How do you know? What is the depreciation method used and the useful lives?
3. How is the book value of plant assets calculated? What is the net book value of McDonald's plant assets as of December 31, 2015?
4. What type of intangibles would be included on McDonald's financial statements and where?
5. What is goodwill? Does McDonald's Corporation report goodwill? If so, how much goodwill is reported as of December 31, 2015? What does McDonald's goodwill primarily result from?

> Ethical Issue 9-1

Western Bank & Trust purchased land and a building for the lump sum of \$3,000,000. To get the maximum tax deduction, Western allocated 90% of the purchase price to the building and only 10% to the land. A more realistic allocation would have been 70% to the building and 30% to the land.

Requirements

1. Explain the tax advantage of allocating too much to the building and too little to the land.
2. Was Western's allocation ethical? If so, state why. If not, why not? Identify who was harmed.

> Fraud Case 9-1

Jim Reed manages a fleet of utility trucks for a rural county government. He's been in his job for 30 years, and he knows where the angles are. He makes sure that when new trucks are purchased, the residual value is set as low as possible. Then, when they become fully depreciated, they are sold off by the county at residual value. Jim makes sure his buddies in the construction business are first in line for the bargain sales, and they make sure he gets a little something back. Recently, a new county commissioner was elected with vows to cut expenses for the taxpayers. Unlike other commissioners, this man has a business degree, and he is coming to visit Jim tomorrow.

Requirements

1. When a business sells a fully depreciated asset for its residual value, is a gain or loss recognized?
2. How do businesses determine what residual values to use for their various assets? Are there "hard and fast" rules for residual values?
3. How would an organization prevent the kind of fraud depicted here?

> Financial Statement Case 9-1

View a link to **Target Corporation's** Fiscal 2015 annual report at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>. Refer to the Target Corporation financial statements, including Notes 14 and 15. Answer the following questions.

Requirements

1. Which depreciation method does Target Corporation use for reporting in the financial statements? What type of depreciation method does the company probably use for income tax purposes?
2. What was the amount of depreciation and amortization expense for the year ending January 30, 2016?
3. The statement of cash flows reports the cash purchases of property, plant, and equipment. How much were Target's additions to property, plant, and equipment during the year ending January 30, 2016? Did Target record any proceeds from the sale of property, plant, and equipment?

4. What was the amount of accumulated depreciation at January 30, 2016? What was the net book value of property, plant, and equipment for Target as of January 31, 2016?
5. Compute Target's asset turnover ratio for year ending January 30, 2016. Round to two decimal places. How does Target's ratio compare with that of **Kohl's Corporation?**

> Communication Activity 9-1

In 150 words or fewer, explain the different methods that can be used to calculate depreciation. Your explanation should include how to calculate depreciation expense using each method.

Pearson MyLab Accounting

For a wealth of online resources, including exercises, problems, media, and immediate tutorial help, please visit <http://www.myaccountinglab.com>.

> Quick Check Answers

1. d 2. d 3. c 4. b 5. c 6. d 7. d 8. b 9. c 10A. b

Investments

10



How Should the Business Invest Its Excess Cash?

Donavon Gill, portfolio manager for GMP Investors, had just finished a meeting with his newest client, Sarah Miller. Sarah is the CEO of Miller Construction, a profitable construction firm with offices throughout the United States. Sarah had requested a meeting with Donavon to discuss an investment plan for the business. Miller Construction was interested in investing its excess cash and, as CEO, Sarah had come to Donavon with a number of questions.

During the meeting, Donavon had shared with Sarah a variety of different investment options that the business could consider. One option might be for Miller Construction to invest in other corporations' stocks (called *equity securities*). Another option for the business might be investing in bonds (called *debt securities*). He also talked to Sarah about why the business might want to invest in each type of security. Donavon knew that it was his responsibility to provide a custom solution for Miller

Construction so that Sarah's business would meet its earnings needs.

Sarah was also interested in how Miller Construction would report these investments on its financial statements. She knew that investments in debt and equity securities were reported as assets on the balance sheet, but she was concerned that there might be some additional reporting requirements. Donavon was glad that Sarah was considering these issues and was happy to help her. He shared with her that the type of security (debt or equity) and the length of time the security was held (short-term versus long-term) determined how it was reported on the financial statements. Donavon also suggested that she talk to her company's accountant before deciding on the business's investment plan. He knew that there were a lot of issues to consider when choosing how to invest excess cash.



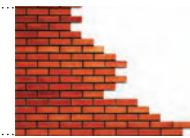
Why Would a Company Invest?

Many of you are familiar with the famous businessman Warren Buffett, but you might not know that he is the primary stockholder and CEO of **Berkshire Hathaway, Inc.** Berkshire Hathaway is a holding company that owns a large number of other businesses (called *subsidiaries*), including the popular automobile insurer GEICO and the railroad system operator Burlington Northern Santa Fe. In addition to owning subsidiaries, Berkshire Hathaway also invests cash in other corporations' stock, such as The Coca-Cola Company (9.3% ownership), Wal-Mart Stores, Inc. (2.0% ownership), and Phillips 66 (12.6% ownership). Investing excess cash in corporations' stocks and bonds is a common practice; many businesses (and individuals) do this. In this chapter, you learn why companies might invest in securities and how these investments are reported on the financial statements.





Chapter 10 Learning Objectives



- | | |
|--|---|
| <p>1 Identify why companies invest in debt and equity securities and classify investments</p> <p>2 Account for investments in debt securities</p> <p>3 Account for investments in equity securities</p> | <p>4 Describe and illustrate how debt and equity securities are reported</p> <p>5 Use the rate of return on total assets to evaluate business performance</p> |
|--|---|

WHY DO COMPANIES INVEST?

Learning Objective 1

Identify why companies invest in debt and equity securities and classify investments

Investor

The owner of a bond or stock of a corporation.

Investee

The corporation that issued the bond or stock to the investor.

Security

A share or interest representing financial value.

Debt Security

Investment in notes or bonds payable issued by another company.

Equity Security

Investment in stock ownership in another company that sometimes pays cash dividends or issues stock dividends.

Just as individuals invest in a variety of companies' stocks and bonds, the same is true for businesses. Investments in stocks or bonds can range from a few securities to the acquisition of an entire company. In this chapter, we examine debt (bonds) and equity (stock) accounting for the investor who buys them.

Debt Securities Versus Equity Securities

The owner of a bond or stock of a corporation is referred to as the **investor**. The corporation that issued the bond or stock is referred to as the **investee**. For example, if you own shares of Smart Touch Learning's stock, you are the investor and Smart Touch Learning is the investee.

Investors can invest in either debt securities or equity securities. A **security** is a share or interest representing financial value. Securities are represented by a certificate (such as a stock certificate) and are commonly traded on an exchange (such as the New York Stock Exchange). A **debt security** is an investment in notes or bonds payable issued by another company. Debt securities represent a credit relationship with another company or governmental entity, and typically pays interest for a fixed period and a final payment of face value at the end of the term. Debt securities include U.S. government securities (Treasury bills), municipal bonds, and corporate bonds. An **equity security** is an investment in stock ownership in another company and sometimes pays cash dividends or issues stock dividends. Equity securities include common and preferred stock.

Reasons to Invest

Why would a company invest in debt or equity securities? Let's look at two common reasons:

1. The company may have short-term, excess cash that it doesn't need for normal operations. This excess cash could be the result of temporary or seasonal business fluctuations, or it could be cash available for a longer term. The company wants to make the best use of its excess cash, so it invests in debt or equity securities to generate investment income. This investment income may come from interest earned from debt investments, dividends earned from stock investments, and/or increases in the market value of the security.
2. The company may invest in debt or equity securities of other companies to pursue a certain business strategy. For example, a company may invest in a key vendor's debt or equity securities to further enhance a business relationship with that vendor. Doing so might strengthen the relationship between the investing company and the vendor.



Of course, there are other reasons a company may want to invest in other companies' debt or equity securities, but the reasons we identified above are the most common. Now, let's turn to a few basics of investing in debt or equity securities.

ETHICS

It's just a tip, isn't it?

Arlene Barry had just left the most recent board meeting of Panda Toy Manufacturing. Arlene served as chairman of the board and was also a majority stockholder in the business. Panda Toy Manufacturing had just learned that the company was being sued by a multinational retail toy store for failure to use flame-retardant filling in its stuffed panda bears. Arlene knew that the business had been cutting costs and had intentionally used filling that was not up to appropriate standards. She was sure that Panda Toy would lose the lawsuit and knew that the value of her stock would drop considerably. Arlene was considering quickly selling her stock before the lawsuit became public knowledge. What should Arlene do? What would you do?

Solution

If Arlene sells her investment in Panda Toy Manufacturing, she could be found guilty of illegal insider trading. Insider trading occurs when a corporate officer, director, or employee buys or sells stock after learning information obtained during the performance of the individual's duties that is considered to be non-public information about a company. If Arlene wants to sell her shares of Panda Toy, she should wait until after the information has become public. This type of sale would be considered legal insider trading and would need to be reported to the U.S. Securities and Exchange Commission (SEC) to notify the public of a change in ownership of the manufacturer's stock.

Classification and Reporting of Investments

Investments are first classified based on the length of time the investor intends to hold the investment. The two classifications are similar to the balance sheet classifications you learned previously.

- **Short-term investments** are investments in debt and equity securities that the investor intends to sell in one year or less. Short-term investments are reported as current assets.
- **Long-term investments** are all investments that are not short-term. Long-term investments include debt and equity securities that the investor expects to hold longer than one year or debt or equity securities that are not readily marketable—for instance, a stock investment in a small or privately held company that is not traded on any stock exchange.

Debt Securities

Debt securities can be further classified into three specific types based on how long the investor intends to hold the investment.

- **Trading debt investments**¹ are debt securities in which the investor intends to sell in the very near future—days, weeks, or only a few months—with the intent of generating a profit on a quick sale. Trading debt investments are categorized as current assets.
- **Held-to-maturity (HTM) debt investments** are debt securities the investor intends to hold and has the ability to hold until they mature. Held-to-maturity debt investments are categorized as current assets or long-term assets on the balance sheet, depending on the maturity date.

Short-term Investment

An investment in debt and equity securities that the investor intends to sell in one year or less.

Long-term Investment

An investment in debt and equity securities that the investor intends to hold for longer than one year.

Trading Debt Investment

A debt security that the investor plans to sell in the very near future.

Held-to-Maturity (HTM) Debt Investment

A debt security the investor intends to hold and has the ability to hold until it matures.

¹ In January 2016, FASB issued new guidance on financial instruments, *Financial Instruments-Overall*. Under this new guidance, the designation of trading investments (equity) and available-for-sale investments (equity) will be eliminated. Trading investments (debt) and available-for-sale investments (debt) will remain. This new guidance goes into effect for fiscal years after December 15, 2017 and early adoption is not permitted. The applicable sections of the text have been updated for this new guidance.



Available-for-Sale (AFS) Debt Investment

A debt security that isn't a trading debt investment or a held-to-maturity debt investment.

- **Available-for-sale (AFS) debt investments** include all debt securities that aren't trading debt investments or held-to-maturity debt investments. Available-for-sale debt investments are reported either as current assets or long-term assets on the balance sheet. AFS debt investments are reported as current assets if the business expects to sell them within one year. All other AFS debt investments that are planned to be held longer than a year are reported as long-term assets.

Equity Securities

Equity securities can also be classified into three specific types based on the investor's level of influence over the investee company.

No Significant Influence Equity Investment

An equity security in which the investor lacks the ability to participate in the decisions of the investee company.

Significant Influence Equity Investment

An equity security in which the investor has the ability to exert influence over operating and financial decisions of the investee company.

Controlling Interest Equity Investment

An equity security in which the investor owns more than 50% of the investee's voting stock.

- **No significant influence.** Investments in which the investor lacks the ability to participate in the decisions of the investee company are treated as **no significant influence equity investments**. Generally, the investor owns less than 20% of the investee's voting stock. These equity investments are reported as either current assets or long-term assets on the balance sheet depending on how long the investor intends to hold the security.
- **Significant influence.** **Significant influence equity investments** are equity securities in which the investor has the ability to exert influence over operating and financial decisions of the investee company. Generally, the investor owns from 20% to 50% of the investee's voting stock. Significant influence equity investments are reported as long-term assets on the balance sheet.
- **Control.** **Controlling interest equity investments** are equity securities in which the investor owns more than 50% of the investee's voting stock. Controlling interest investments are consolidated into the investor's financial statements and are discussed in more advanced accounting courses.

Exhibit 10-1 summarizes the different types of investments.

Exhibit 10-1 | Types of Investments

Types of Investments	Definition
Debt securities—Classified by how long the investor intends to hold the investment	
Trading debt investment	A debt security that the investor plans to sell in the very near future.
Held-to-maturity (HTM) debt investment	A debt security the investor intends to hold and has the ability to hold until it matures.
Available-for-sale (AFS) debt investment	A debt security that isn't a trading debt investment or a held-to-maturity debt investment.
Equity securities—Classified by the investor's level of influence over the investee company	
No significant influence equity investment	An equity security in which the investor lacks the ability to participate in the decisions of the investee company.
Significant influence equity investment	An equity security in which the investor has the ability to exert influence over operating and financial decisions of the investee company.
Controlling interest equity investment	An equity security in which the investor owns more than 50% of the investee's voting stock.



Try It!

Match the key term to the scenario.

- | | |
|--|---|
| 1. Available-for-sale debt investments | a. Jane owns 53% of Richard's Roses's voting stock. |
| 2. Controlling interest equity investments | b. Joe owns a debt security in Bones, Inc. and intends to hold it until maturity. |
| 3. Trading debt investments | c. Jeannie owns a debt security in Cricket, Inc. and plans on selling the debt after one year. |
| 4. Held-to-maturity debt investments | d. Jimenez owns 5% of Delgado, Inc.'s voting stock but does not have the ability to participate in the decisions of Delgado, Inc. |
| 5. Significant influence equity investments | e. Jacob owns 24% of Pay, Inc.'s voting stock and has the ability to exert influence over Pay, Inc. |
| 6. No significant influence equity investments | f. Jim owns a debt security in Tag, Inc.'s and plans on holding the debt for only a week. |

Check your answers online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercise S10-1.

Pearson MyLab Accounting

HOW ARE INVESTMENTS IN DEBT SECURITIES ACCOUNTED FOR?

Let's begin by discussing how debt securities are accounted for, including the purchase, interest revenue earned, and disposition of the securities.

Purchase of Debt Securities

Assume Smart Touch Learning has excess cash to invest and pays \$100,000 to buy \$100,000 face value, 9%, five-year Neon Company bonds on July 1, 2018. The bonds are issued on July 1, 2018. The bonds pay interest on June 30 and December 31. Smart Touch Learning intends to hold the bonds to maturity and will, therefore, record them as held-to-maturity debt investments. Smart Touch Learning's accounting clerk will record the investment in debt securities at cost, including any brokerage fees paid, with the following entry:

Date	Accounts and Explanation	Debit	Credit
2018			
Jul. 1	Held-to-Maturity Debt Investments	100,000	
	Cash		100,000
	<i>Purchased investment in bonds.</i>		

Learning Objective 2

Account for investments in debt securities

$$\left. \begin{array}{l} A \uparrow \\ \text{HTM Debt} \\ \text{Investments} \uparrow \\ \text{Cash} \downarrow \end{array} \right\} = \left. \begin{array}{l} L \\ + \\ E \end{array} \right\}$$



Interest Revenue

On December 31, 2018, Smart Touch Learning would receive the first interest payment on the bond investment. Smart Touch Learning's entry to record the receipt of interest on December 31, 2018, is as follows:

	Date	Accounts and Explanation	Debit	Credit
A↑ Cash↑	2018			
	Dec. 31	Cash Interest Revenue (\$100,000 × 0.09 × 6/12)	4,500	4,500
		<i>Received cash interest.</i>		

Smart Touch Learning would repeat this entry every six months for the five years—each time interest payments are received.

Disposition at Maturity

When Smart Touch Learning disposes of the bonds at maturity (June 30, 2023), it will receive the face value of the bond and record the following entry, assuming the last interest payment has been recorded:

	Date	Accounts and Explanation	Debit	Credit
A↓ Cash↑ HTM Debt Investments↓	2023			
	Jun. 30	Cash Held-to-Maturity Debt Investments	100,000	100,000
		<i>Disposed of bond at maturity.</i>		

In this example, we illustrated the accounting for held-to-maturity debt investments. Debt securities can also be trading debt investments and available-for-sale debt investments. The accounting for these is the same as illustrated above. The only difference is the use of a different account name. In addition, debt securities can be purchased at face value, at a discount, or at a premium. In our example, we purchased the debt securities at face value. If a debt security is purchased at a discount or at a premium, the discount/premium must be amortized when the interest revenue is earned. This amortization can be done using either the straight-line amortization method or the effective-interest amortization method and is similar to recording the amortization of discount or premium on bonds payable covered in a later chapter.

Try It!

- On January 1, 2018, the College Corporation decides to invest in Small Town bonds. The bonds mature on December 31, 2022, and pay interest of 4% on June 30 and December 31. The market rate of interest was 4% on January 1, 2018, so the \$20,000 maturity-value bonds sold for face value. College Corporation intends to hold the bonds until maturity. Journalize the transactions related to College Corporation's investment in Small Town bonds during 2018.

Check your answers online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.



HOW ARE INVESTMENTS IN EQUITY SECURITIES ACCOUNTED FOR?

The accounting for equity securities must be separated into three categories based on the investor's level of influence over the investee company.

Equity Securities with No Significant Influence

Equity securities in which the investor lacks the ability to participate in the decisions of the investee company are initially accounted for at cost.

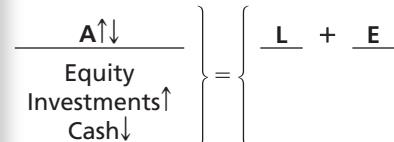
Purchase of Equity Securities

Assume Smart Touch Learning has excess cash to invest and buys 1,000 shares of stock in Yellow Corporation for \$26.16 per share on March 1, 2018. Smart Touch Learning does not have the ability to participate in the decisions of Yellow Corporation. Smart Touch Learning records the purchase as follows:

Date	Accounts and Explanation	Debit	Credit
2018			
Mar. 1	Equity Investments (\$26.16 per share × 1,000 shares)	26,160	
	Cash		26,160
<i>Purchased investment in stock.</i>			

Learning Objective 3

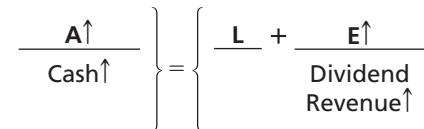
Account for investments in equity securities



Dividend Revenue

Yellow Corporation declares and pays a cash dividend of \$0.16 per share on June 9, 2018. Smart Touch Learning will receive the cash dividend on June 9 and record the entry as follows:

Date	Accounts and Explanation	Debit	Credit
2018			
Jun. 9	Cash	160	
	Dividend Revenue (\$0.16 per share × 1,000 shares)		160
<i>Received cash dividend.</i>			



Disposition

Assume on July 15, 2018, Smart Touch Learning sells 800 shares of Yellow Stock for \$25,000. Smart Touch Learning compares the cash received with the cost of the stock disposed of and determines the amount of gain or loss as follows:

Cash received	\$ 25,000
Less: Cost of stock disposed of (800 shares × \$26.16)	20,928
Gain or (Loss)	\$ 4,072



Smart Touch Learning will then record the following journal entry:

$$\begin{array}{c} A \uparrow \\ \hline \text{Cash} \uparrow \\ \text{Equity} \\ \text{Investments} \downarrow \end{array} \left\{ \begin{array}{c} = \\ \hline L + E \uparrow \\ \text{Gain on} \\ \text{Disposal} \uparrow \end{array} \right.$$

Date	Accounts and Explanation	Debit	Credit
2018			
Jul. 15	Cash	25,000	
	Equity Investments		20,928
	Gain on Disposal		4,072
<i>Disposed of investment in stock.</i>			

Remember that Gain on Disposal is a temporary equity account and is reported in the Other Income and (Expenses) section of the income statement.

If the company had sold the stock at a loss, the account Loss on Disposal would be recorded as a debit and also reported in the Other Income and (Expenses) section of the income statement.

Equity Securities with Significant Influence (Equity Method)

When a company invests in equity securities with 20% to 50% ownership in the investee's voting stock, the investor can *significantly influence* the investee's decisions. This influence may be helpful if the investee's and investor's businesses are somehow related. These types of investments must be accounted for using the equity method.

Purchase

Investments accounted for by the equity method are recorded at cost at the time of purchase. Suppose Smart Touch Learning pays \$400,000 to purchase 40% of the common stock of Kline, Inc. Smart Touch Learning then refers to Kline as an *affiliated company*. Smart Touch Learning's entry to record the purchase of this investment on January 6, 2018 follows. Notice that the investor includes the name of the investee on the account to signify that Smart Touch Learning has significant influence over Kline, Inc.

$$\begin{array}{c} A \downarrow \\ \hline \text{Equity} \\ \text{Investments} \uparrow \\ \text{Cash} \downarrow \end{array} \left\{ \begin{array}{c} = \\ \hline L + E \\ \end{array} \right.$$

Date	Accounts and Explanation	Debit	Credit
2018			
Jan. 6	Equity Investments—Kline, Inc.	400,000	
	Cash		400,000
<i>Purchased investment in stock (equity method).</i>			

Dividends Received and Share of Net Income

When Smart Touch Learning receives cash dividends from Kline, it records its proportionate part of the cash dividends. Suppose that Kline declares and pays a cash dividend of \$50,000 on June 30, 2018. Because Smart Touch Learning owns 40% of the stock, it



receives 40%, or \$20,000, of the dividend. Smart Touch Learning receives this dividend and makes the following journal entry:

Date	Accounts and Explanation	Debit	Credit
2018			
Jun. 30	Cash ($\$40,000 \times 0.40$)	20,000	
	Equity Investments—Kline, Inc.		20,000
	<i>Received cash dividend (equity method).</i>		

$$\begin{array}{c} A \uparrow \\ \text{Cash} \uparrow \\ \text{Equity} \\ \text{Investments} \downarrow \end{array} \left\{ = \right\} \begin{array}{c} L + E \\ \hline \end{array}$$

The **Equity Investments account is credited for the receipt of a dividend because it decreases the investor's investment.** In other words, the dividends are treated as if they were a return of capital rather than as earnings.

Under the equity method, the investor also must record annually its share of the investee's net income. The investor debits the Equity Investments account and credits Revenue from Investments when the investee reports income. As Smart Touch Learning's equity in Kline increases, so does the Equity Investments account on the investor's books.

Suppose Kline reported net income of \$125,000 for the 2018 year. Smart Touch Learning would record 40% of this amount as an increase in the investment account, as follows:

Date	Accounts and Explanation	Debit	Credit
2018			
Dec. 31	Equity Investments—Kline, Inc.	50,000	
	Revenue from Investments ($\$125,000 \times 0.40$)		50,000
	<i>Recorded revenue earned from investment (equity method).</i>		

$$\begin{array}{c} A \uparrow \\ \text{Equity} \\ \text{Investments} \uparrow \end{array} \left\{ = \right\} \begin{array}{c} L + E \uparrow \\ \hline \end{array}$$

Revenue from Investments \uparrow

After the preceding entries are posted, Smart Touch Learning's Equity Investments T-account shows its equity in the net assets of Kline as follows:

Equity Investments—Kline, Inc.			
Jan. 6	400,000	20,000	Jun. 30
Dec. 31	50,000		
Bal.	430,000		

Smart Touch Learning would report the equity investments on the balance sheet and the revenue from investments on the income statement.

Disposition

When Smart Touch Learning decides to sell its investment in Kline, Inc. it will need to determine whether there is a gain or loss. Suppose Smart Touch Learning sells 10% of the Kline common stock for \$40,000 on January 1, 2019. Smart Touch Learning will calculate the gain or loss as follows and record the following journal entry:

Cash received	\$ 40,000
Less: Book value on date of disposal ($\$430,000 \times 0.10$)	43,000
Gain or (Loss)	\$ (3,000)

In using the equity method, when a dividend is received, why is the Equity Investments account credited instead of Dividend Revenue?





$$\begin{array}{c}
 A \downarrow \\
 \hline
 \text{Cash} \uparrow \\
 \text{Equity} \\
 \text{Investments} \downarrow
 \end{array}
 \left\{ \begin{array}{l} = \\ \hline L + E \downarrow \end{array} \right. \quad \begin{array}{l} \text{Loss on} \\ \text{Disposal} \uparrow \end{array}$$

Date	Accounts and Explanation	Debit	Credit
2019			
Jan. 1	Cash	40,000	
	Loss on Disposal	3,000	
	Equity Investments—Kline, Inc.		43,000
<i>Disposed of part of investment in stock (equity method).</i>			

Parent Company

A company that owns a controlling interest in another company.

Subsidiary Company

A company that is controlled by another corporation.

Consolidation Accounting

The way to combine the financial statements of two or more companies that have the same owners.

Consolidated Statements

Financial statements that combine the balance sheets, income statements, and statements of cash flow of the parent company with those of its controlling interest affiliates.

Equity Securities with Control (Consolidations)

Many large corporations own controlling interests in other companies. An investor owns a controlling interest when the investor has legal control over the investee company and generally owns more than 50% of the investee's voting stock. This type of investment enables the investor to elect a majority of the board of directors and thereby control the investee. The corporation that controls the other company is called the **parent company**, and the company that is controlled by another corporation is called the **subsidiary company**.

In equity securities with more than 50% ownership, the parent usually prepares consolidated financial statements. **Consolidation accounting** is the way to combine the financial statements of two or more companies that have the same owners. Many published financial reports include consolidated statements. **Consolidated statements** combine the financial statements (such as the balance sheets, income statements, and statements of cash flow) of the parent company with those of its controlling interest affiliates. The final outcome is a single set of statements, as if the parent and its subsidiaries were the same entity. This topic is covered in advanced accounting courses.

Try It!

8. On May 15, 2018, Mayer Co. invests \$8,000 in John, Inc. stock. John pays Mayer a \$200 dividend on November 15, 2018. Mayer sells the John stock on December 10, 2018, for \$7,500. Assume the Mayer Co. does not have significant influence over John, Inc. Journalize the 2018 transactions related to Mayer's investment in John stock.

Check your answers online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercises S10-3 and S10-4. [Pearson MyLab Accounting](#)

HOW ARE DEBT AND EQUITY SECURITIES REPORTED?

Learning Objective 4

Describe and illustrate how debt and equity securities are reported

Fair Value

The price that would be used if the investments were sold on the market.

Trading Debt Investments

Trading debt investments, those that the investor plans to sell in the very near future, are initially recorded at cost. At the end of each period, though, trading debt securities must be adjusted and reported at fair value. **Fair value** is the price that would be used if the



company were to sell the investments on the market. The company will make a year-end adjustment of the trading debt investment to bring the account to market value. This adjustment is recorded as an unrealized holding gain or loss and is reported in the Other Income and (Expenses) section of the income statement.

It's important to note the distinction between unrealized and realized gains or losses. Unrealized gains or losses occur when a company adjusts an asset to fair value but has not yet disposed of the asset. Realized gains or losses occur when a company disposes of an asset and represents the difference between the cash received at time of disposal and the basis of the asset.

Suppose that on December 31, 2018, Smart Touch Learning reported trading debt investments of \$26,160. After careful evaluation, Smart Touch Learning concluded that the market value of the trading debt investments had decreased to \$24,000. The company has an unrealized loss of \$2,160 on the investments ($\$24,000 - \$26,160$). At year-end, Smart Touch Learning would record the following adjusting entry:

Date	Accounts and Explanation	Debit	Credit	
2018				
Dec. 31	Unrealized Holding Loss—Trading Fair Value Adjustment —Trading <i>Adjusted trading debt investments to market value.</i>	2,160	2,160	A↓ L + E↓
				Fair Value Adjustment↓ = { Unrealized Holding Loss↑ }

After the adjustment, the investment T-accounts would appear as follows:

Trading Debt Investments		Fair Value Adjustment—Trading	
Bal.	26,160	2,160	Dec. 31
$\$26,160 - \$2,160 = \$24,000$			

In this case, the Fair Value Adjustment account has a credit balance, and it is considered a contra account and is subtracted from the Trading Debt Investments account to determine carrying value. If the account has a debit balance, it is considered an adjunct account and is added to the Trading Debt Investments account to determine carrying value.



The combined T-accounts show the \$24,000 balance for trading debt investments. Smart Touch Learning would report its trading debt investments on the balance sheet at \$24,000 at December 31, 2018, and the \$2,160 unrealized holding loss on the trading debt investments on the 2018 income statement as follows:

SMART TOUCH LEARNING Balance Sheet (Partial) December 31, 2018		
Current Assets:		
Trading Debt Investments (at fair value; cost \$26,160)		\$ 24,000

SMART TOUCH LEARNING Income Statement (Partial) For the Year Ended December 31, 2018		
Other Income and (Expenses):		
Unrealized Holding Loss—Trading		\$ (2,160)

Disposition

When a trading debt security is disposed, the fair value adjustment is ignored in determining the calculation of the gain or loss. The disposition is handled as we have shown earlier in the chapter. The amount of gain or loss is calculated as the difference between the cash received and the cost of the stock disposed. At the end of the year, the company would evaluate their remaining trading debt securities and make a year-end adjustment to current market value.

Available-for-Sale Debt Investments

Available-for-sale (AFS) debt investments are reported as *current assets* on the balance sheet if the business expects to sell them within one year. All other AFS debt investments that are planned to be held longer than a year are reported as *long-term assets* on the balance sheet. The fair value method is also used to account for AFS debt investments.

AFS debt investments are reported on the balance sheet at current market value. This requires a year-end adjustment of the AFS debt investment to current market value, much like the treatment of trading debt investments. However, the unrealized holding gains and losses on AFS debt investments are not reported on the income statement. They are recorded as an adjustment to the Unrealized Holding Gain—Available-for-Sale account or Unrealized Holding Loss—Available-for-Sale account, which is included in Other Comprehensive Income on the Statement of Comprehensive Income and as a component of Accumulated Other Comprehensive Income in the stockholders' equity section of the balance sheet.

Assume on December 31, 2018, Smart Touch Learning reported long-term available-for-sale debt investments of \$60,000. After careful review, the company determines the market value of the AFS debt investments has increased to \$64,000. Smart Touch Learning has an unrealized holding gain of \$4,000 on the investment (\$64,000 market value minus



\$60,000 purchase price). At year-end, Smart Touch Learning would make the following adjustment:

Date	Accounts and Explanation	Debit	Credit	
2018				$A \uparrow$
Dec. 31	Fair Value Adjustment—Available-for-Sale	4,000		$L + E \uparrow$
	Unrealized Holding Gain—Available-for-Sale		4,000	Unrealized Holding Gain↑
	<i>Adjusted available-for-sale debt investments to market value.</i>			

After posting the December 31, 2018, adjustment, the investment T-accounts would appear as follows:

Available-for-Sale Debt Investments		Fair Value Adjustment—AFS	
Bal.	60,000	Dec. 31	4,000
$\$60,000 + \$4,000 = \$64,000$			

The combined T-accounts show the \$64,000 balance for the AFS debt investments. Smart Touch Learning would report the investment on the balance sheet at \$64,000 at December 31, 2018. The \$4,000 Unrealized Holding Gain—Available-for-Sale would be reported in the stockholders' equity section of the balance sheet as Accumulated Other Comprehensive Income as shown here:

SMART TOUCH LEARNING Balance Sheet (Partial) December 31, 2018	
Assets	
Long-term Assets:	
Available-for-Sale Debt Investments (at fair value; cost \$60,000)	\$ 64,000
Stockholders' Equity	
Accumulated Other Comprehensive Income:	
Unrealized Holding Gain—AFS	\$ 4,000

It's important to remember that unrealized holding gains or losses on available-for-sale debt investments are not included in net income. Instead, they are included as other comprehensive income, which are adjustments to net income to determine comprehensive income. **Comprehensive income** is the company's change in total stockholders' equity from all sources other than owners' investments and dividends. Comprehensive income includes net income plus some specific gains and losses, as follows:

- Unrealized holding gains or losses on *available-for-sale debt investments*
- Foreign currency translation adjustments
- Gains or losses from post-retirement benefit plans
- Deferred gains or losses from derivatives

Comprehensive Income

A company's change in total stockholders' equity from all sources other than owners' investments and dividends.



The calculation of these items is explained in advanced accounting courses. For now, you need to know that these items do not enter into the determination of net income but, instead, are reported as other comprehensive income.

Comprehensive income can be reported one of two ways: as a second income statement or combined with a traditional income statement into a combined statement of comprehensive income. An example of how comprehensive income can be reported is shown in Exhibit 10-2.

Exhibit 10-2 | Comprehensive Income

SMART TOUCH LEARNING Comprehensive Income Statement For the Year Ended December 31, 2018	
Net Income	\$ 100,000
Other Comprehensive Income:	
Unrealized Holding Gain—AFS	4,000
Comprehensive Income	<u>\$ 104,000</u>

Disposition

It is important to note that disposition of available-for-sale debt investments is handled in the same manner as trading debt investments. Any prior period fair value adjustment is ignored when calculating the amount of the gain or loss. The gain or loss is determined as the difference between the amount received and the cost of the investment. At the end of the year, the company would evaluate their remaining available-for-sale debt investments and make a year-end adjustment to current market value.

Held-to-Maturity Debt Investments

Held-to-maturity (HTM) debt investments are normally reported at amortized cost, which is explained in advanced accounting courses. Depending on the maturity date, the HTM debt investment will be reported as a current asset or a long-term asset on the balance sheet. When the maturity date is within one year of the balance sheet date, the HTM debt investment is reported as a current asset; otherwise, the asset is reported as long-term. Interest revenue earned on HTM debt investments is reported on the income statement in the Other Income and (Expenses) section.

Equity Investments with No Significant Influence

Equity investments with no significant influence must also be adjusted at the end of the year and reported at fair value. Similar to trading debt investments, the company will make a year-end adjustment of the equity investment to bring the account to market value. The adjustment is recorded as an unrealized holding gain or loss and is reported in the Other Income and (Expenses) section of the income statement.

Exhibit 10-3 summarizes the accounting methods for debt and equity securities and also the financial statement effects.


Exhibit 10-3 | Debt and Equity Securities—Accounting Methods and Financial Statement Effects

Types of Investments	Accounting Methods	Financial Statement Effects	
		Balance Sheet	Income Statement
Trading Debt Investments	Fair Value: Unrealized Holding Gain or Loss is included in net income.	The investment is reported as a current asset on the balance sheet.	Interest revenue is reported on the income statement.
Held-to-Maturity Debt Investments	Amortized Cost	Depending on the maturity date, the investment is reported as a current or long-term asset on the balance sheet.	Interest revenue is reported on the income statement.
Available-for-Sale Debt Investments	Fair Value: Unrealized Holding Gain or Loss is included in Other Comprehensive Income and reported as a separate component of stockholders' equity.	The investment is reported as a current or long-term asset on the balance sheet depending on management's intent.	Interest revenue is reported on the income statement.
No Significant Influence Equity Investments	Fair Value: Unrealized Holding Gain or Loss is included in net income.	The investment is reported as a current or long-term asset on the balance sheet depending on management's intent.	Dividend revenue is reported on the income statement.
Significant Influence Equity Investments	Equity	The investment is reported as a long-term asset on the balance sheet.	A percentage share of investee's net income is reported on the income statement.
Controlling Interest Equity Investments	Consolidation	The balance sheets of the parent and subsidiary are combined.	The income statements of the parent and subsidiary are combined.

TYING IT ALL TOGETHER

Berkshire Hathaway, Inc. is a holding company owning subsidiaries that engage in a variety of different business activities including insurance, freight rail transportation, utilities and energy, manufacturing, services, and retail. Companies such as GEICO, Burlington Northern Santa Fe, Benjamin Moore, and See's Candies are included in the list of Berkshire Hathaway's subsidiaries. (You can find Berkshire Hathaway, Inc.'s annual report at <http://www.berkshirehathaway.com/2015ar/2015ar.pdf>)

What type of investments does Berkshire Hathaway report on its balance sheet?

Berkshire Hathaway reports both debt and equity securities on its balance sheet. The company classifies the investments as fixed

maturity securities (debt investments), equity securities, and equity securities with significant influence.

How are Berkshire Hathaway's investments classified?

The company, in the notes to the financial statements, reports that held-to-maturity investments are carried at amortized cost and trading securities are acquired with the intent to sell in the near term and are carried at fair value. All other securities are classified as available-for-sale and are carried at fair value. The equity method is used for equity investments in which the company has the ability to exercise significant influence but not control.



Try It!

9. On August 20, 2018, Mraz, Co. decides to invest excess cash of \$2,500 by purchasing Virginia, Inc. bonds. At year-end, December 31, 2018, the market price of the bonds was \$2,000. The investment is categorized as available-for-sale debt. Journalize the adjusting entry needed at December 31, 2018.

Check your answer online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercises S10-5 and S10-6. [Pearson MyLab Accounting](#)

HOW DO WE USE THE RATE OF RETURN ON TOTAL ASSETS TO EVALUATE BUSINESS PERFORMANCE?

Learning Objective 5

Use the rate of return on total assets to evaluate business performance

Rate of Return on Total Assets

A ratio that measures the success a company has in using its assets to earn income.

$$\frac{\text{Net income} + \text{Interest expense}}{\text{Average total assets}}$$

The **rate of return on total assets**, or simply *return on assets*, measures a company's success in using assets to earn a profit. There are two ways that a company can finance its assets:

- Debt—A company can borrow money from creditors to purchase assets. Creditors earn interest on the money that is loaned.
- Equity—A company may receive cash or other assets from stockholders. Stockholders invest in the company and hope to receive a return on their investment.

Rate of return on total assets is calculated by adding interest expense to net income and dividing by average total assets. Interest expense is added back to net income to determine the real return on the assets regardless of the corporation's financing choices (debt or equity).

Using **Kohl's Corporation's** Fiscal 2015 Annual Report, we can determine its rate of return on total assets. Visit <http://www.pearsonglobaleditions.com/Sitemap/Horngren/> to view a link to Kohl's Corporation's annual report. Net income and interest expense are taken from the company's income statement, and total assets is taken from the balance sheet as follows (in millions):

Total Assets, January 30, 2016	\$ 13,606
Total Assets, January 31, 2015	14,333
For Year Ended January 30, 2016:	
Interest Expense	327
Net Income	673

The rate of return on total assets is calculated as:

$$\begin{aligned}
 \text{Rate of return on total assets} &= (\text{Net income} + \text{Interest expense}) / \text{Average total assets} \\
 &= (\$673 + \$327) / [(\$13,606 + \$14,333) / 2] \\
 &= 0.07 = 7\%
 \end{aligned}$$

Kohl's Corporation has a rate of return on total assets of 7%, which means that for each \$1.00 invested in the company's average assets, the company earned \$0.07 in profits before considering interest expense. What is a good rate of return on total assets? There is no single answer because rates of return vary widely by industry. Suppose that for the department stores industry, a 12% rate of return on total assets is considered good. In that case, Kohl's Corporation's 7% return on assets would be considered very low compared to the industry average.



Try It!

10. Lee Co. reported the following items on its 2018 financial statements:

Total Assets, December 31, 2018	\$ 10,000
Total Assets, December 31, 2017	15,000
For Year Ended December 31, 2018:	
Interest Expense	150
Net Income	850

Determine Lee's rate of return on total assets for 2018.

Check your answer online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercise S10-7. [Pearson MyLab Accounting](#)

REVIEW

> Things You Should Know

1. Why do companies invest?

- Companies invest in debt or equity securities to generate investment income or to pursue a certain business strategy.
- A debt security is an investment in notes or bonds payable issued by another company.
- An equity security is an investment in stock ownership in another company that sometimes pays cash dividends or issues stock dividends.
- Investments are classified as either short-term or long-term investments.
- Debt securities can be classified into three categories:
 - Trading debt investments—debt securities in which the investor intends to sell in the very near future
 - Held-to-maturity (HTM) debt investments—debt securities the investor intends to hold and has the ability to hold until they mature
 - Available-for-sale (AFS) debt investments—debt securities that aren't trading debt investments or held-to-maturity debt investments
- Equity securities can be classified into three categories:
 - No significant influence equity investments—equity securities in which the investor lacks the ability to participate in the decisions of the investee company
 - Significant influence equity investments—equity securities in which the investor has the ability to exert influence over operating and financial decisions of the investee company. Generally the investor owns 20% to 50% of the investee's voting stock.
 - Controlling interest equity investments—equity securities in which the investor owns more than 50% of the investee's voting stock

2. How are investments in debt securities accounted for?

- Investments in debt securities are recorded at cost, including any brokerage fees paid.
- The receipt of interest revenue is recorded with a debit to Cash and a credit to Interest Revenue.
- Debt securities disposed of at maturity are recorded with a debit to Cash and a credit to the Debt Investments account.

3. How are investments in equity securities accounted for?

- Equity securities with no significant influence
 - The purchase of equity securities is recorded at cost, including any brokerage fees paid.
 - The receipt of dividend revenue is recorded with a debit to Cash and a credit to Dividend Revenue.
 - Equity securities disposed of could involve either a gain or loss on disposal.
- Equity securities with significant influence
 - The purchase of the equity securities is recorded at cost.
 - Dividends declared and received are recorded with a debit to Cash and a credit to Equity Investments. A dividend reduces the investor's investment.
 - The investor's share of net income is recorded as a debit to Equity Investments and a credit to Revenue from Investments. Net income increases the investor's investment.
 - Disposition of equity securities could involve either a gain or loss.
- Equity securities with control are recorded using the consolidation method, which involves the parent company preparing consolidated statements.

4. How are debt and equity securities reported?

- Trading debt investments, available-for-sale debt investments, and equity investments with no significant influence are reported at fair value on the balance sheet.
 - The unrealized holding gain or loss incurred on trading debt investments and equity investments are reported on the income statement as Other Income and (Expenses).
 - The unrealized holding gain or loss incurred on available-for-sale debt investments is not included in net income. It is, instead, reported as part of accumulated other comprehensive income included in stockholders' equity on the balance sheet.
- Held-to-maturity debt investments are reported at amortized cost on the balance sheet.

5. How do we use the rate of return on total assets to evaluate business performance?

- The rate of return on total assets measures a company's success in using its assets to earn a profit.
- $(\text{Net income} + \text{Interest expense}) / \text{Average total assets}$.

> Check Your Understanding

Check your understanding of the chapter by completing this problem and then looking at the solution. Use this practice to help identify which sections of the chapter you need to study more.

Requirements

1. Identify the appropriate accounting method for each of the following situations (See Learning Objective 1):
 - a. Investment in 25% of the investee company's stock of which the investor has significant influence
 - b. Available-for-sale debt investment
 - c. Investment in more than 50% of the investee company's stock
 - d. Bond investment that matures in four years. The investor plans to hold the bond for the full four years.
2. At what amount should the following trading debt investment portfolio be reported on the December 31, 2018, balance sheet? (See Learning Objective 4)

Bond	Investment Cost	Current Market Value
Purple	\$ 5,000	\$ 5,500
Yellow	61,200	53,000
Black	3,680	6,230
Totals	<u>\$ 69,880</u>	<u>\$ 64,730</u>

Journalize any adjusting entry required on December 31.

3. An investor paid \$67,900 on January 1, 2018, to acquire 40% of Finn-Girl, Inc.'s outstanding common stock. The investor had significant influence of Finn-Girl, Inc. For the year ending December 31, 2018, Finn-Girl's net income was \$80,000, and on June 14, the company declared and paid cash dividends of \$55,000 to all stockholders. Journalize the investor's transactions related to the Finn-Girl investment: (a) purchase of the investment, (b) receipt of dividends, (c) investor's share of net income, and (d) sale of Finn-Girl stock for \$80,100 on January 3, 2019. (See Learning Objective 3)

> Solutions

Requirement 1

- a. Equity b. Fair value c. Consolidation d. Amortized cost

Requirement 2

The trading debt investments should be reported at market value, \$64,730, on the balance sheet. The adjusting entry required to report the investments at fair value is as follows:

Date	Accounts and Explanation	Debit	Credit
2018			
Dec. 31	Unrealized Holding Loss—Trading (\$64,730 — \$69,880)	5,150	
	Fair Value Adjustment—Trading		5,150
	<i>Adjusted trading debt investments to market value.</i>		

The Unrealized Holding Loss—Trading would be reported as an Other Income and (Expenses) item on the income statement.

Requirement 3

Date	Accounts and Explanation		Debit	Credit
2018				
(a) Jan. 1	Equity Investments—Finn-Girl, Inc.		67,900	
	Cash			67,900
	<i>Purchased investment in stock (equity method).</i>			
(b) Jun. 14	Cash		22,000	
	Equity Investments—Finn-Girl, Inc. ($\$55,000 \times 0.40$)			22,000
	<i>Received cash dividends (equity method).</i>			
(c) Dec. 31	Equity Investments—Finn-Girl, Inc.		32,000	
	Revenue from Investments ($\$80,000 \times 0.40$)			32,000
	<i>Recorded revenue earned from investment (equity method).</i>			
2019				
(d) Jan. 3	Cash		80,100	
	Equity Investments—Finn-Girl, Inc.			77,900
	Gain on Disposal			2,200
	<i>Disposed of investment in stock (equity method).</i>			

Calculations for disposal:

Equity Investments—Finn-Girl, Inc.			
	Jan. 1	67,900	Jun. 14
	Dec. 31	32,000	
Bal.		77,900	

Cash received	\$ 80,100
Less: Book value of stock disposed of	77,900
Gain or (Loss)	\$ 2,200

> Key Terms

Available-for-Sale (AFS) Debt Investment (p. 574)	Fair Value (p. 580)	Rate of Return on Total Assets (p. 586)
Comprehensive Income (p. 583)	Held-to-Maturity (HTM) Debt Investment (p. 573)	Security (p. 572)
Consolidated Statements (p. 580)	Investee (p. 572)	Short-term Investment (p. 573)
Consolidation Accounting (p. 580)	Investor (p. 572)	Significant Influence Equity Investment (p. 574)
Controlling Interest Equity Investment (p. 574)	Long-term Investment (p. 573)	Subsidiary Company (p. 580)
Debt Security (p. 572)	No Significant Influence Equity Investment (p. 574)	Trading Debt Investment (p. 573)
Equity Security (p. 572)	Parent Company (p. 580)	

> Quick Check

1. Assume Intervale Railway is considering investing in Pale Co. stock for three months. The investment will represent 5% of the voting stock of Pale Co. How would the investment be classified?
 - a. Significant influence equity investment
 - b. No significant influence equity investment
 - c. Held-to-maturity debt investment
 - d. Controlling interest equity investment

2. Which of the following investments is most likely classified as a held-to-maturity debt investment?

a. 80% stock ownership in a subsidiary	c. 10-year bonds
b. 100% ownership in voting stock of a supplier	d. None of the above

3. If Intervale Railway invests \$100,000 in 5% bonds at face value that the company intends to hold until the bond maturity date, the interest revenue recognized when each semiannual interest payment is received would be recorded as a
 - a. credit to Cash, \$2,500.
 - b. credit to Interest Revenue, \$2,500.
 - c. debit to Held-to-Maturity Debt Investments, \$2,500.
 - d. debit to Dividend Revenue, \$2,500.

4. A company invested \$45,000 in Yale Co. stock. The investment represented 5% of the voting stock of Yale Co. If the Yale Co. stock investment paid dividends, what account would be credited?

a. Equity Investments	c. Dividend Revenue
b. Interest Revenue	d. Cash

5. If a company owns 25% of the voting stock of Pink Co. and can exercise significant influence, dividends received will be
 - a. credited to Equity Investments—Pink Co.
 - b. credited to Dividend Revenue.
 - c. debited to Equity Investments—Pink Co.
 - d. credited to Cash.

6. Best Appliances owns 90% of the voting stock of Wratchet, Inc. Which of the following is true?
 - a. The financial statements of Best would be consolidated into Wratchet.
 - b. Wratchet would be considered the parent entity.
 - c. Best would be considered the parent entity.
 - d. Both a and c are correct.

7. Haven Co. purchased a bond on October 4 of the current year for \$43,000 and classified it as available-for-sale. The market value of the investment at year-end is \$40,000. What value will be reported in net income for the adjustment, if any?
 - a. \$40,000
 - b. \$0
 - c. \$(3,000)
 - d. Not enough information is given to determine the amount included in net income.

Learning Objective 1

Learning Objective 1

Learning Objective 2

Learning Objective 3

Learning Objective 3

Learning Objective 3

Learning Objective 4

Learning Objective 4

8. Harvard Co. purchased a bond on December 1 of the current year for \$30,000 and classified the investment as trading. The market value of the investment at year-end is \$36,000. What value will be reported in net income for the adjustment?
- a. \$36,000 b. \$(6,000) c. \$6,000 d. \$30,000
9. Bendi Corp. purchased 1,000 shares of Kala Corp. for \$16 per share. The investment represents 5% ownership, and Bendi does not have significant influence. The fair value at year-end is \$15 per share. Assuming no other transactions occurred, where would the \$1 per share difference be reported on the year-end financial statements?
- a. Other Income and (Expense) c. Operating Income
b. Other Comprehensive Income d. None of the above

Learning Objective 5

10. Bengaluru Company reported the following information on its financial statements

Total Assets, December 31, 2018	\$ 460,000
Total Assets, December 31, 2019	480,000
For Year Ended December 31, 2019:	
Interest Expense	23,800
Net Income	42,000

What is Bengaluru's rate of return on total assets?

- a. 14.0% c. 13.7%
b. 14.3% d. None of the above

Check your answers at the end of the chapter.

ASSESS YOUR PROGRESS

> Review Questions

1. What is a debt security?
2. What is an equity security?
3. Why would a company invest in debt or equity securities?
4. Briefly describe the specific types of debt and equity securities.
5. How is the purchase of a held-to-maturity debt security at face value recorded?
6. When disposing of an available-for-sale debt investment, where is the gain or loss on disposal reported in the financial statements?
7. What method is used for investments in equity securities when the investor has significant influence and typically 20% to 50% ownership? Briefly describe how dividends declared and received and share of net income are reported.
8. What method is used for investments in equity securities with more than 50% ownership? Briefly describe this method.
9. What adjustment must be made at the end of the period for trading debt investments and available-for-sale debt investments?
10. Where on the financial statements is an unrealized holding gain or loss on trading debt investments reported?

11. Where on the financial statements is an unrealized holding gain or loss on available-for-sale debt investments reported?
12. What is comprehensive income, and what does it include?
13. How are held-to-maturity debt investments reported on the financial statements?
14. What does the rate of return on total assets measure, and how is it calculated?

> Short Exercises

S10-1 Identifying why companies invest and classifying investments

Garden Haven has excess cash of \$15,000 at the end of the harvesting season. Garden Haven will need this cash in four months for normal operations.

Requirements

1. What are some reasons why Garden Haven may choose to invest in debt or equity securities?
2. What type of classification would Garden Haven's investment fall within—short-term or long-term? Why?

Learning Objective 1

S10-2 Accounting for debt investments

On January 1, 2018, The Chef's Restaurant decides to invest in Lake Hawden bonds. The bonds mature on December 31, 2023, and pay interest on June 30 and December 31 at 6% annually. The market rate of interest was 6% on January 1, 2018, so the \$60,000 maturity value bonds sold for face value. Chef's intends to hold the bonds until December 31, 2023.

Requirements

1. Journalize the transactions related to Chef's investment in Lake Hawden bonds during 2018.
2. In what category would Chef's report the investment on the December 31, 2018 balance sheet?

Learning Objective 2

S10-3 Accounting for equity investments

On January 1, 2018, Bark Company invests \$10,000 in Roots, Inc. stock. Roots pays Bark a \$400 dividend on August 1, 2018. Bark sells the Roots's stock on August 31, 2018, for \$10,450. Assume the investment is categorized as a short-term equity investment and Bark Company does not have significant influence over Roots, Inc.

Requirements

1. Journalize the transactions for Bark's investment in Roots's stock.
2. What was the net effect of the investment on Bark's net income for the year ended December 31, 2018?

Learning Objective 3

S10-4 Accounting for equity investments

On January 1, 2018, Staub, Inc. decides to invest in 7,000 shares of Chestnut stock when the stock is selling for \$10 per share. On June 1, 2018, Chestnut paid a \$0.90 per share cash dividend to stockholders. On December 31, 2018, Chestnut reports net income of \$70,000 for 2018. Assume Farrier has 28,000 shares of voting stock outstanding during 2018 and Staub has significant influence over Chestnut.

Learning Objective 3

Requirements

1. Identify what type of investment the Chestnut stock is for Staub.
2. Journalize the transactions related to Staub's investment in the Chestnut stock during 2018.
3. In what category and at what value would Staub's report the investment on the December 31, 2018 balance sheet?

Learning Objectives 3, 4

S10-5 Accounting for debt investments

On February 1, 2018, Park Co. decides to invest excess cash of \$17,000 by purchasing a Carr, Inc. bond at face value. At year-end, December 31, 2018, the fair value of the Carr bond was \$21,700. The investment is categorized as a trading debt investment.

Requirements

1. Journalize the transactions for Park's investment in Carr, Inc. for 2018.
2. In what category and at what value would Park report the asset on the December 31, 2018 balance sheet? In what account would the market price change in Carr's bond be reported, if at all?
3. What was the net effect of the investment on Park's net income for the year ended December 31, 2018?

Learning Objectives 3, 4

S10-6 Accounting for debt investments

On September 1, 2018, Toby's Restaurant decides to invest excess cash of \$56,200 from the tourist season by purchasing a Desert, Inc. bond at face value. At year-end, December 31, 2018, Desert's bond had a market value of \$51,600. The investment is categorized as an available-for-sale debt investment and will be held for the short-term.

Requirements

1. Journalize the transactions for Toby's investment in Desert, Inc. for 2018.
2. In what category and at what value would Toby report the asset on the December 31, 2018 balance sheet? In what account would the market price change in Desert's stock be reported, if at all?
3. What was the net effect of the investment on Toby's net income for the year ended December 31, 2018?

Learning Objective 5

S10-7 Computing rate of return on total assets

Raven's 2018 financial statements reported the following items—with 2017 figures given for comparison:

RAVEN, INC. Balance Sheet As of December 31, 2018 and 2017		
	2018	2017
Total Assets	\$ 28,250	\$ 27,110
Total Liabilities	13,600	15,910
Total Stockholders' Equity (all common)	14,650	11,200
Total Liabilities and Stockholders' Equity	\$ 28,250	\$ 27,110

Net income for 2018 was \$4,590, and interest expense was \$220. Compute Raven's rate of return on total assets for 2018. (Round to the nearest percent.)

> Exercises

E10-8 Accounting for debt investments

Bennett purchased a bond on January 1, 2018, for \$130,000. The bond has a face value of \$130,000 and matures in 20 years. The bond pays interest on June 30 and December 31 at a 4% annual rate. Bennett plans on holding the investment until maturity.

Requirements

1. Journalize the 2018 transactions related to Bennett's bond investment. Explanations are not required.
2. Journalize the transaction related to Bennett's disposition of the bond at maturity on December 31, 2037. (Assume the last interest payment has already been recorded.) Explanations are not required.

Learning Objective 2

E10-9 Accounting for debt investments

Epoch Star & Co. owns vast amounts of corporate bonds. Suppose Epoch buys \$500,000 of BloomCo bonds at face value on January 2, 2018. The BloomCo bonds pay interest at the annual rate of 7% on June 30 and December 31 and mature on December 31, 2032. Epoch Star intends to hold the investment until maturity.

Requirements

1. Journalize any required 2018 entries for the bond investment.
2. How much cash interest will Epoch Star receive each year from BloomCo?
3. How much interest revenue will Epoch Star report during 2018 on this bond investment?

Learning Objective 2

E10-10 Accounting for debt investments

Advance & Co. owns vast amounts of corporate bonds. Suppose Advance buys \$1,200,000 of TruffleCo bonds at face value on January 2, 2018. The TruffleCo bonds pay interest at the annual rate of 3% on June 30 and December 31 and mature on December 31, 2022. Advance intends to hold the investment until maturity.

Requirements

1. How would the bond investment be classified on Advance's December 31, 2018 balance sheet?
2. Journalize the following on Advance's books:
 - a. Receipt of final interest payment on December 31, 2022.
 - b. Disposition of the investment at maturity on December 31, 2022.

Learning Objective 2

2a. Int. Rev. CR \$36,000

E10-11 Accounting for debt investments

Peyton Investments completed the following investment transactions during 2018:

2018

- | | |
|---------|--|
| Jan. 5 | Purchased Vedder Company's \$400,000 bond at face value. Peyton classified the investment as available-for-sale. The Vedder bond pays interest at the annual rate of 4% on June 30 and December 31 and matures on December 31, 2021. Management's intent is to keep the bonds for several years. |
| Jun. 30 | Received an interest payment from Vedder. |
| Dec. 31 | Received an interest payment from Vedder. |
| 31 | Adjusted the investment to its current market value of \$396,000. |

Learning Objectives 2, 4

Requirements

1. Journalize Peyton's investment transactions. Explanations are not required.
2. Prepare a partial balance sheet for Peyton's Vedder investment as of December 31, 2018.
3. Prepare a comprehensive income statement for Peyton Investments for year ended December 31, 2018. Assume net income was \$200,000.

Learning Objectives 3, 4

E10-12 Accounting for equity investments

Raider Investments completed the following investment transactions during 2018:

-
- | | |
|---------|---|
| Jan. 14 | Purchased 200 shares of Naradon stock, paying \$41 per share. The investment represents 4% ownership in Naradon's voting stock. Raider does not have significant influence over Naradon. Raider intends to hold the investment for the indefinite future. |
| Aug. 22 | Received a cash dividend of \$0.82 per share on the Naradon stock. |
| Dec. 31 | Adjusted the investment to its current market value of \$36 per share. |
| 31 | Naradon reported net income of \$250,000 for the year ended 2018. |
-

Requirements

1. Journalize Raider's investment transactions. Explanations are not required.
2. Classify and prepare a partial balance sheet for Raider's Naradon investment as of December 31, 2018.
3. Prepare a partial income statement for Raider Investments for year ended December 31, 2018.

Learning Objectives 3, 4

E10-13 Accounting for equity investments

Green Back Investments completed the following investment transactions during 2018:

-
- | | |
|---------|--|
| Jan. 14 | Purchased 500 shares of Microscape stock, paying \$46 per share. The investment represents 4% ownership in Microscape's voting stock. Green Back does not have significant influence over Microscape. Green Back intends to hold the investment for the indefinite future. |
| Aug. 22 | Received a cash dividend of \$0.52 per share on the Microscape stock. |
| Dec. 31 | Adjusted the Microscape investment to its current market value of \$51. |
-

Requirements

1. Journalize the entries for 2018. Explanations are not required.
2. What account(s) and amount(s), if any, would be reported on Green Back's income statement for the year ended December 31, 2018?

Learning Objective 3

1. Revenue from Investments
CR \$45,000

E10-14 Accounting for equity investments

Creative Investments completed the following transactions during 2018:

-
- | | |
|---------|---|
| Jan. 14 | Purchased 700 shares of Robotic stock, paying \$53 per share. The investment represents 45% ownership in Robotic's voting stock and Creative has significant influence over Robotic. Creative intends to hold the investment for the indefinite future. |
| Aug. 22 | Received a cash dividend of \$0.84 per share on the Robotic stock. |
| Dec. 31 | Robotic's current market value is \$52 per share. |
| 31 | Robotic reported net income of \$150,000 for the year ended 2018. |
-

Requirements

1. Journalize Creative's transactions. Explanations are not required.
2. Classify and prepare partial financial statements for Creative's 45% Robotic investment for the year ended December 31, 2018.

E10-15 Accounting for equity investments

Suppose that on January 6, 2018, East Coast Motors paid \$280,000,000 for its 35% investment in Boxcar Motors. East Coast has significant influence over Boxcar after the purchase. Assume Boxcar earned net income of \$90,000,000 and paid cash dividends of \$45,000,000 to all outstanding stockholders during 2018. (Assume all outstanding stock is voting stock.)

Requirements

1. What method should East Cost Motors use to account for the investment in Boxcar Motors? Give your reasoning.
2. Journalize all required 2018 transactions related to East Cost Motors's Boxcar investment. Include an explanation for each entry.
3. Post all 2018 transactions to the investment T-account. What is its balance after all the transactions are posted? How would this balance be classified on the balance sheet dated December 31, 2018?

E10-16 Classifying and accounting for equity investments

Newington Today Publishers completed the following investment transactions during 2018 and 2019:

2018

- Dec. 6 Purchased 1,500 shares of Golden stock at a price of \$23.00 per share, intending to sell the investment next month. Newington did not have significant influence over Golden.
- 23 Received a cash dividend of \$1.40 per share on the Golden stock.
- 31 Adjusted the investment to its market value of \$14.00 per share.

2019

- Jan. 27 Sold the Golden stock for \$18.80 per share.

Requirements

1. Journalize Newington Today's investment transactions. Explanations are not required.
2. On December 31, 2018, how would the Golden stock be classified and at what value would it be reported on the balance sheet?

E10-17 Computing rate of return on total assets

Montane Exploration Company reported these figures for 2018 and 2017:

Income Statement—partial:	2018	2017
Interest Expense	\$ 16,700,000	\$ 16,500,000
Net Income	16,900,000	20,200,000
Balance Sheet—partial:	Dec. 31, 2018	Dec. 31, 2017
Total Assets	\$ 316,000,000	\$ 420,000,000

Compute the rate of return on total assets for 2018. (Round to two decimals.)

Learning Objective 3

3. \$295,750,000 Bal.

Learning Objectives 1, 3, 4

1. Dec. 31 Fair Value Adjustment—Equity Investments CR \$32,500

Learning Objective 5

- Avg. total assets \$368,000,000

> Problems Group A

Learning Objective 2

1. Dec. 31 Int. Rev. CR \$15,00

Learning Objectives 1, 2, 3, 4

2. Sep. 16 Gain on Disposal
CR \$5,880

P10-18A Accounting for debt investments

Suppose Walker Brothers purchases \$700,000 of 5.5% annual bonds of Whitmore Corporation at face value on January 1, 2018. These bonds pay interest on June 30 and December 31 each year. They mature on December 31, 2027. Walker intends to hold the Whitmore bond investment until maturity.

Requirements

1. Journalize Walker Brothers's transactions related to the bonds for 2018.
2. Journalize the entry required on the Whitmore bonds maturity date. (Assume the last interest payment has already been recorded.)

P10-19A Classifying and accounting for debt and equity investments

Dream Corporation generated excess cash and invested in securities as follows:

2018

- | | |
|---------|---|
| Jul. 2 | Purchased 2,800 shares of Micro, Inc. common stock at \$12.00 per share. Dreams plans to sell the stock within three months, when the company will need the cash for normal operations. Dream does not have significant influence over Micro. |
| Aug. 21 | Received a cash dividend of \$0.60 per share on the Micro stock investment. |
| Sep. 16 | Sold the Pogo stock for \$15.50 per share. |
| Oct. 1 | Purchased a Volton bond for \$38,000 at face value. Dream classifies the investment as trading and short-term. |
| Dec. 31 | Received a \$160 interest payment from Volton. |
| 31 | Adjusted the Volton bond to its market value of \$43,000. |

Requirements

1. Classify each of the investments made during 2018. (Assume the equity investments represent less than 20% of ownership of outstanding voting stock.)
2. Journalize the 2018 transactions. Explanations are not required.
3. Prepare T-accounts for the investment assets, and show how to report the investments on Dream's balance sheet at December 31, 2018.
4. Where is the unrealized holding gain or loss associated with the trading debt investment reported?

Learning Objectives 3, 4

1. Dec. 31 Fair Value Adjustment—Equity Investments DR \$4,000

P10-20A Accounting for equity investments

The beginning balance sheet of Desk Source Co. included a \$750,000 investment in the Ethan stock (40% ownership, Desk has significant influence over Ethan). During the year, Desk Source completed the following investment transactions:

- | | |
|---------|---|
| Mar. 3 | Purchased 6,000 shares at \$11 per share of Jack Software common stock as a long-term equity investment, representing 4% ownership, no significant influence. |
| May 15 | Received a cash dividend of \$0.66 per share on the Jack investment. |
| Dec. 15 | Received a cash dividend of \$75,000 from Ethan investment. |
| 31 | Received Ethan annual report showing \$100,000 of net income. |
| 31 | Received Jack's annual report showing \$800,000 of net income for the year. |
| 31 | Ethan's stock fair value at year-end was \$715,000. |
| 31 | Jack's common stock fair value at year-end was \$12 per share. |

Requirements

1. Journalize the transactions for the year of Desk Source.
2. Post transactions to T-accounts to determine the December 31, 2018 balances related to the investment and investment income accounts.
3. Prepare Desk Source's partial balance sheet at December 31, 2018, from your answers in Requirement 2.
4. Where is the unrealized holding gain or loss associated with the Jack stock reported?

> Problems Group B

P10-21B Accounting for debt investments

Suppose Anderson Brothers purchases \$900,000 of 7.5% annual bonds of Thomson Corporation at face value on January 1, 2018. These bonds pay interest on June 30 and December 31 each year. They mature on December 31, 2027. Anderson intends to hold the Thomson bond investment until maturity.

Requirements

1. Journalize Anderson Brothers's transactions related to the bonds for 2018.
2. Journalize the entry required on the Thomson bonds maturity date. (Assume the last interest payment has already been recorded.)

P10-22B Classifying and accounting for debt and equity investments

Ship Your Way Corporation generated excess cash and invested in securities as follows:

2018

- | | |
|---------|--|
| Jul. 2 | Purchased 3,500 shares of Lexi, Inc. common stock at \$12.00 per share.
Ship Your Way plans to sell the stock within three months, when the company will need the cash for normal operations.

Ship Your Way does not have significant influence over Lexi. |
| Aug. 21 | Received a cash dividend of \$0.10 per share on the Lexi stock investment. |
| Sep. 16 | Sold the Lexi stock for \$14.80 per share. |
| Oct. 1 | Purchased a Russo bond for \$24,000 at face value. Ship Your Way classifies the investment as trading and short-term. |
| Dec. 31 | Received a \$200 interest payment from Russo. |
| 31 | Adjusted the Russo bond to its market value of \$29,000. |
-

Requirements

1. Classify each of the investments made during 2018. (Assume the equity investments represent less than 20% of ownership of outstanding voting stock.)
2. Journalize the 2018 transactions. Explanations are not required.
3. Prepare T-accounts for the investment assets, and show how to report the investments on Ship Your Way's balance sheet at December 31, 2018.
4. Where is the unrealized holding gain or loss associated with the trading debt investment reported?

Learning Objective 2

1. Dec. 31 Int. Rev. CR \$14,000

Learning Objectives 1, 2, 3, 4

2. Sep. 16 Gain on Disposal CR \$2,940

Learning Objectives 3, 4

1. Dec. 31 Fair Value Adjustment—Equity Investments DR \$5,000

P10-23B Accounting for equity investments

The beginning balance sheet of Page Source Co. included a \$300,000 investment in Entro stock (35% ownership, Page has significant influence over Entro).

During the year, Page Source completed the following investment transactions:

- Mar. 3 Purchased 6,000 shares at \$6 per share of Ron Software common stock as a long-term equity investment, representing 8% ownership, no significant influence.
- May 15 Received a cash dividend of \$0.44 per share on the Ron investment.
- Dec. 15 Received a cash dividend of \$65,000 from Entro investment.
- 31 Received Entro's annual report showing \$110,000 of net income.
- 31 Received Ron's annual report showing \$200,000 of net income for the year.
- 31 Entro's stock fair value at year-end was \$273,500.
- 31 Ron's common stock fair value at year-end was \$9 per share.

Requirements

1. Journalize the transactions for the year of Page Source.
2. Post transactions to T-accounts to determine the December 31, 2018, balances related to the investment and investment income accounts.
3. Prepare Page Source's partial balance sheet at December 31, 2018, from your answers in Requirement 2.
4. Where is the unrealized holding gain or loss associated with the Ron stock reported?

CRITICAL THINKING

> Using Excel

P10-24 Using Excel to prepare balance sheet presentation of equity and debt securities

Download an Excel template for this problem online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

The financial statement presentation of debt securities categorized as trading, held-to-maturity, or available-for-sale as of March 31, 2018, is due shortly to Catherine's supervisor. She has received lists of the securities and balance sheet amounts from the IT department. However, one list of securities links together the security ID, the security name, the security category, and whether it is short-term or long-term. A second list contains the security ID and balance sheet amount(s). Catherine will have to manipulate the data to obtain the information she needs.

Requirements

1. Split the contents of the two lists into separate cells. Use functions LEFT, MID, RIGHT, FIND and VALUE as needed.
2. Add a column to List 2 that calculates the lower of cost or fair value by security using the function MIN.
3. Create a new list of securities that has Description, Category, Short-term or Long-term, and Lower of Cost or Fair Value. This new list should contain values (not formulas).
4. Copy the new list to a new location. Sort securities as to whether they are short-term or long-term (in reverse alphabetical order), and then sort by category (in reverse alphabetical order).
5. Subtotal the securities first by time (short-term or long-term), and then by category (trading, held-to-maturity, or available-for-sale). On the second subtotal, do not remove the previous subtotals.
6. Compress the information so that only the subtotals appear (display level 3).

> Continuing Problem

P10-25 Accounting for debt and equity investments

This problem continues the Let's Bike Company situation from Chapter 9. Cho and Lee are pleased with the growth of their business and have decided to invest its temporary excess cash in a brokerage account. The company had the following securities transactions in 2019.

-
- | | |
|---------|---|
| Jul. 1 | Purchased 7%, six-year Wick Company bonds with a face value of \$50,000. The bonds pay interest on June 30 and December 31. Let's Bike Company intends to hold the bonds to maturity. |
| Aug. 1 | Purchased 2,000 shares of stock in Pure Sports Equipment for \$20 per share. Let's Bike Company does not have the ability to participate in the decisions of Pure Sports Equipment. |
| Sep. 1 | Purchased 10,000 shares of stock in Smart Backpacks for \$75,000. These 10,000 shares represent 35% of the common stock of Smart Backpacks. |
| Nov. 30 | Pure Sports Equipment declared and paid a cash dividend of \$0.2 per share. |
| Dec. 31 | Received the first interest payment on a bond investment in Wick Company. |
| 31 | Smart Backpacks declared and paid a cash dividend of \$8,000. Smart Backpacks reported net income of \$60,000 from September to December 2019. |
| 31 | Let's Bike Company concluded that the market value of Pure Sports Equipment is \$41,000. |
-

Requirements

1. Journalize the transactions including any entries, if required, at December 31, 2019.
2. Determine the effect on Let's Bike Company's net income for the year for each of the three investments.

> Tying It All Together Case 10-1

Before you begin this assignment, review the Tying It All Together feature in the chapter. It will also be helpful if you review Berkshire Hathaway, Inc.'s 2015 annual report (<http://www.berkshirehathaway.com/2015ar/2015ar.pdf>).

Berkshire Hathaway, Inc. is a holding company owning subsidiaries that engage in a variety of different business activities including insurance, freight rail transportation, utilities and energy, manufacturing, services and retail.

Requirements

With a partner or group, lead your class in a discussion of the following questions or write a report as directed by your instructor.

1. Review Note 3 (Investments in fixed maturity securities). At December 31, 2015, what type of investments in securities with fixed maturities did the company hold?
2. Review Note 4 (Investments in equity securities). At December 31, 2015, what type of investments in equity securities did the company hold?
3. Review Note 1(d) (Investments). How, if at all, does the company use fair value measurements in regards to its investments?

> Decision Case 10-1

Rock Designs, Inc. is a jewelry store located in Miramar Beach, Florida. After Valentine's Day, the store often has excess cash to get it through the three-month slow season. The primary stockholder, Hardy Rock, wants to make this seasonal cash work for the business.

Requirements

1. Identify which investment class options are available to Rock Designs, Inc.
2. The company identifies that it wants to invest in the technology sector and has narrowed its choices to three companies: Apple, Inc., Google, Inc., and Microsoft Corporation. Prepare a brief analysis comparing the three companies, and recommend one of the three based on your analysis.

> Ethical Issue 10-1

As a result of the recent mortgage crisis, many banks reported record losses to their mortgage receivables and other assets based on the decline in these assets' fair values.

Requirements

1. What would the effect be to stakeholders if such losses were not reported in a timely way?
2. If a business chooses not to report these losses, is there an ethical issue involved? Who is hurt?

> Fraud Case 10-1

Wild Adventure conducts tours of wildlife reserves around the world. The company recently purchased a lodge in Adelaide, Australia, securing a 4% mortgage from First Bank. In addition to monthly payments, Wild Adventure must provide annual reports to the bank showing that the company has a current ratio of 1.2 or better.

After reviewing the annual reports, the CEO, N. O. Scrooge, approached Carl Hauptfleisch, the CFO, and stated, "We've decided we are going to move all our long-term debt investments into our brokerage account so we can sell them soon. Carl, go ahead and make the adjusting entries as of the current year-end."

Carl made the adjustments even though he doesn't think the company will actually go ahead with the planned sale of the long-term debt investments. The subsequent year, the economy turned, and the company's travel revenues dropped more than 60%. Wild Adventure eventually defaulted on the First Bank loan.

Requirements

1. What effect did the adjustments have on the financial statements? What effect did the adjustments have on the current ratio?
2. What type of information in the financial reports would have helped the bank detect this reclassification?
3. Has a fraud occurred? If so, what is the fraud?

> Financial Statement Case 10-1

Details about a company's investments appear in a number of places in the annual report. Use **Target Corporation's** Fiscal 2015 annual report to answer the following questions. Visit <http://www.pearsonhighered.com/Horngren> to view a link to Target Corporation's Fiscal 2015 annual report.

Requirements

1. Calculate the rate of return on total assets for Target Corporation for the year ended January 30, 2016.
2. Compare Target Corporation's rate of return on total assets to **Kohl's Corporation's** ratio. Discuss the differences.

> Communication Activity 10-1

In 150 words or fewer, explain the difference between trading debt investments and available-for-sale debt investments.

Pearson MyLab Accounting

For a wealth of online resources, including exercises, problems, media, and immediate tutorial help, please visit <http://www.myaccountinglab.com>.

> Quick Check Answers

1. b 2. c 3. b 4. c 5. a 6. c 7. b 8. c 9. a 10. a

11

Current Liabilities and Payroll



How Much Does One Employee Cost?

Mary Green, MD, recently opened a health care clinic, Family Medicine, that serves low-income families and uninsured individuals. Family Medicine prides itself on keeping its costs low but still providing excellent health care to its patients. When Mary opened the clinic, she hired only one part-time nurse. Now, with the clinic growing, Mary is considering hiring several more nurses and another doctor.

Mary knows that having employees is expensive. Not only does the business have to pay their wages, but there are additional payroll taxes that must be paid. As Mary is deciding what salary to offer her

new employees, she must consider these additional costs. She knows that if she offers the new doctor a salary of \$100,000, the business will end up paying more than \$100,000. This is because of additional payroll taxes such as Social Security and unemployment compensation. In addition, Family Medicine will need to offer health care and retirement benefits to each employee. All of these extra expenses cost money—money she could be saving. But Mary knows that in order to provide the quality of service her patients expect, she must pay the cost of having quality employees.



How Do Businesses Account for Current Liabilities and Payroll?

We now begin our focus on liabilities, or debts, a business owes. Payroll is one of those liabilities. Companies such as **UnitedHealth Group Incorporated**, a leading health care company that serves more than 85 million people, value hiring smart, committed, and talented people. Part of UnitedHealth's recruiting package is the salary it offers employees. In addition, UnitedHealth Group also offers benefits such as vacation, health care, and retirement to reward its employees. Payroll and employee benefits are reported as current liabilities on the balance sheet until the company makes payment. In this chapter, we look at how businesses, such as UnitedHealth Group, account for and record payroll and other current liabilities.



Chapter 11 Learning Objectives

- | | |
|---|--|
| 1 Account for current liabilities of known amount
2 Calculate and journalize basic payroll transactions
3 Account for current liabilities that must be estimated | 4 Account for contingent liabilities
5 Use the times-interest-earned ratio to evaluate business performance |
|---|--|

Up to this point, we've been focusing on all the assets a corporation owns. But what about the bills a business owes? A business needs to know what it owes (liabilities) and by what date they have to be paid. Why? To be sure the business has cash on hand to pay these bills. In this chapter, we focus on some common current liabilities a business may owe. As with other chapters, we'll continue to focus on Smart Touch Learning and see how it manages its current liabilities.

HOW ARE CURRENT LIABILITIES OF KNOWN AMOUNTS ACCOUNTED FOR?

Liabilities are debts that are owed to creditors. Liabilities have three main characteristics:

1. They occur because of a past transaction or event.
2. They create a present obligation for future payment of cash or services.
3. They are an unavoidable obligation.

Liabilities can be split into two main categories: current and long-term. In this chapter, we discuss current liabilities. **Current liabilities** must be paid either with cash or with goods and services within one year or within the entity's operating cycle if the cycle is longer than a year.

Accounts Payable, Notes Payable due within one year, Salaries Payable, Interest Payable, Unearned Revenue, and Income Tax Payable are all current liabilities. Any portion of a long-term liability that is due within the next year is also reported as a current liability. Current liabilities are listed on the balance sheet in the order in which they are due.

Long-term liabilities are liabilities that do not need to be paid within one year or within the entity's operating cycle, whichever is longer. Many Notes Payable are long-term, such as a mortgage on a building. We will explore more about long-term liabilities in the next chapter.

The amounts of most liabilities are known. For example, a business receives a bill that is due in 30 days or a business takes out a 90-day loan from a bank. We will begin our discussion with current liabilities of a known amount.

Accounts Payable

Amounts owed for products or services purchased on account are *accounts payable*. Because these are typically due in 30 days, they are current liabilities. We have seen many accounts payable illustrations in preceding chapters. Businesses can record accounts payable for the purchase of goods or for the receipt of services. Accounts payable occur because the business receives the goods or services before payment has been made.

Learning Objective 1

Account for current liabilities of known amount

Liabilities

Debts that are owed to creditors.

Current Liability

A liability that must be paid with cash or with goods and services within one year or within the entity's operating cycle, whichever is longer.

Long-term Liability

A liability that does not need to be paid within one year or within the entity's operating cycle, whichever is longer.



IFRS defines current and long-term liabilities in the same manner as GAAP.



Sales Tax Payable

Most states assess sales tax on retail sales. Retailers collect the sales tax in addition to the price of the item sold. Sales Tax Payable is a current liability because the retailer must pay the state in less than a year. Sales tax is usually calculated as a percentage of the amount of the sale.

For example, suppose December's taxable sales for Smart Touch Learning totaled \$10,000. The company collected an additional 6% sales tax, which would equal \$600 ($\$10,000 \times 0.06$). The accounting clerk would record that month's cash sales as follows:

$$\frac{A \uparrow}{\text{Cash} \uparrow} = \left\{ \begin{array}{c} \frac{L \uparrow}{\text{Sales Tax Payable} \uparrow} + \frac{E \uparrow}{\text{Sales Revenue} \uparrow} \end{array} \right.$$

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Cash	10,600	
	Sales Revenue		10,000
	Sales Tax Payable ($\$10,000 \times 0.06$)		600
<i>To record cash sales and the related sales tax.</i>			

Sales tax is not an expense of the business. It is a current liability. Companies collect the sales tax and then forward it to the state at regular intervals. They normally submit it monthly, but they could file it at other intervals, depending on the state and the amount of the tax. To pay the tax, the company debits Sales Tax Payable and credits Cash.

$$\frac{A \downarrow}{\text{Cash} \downarrow} = \left\{ \begin{array}{c} \frac{L \downarrow}{\text{Sales Tax Payable} \downarrow} + \frac{E}{\text{ }} \end{array} \right.$$

Date	Accounts and Explanation	Debit	Credit
Jan. 20	Sales Tax Payable	600	
	Cash		600
<i>To record cash payment for sales tax payable.</i>			

Income Tax Payable

The federal government and many state governments require corporations to pay income tax on their net income. Federal income taxes are calculated on a corporate tax return, referred to as a Form 1120. The amount of taxes that the corporation owes but has not yet paid is classified as Income Tax Payable and is reported as a current liability on the balance sheet.

For example, assume that Smart Touch Learning incurred federal income tax payable of \$3,780. Smart Touch Learning would record the following journal entry:

$$\frac{A}{\text{ }} = \left\{ \begin{array}{c} \frac{L \uparrow}{\text{Income Tax Payable} \uparrow} + \frac{E \downarrow}{\text{Income Tax Expense} \uparrow} \end{array} \right.$$

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Income Tax Expense	3,780	
	Income Tax Payable		3,780
<i>To record income tax expense incurred.</i>			



When Smart Touch Learning files its Form 1120 corporate tax return and makes payment, the corporation will record the following entry:

Date	Accounts and Explanation	Debit	Credit	
Mar. 15	Income Tax Payable	3,780		
	Cash		3,780	
<i>To record cash payment for income tax payable.</i>				

$$\frac{A \downarrow}{\text{Cash} \downarrow} = \left\{ \begin{array}{l} L \downarrow \\ \text{Income Tax} \\ \text{Payable} \downarrow \end{array} \right. + E$$

Unearned Revenues

Unearned revenue is also called *deferred revenue*. Unearned revenue arises when a business has received cash in advance of providing goods or performing work and, therefore, has an obligation to provide goods or services to the customer in the future. Unearned revenues are current liabilities until they are earned.

Suppose Smart Touch Learning received \$900 in advance on May 21 for a month's work beginning on that date. On May 21, because it received cash before earning the revenue, the company has a liability to perform work for the client. The liability is called *Unearned Revenue*. The entry made by the accounting clerk on May 21 follows:

Date	Accounts and Explanation	Debit	Credit	
May 21	Cash	900		
	Unearned Revenue		900	
<i>Collected cash for future services.</i>				

$$\frac{A \uparrow}{\text{Cash} \uparrow} = \left\{ \begin{array}{l} L \uparrow \\ \text{Unearned} \\ \text{Revenue} \uparrow \end{array} \right. + E$$

During May, Smart Touch Learning delivered one-third of the work and earned \$300 ($\$900 \times 1/3$) of the revenue. On May 31, the accounting clerk would record the following adjusting entry to show that some work had been completed and some revenue had now been earned:

Date	Accounts and Explanation	Debit	Credit	
May 31	Unearned Revenue	300		
	Service Revenue		300	
<i>To record service revenue earned that was collected in advance.</i>				

$$\frac{A}{\text{Unearned} \downarrow} = \left\{ \begin{array}{l} L \downarrow \\ \text{Unearned} \\ \text{Revenue} \downarrow \end{array} \right. + \left\{ \begin{array}{l} E \uparrow \\ \text{Service} \\ \text{Revenue} \uparrow \end{array} \right.$$

At this point, Smart Touch Learning has earned \$300 of the revenue and still owes \$600 of work to the customer as shown in the T-accounts:

Unearned Revenue				Service Revenue		
May 31	300	900	May 21		300	May 31
		600		Bal.		

Short-term Notes Payable

Short-term notes payable are a common form of financing. Short-term notes payable represent a written promise by the business to pay a debt, usually involving interest, within one year or less. Assume on May 1, Smart Touch Learning purchased merchandise

Short-term Note Payable

A written promise made by the business to pay a debt, usually involving interest, within one year or less.



inventory with a 10%, 90-day note payable, for \$8,000. The company uses the perpetual inventory system. The entry to record the note and purchase of inventory follows:

$$\begin{array}{c} A \uparrow \\ \text{Merchandise} \\ \text{Inventory} \uparrow \end{array} \left\{ = \right\} \begin{array}{c} L \uparrow \\ \text{Notes} \\ \text{Payable} \uparrow \end{array} + \begin{array}{c} E \\ \end{array}$$

Date	Accounts and Explanation	Debit	Credit
May 1	Merchandise Inventory	8,000	
	Notes Payable		8,000
<i>Purchased merchandise inventory in exchange for 90-day, 10% note.</i>			

On July 30, when the note is due, Smart Touch Learning will pay the note plus interest and record the following entry:

$$\begin{array}{c} A \downarrow \\ \text{Cash} \downarrow \end{array} \left\{ = \right\} \begin{array}{c} L \downarrow \\ \text{Notes} \\ \text{Payable} \downarrow \end{array} + \begin{array}{c} E \downarrow \\ \text{Interest} \\ \text{Expense} \uparrow \end{array}$$

Date	Accounts and Explanation	Debit	Credit
Jul. 30	Notes Payable	8,000	
	Interest Expense (\$8,000 × 0.10 × 90/365)	197*	
	Cash		8,197
<i>Paid note and interest at maturity.</i>			

*rounded

Remember that the calculation for interest is principal × interest rate × time.

Businesses occasionally borrow cash from banks. The bank requires the business to sign a *promissory note* that states that the business will pay the *principal* plus *interest* at a specified *maturity date*. As an example, assume that on November 1, 2018, Smart Touch Learning borrows \$10,000 from First Street Bank at 6% for five months. On November 1, the accounting clerk records the following entry:

$$\begin{array}{c} A \uparrow \\ \text{Cash} \uparrow \end{array} \left\{ = \right\} \begin{array}{c} L \uparrow \\ \text{Notes} \\ \text{Payable} \uparrow \end{array} + \begin{array}{c} E \\ \end{array}$$

Date	Accounts and Explanation	Debit	Credit
2018			
Nov. 1	Cash	10,000	
	Notes Payable		10,000
<i>Received cash in exchange for 5-month, 6% note.</i>			

At year-end, the matching principle requires the business to accrue interest expense for November and December as follows:

$$\begin{array}{c} A \\ \end{array} \left\{ = \right\} \begin{array}{c} L \uparrow \\ \text{Interest} \\ \text{Payable} \uparrow \end{array} + \begin{array}{c} E \downarrow \\ \text{Interest} \\ \text{Expense} \uparrow \end{array}$$

Date	Accounts and Explanation	Debit	Credit
2018			
Dec. 31	Interest Expense (\$10,000 × 0.06 × 2/12)	100	
	Interest Payable		100
<i>Accrued interest expense at year-end.</i>			



The interest accrual at December 31, 2018, allocated \$100 of the interest on this note to 2018. During 2019, the interest on this note for the three remaining months is \$150. When Smart Touch Learning records payment for the note, it will record the remaining interest expense and also remove the interest payable and note payable from the books as shown:

Date	Accounts and Explanation	Debit	Credit
2019			
Apr. 1	Notes Payable	10,000	
	Interest Expense ($\$10,000 \times 0.06 \times 3/12$)	150	
	Interest Payable	100	
	Cash		10,250
<i>Paid note and interest at maturity.</i>			

$$\frac{A \downarrow}{\text{Cash} \downarrow} = \left\{ \begin{array}{l} \frac{L \downarrow}{\text{Notes Payable} \downarrow} + \frac{E \downarrow}{\text{Interest Expense} \uparrow} \\ \text{Interest Payable} \downarrow \end{array} \right\}$$

Current Portion of Long-term Notes Payable

Long-term notes payable are typically reported in the long-term liability section of the balance sheet. If, however, the long-term debt is paid in installments, the business will report the current portion of notes payable (also called *current maturity*) as a current liability. The **current portion of notes payable** is the principal amount that will be paid within one year of the balance sheet date. The remaining portion of the note will be classified as long-term.

Let's consider a \$20,000 note payable that is paid in \$5,000 installments over four years. The portion that must be paid within one year, \$5,000, is current. The remaining \$15,000 will be classified as long-term. No journal entry is needed to reclassify the current portion. It is, instead, only classified as current or long-term for reporting purposes on the balance sheet. Notice that the reclassification does not change the total amount of debt. It only reclassifies \$5,000 of the total debt from long-term to current.

Current Portion of Notes Payable

The amount of the principal that is payable within one year of the balance sheet date.

Try It!

On August 10, Swanson Company recorded sales of merchandise inventory on account, \$4,000. The sales were subject to sales tax of 4%. The company uses the perpetual inventory system. On September 30, Swanson paid \$500 of sales tax to the state.

1. Journalize the transaction to record the sale on August 10. Ignore cost of goods sold.
2. Journalize the transaction to record the payment of sales tax to the state.

Check your answers online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercises S11-1 through S11-5. [Pearson MyLab Accounting](#)

HOW DO COMPANIES ACCOUNT FOR AND RECORD PAYROLL?

Payroll, also called *employee compensation*, also creates liabilities for a business. For service organizations—such as CPA firms and travel agencies—payroll is *the* major expense. Labor cost is so important that most businesses develop a special payroll system.

There are numerous ways to label an employee's pay:

- *Salary* is pay stated at an annual, monthly, or weekly rate, such as \$62,400 per year, \$5,200 per month, or \$1,200 per week.

Learning Objective 2

Calculate and journalize basic payroll transactions



- *Wages* are pay amounts stated at an hourly rate, such as \$15 per hour.
- *Commission* is pay stated as a percentage of a sale amount, such as a 5% commission on a sale. A realtor who earns 5% commission, for example, earns \$5,000 on a \$100,000 sale of real estate ($\$100,000 \times 5\%$).
- *Bonus* is pay over and above base salary (or wage or commission). A bonus is usually paid for exceptional performance—in a single amount after year-end.
- *Benefits* are extra compensation—items that are not paid directly to the employee. Benefits cover health, life, and disability insurance. The employer pays the insurance company, which then provides coverage for the employee. Another type of benefit, retirement, sets aside money for the employee for his or her future retirement.

Businesses pay employees at a base rate for a set period—called *straight time*. For additional hours—*overtime*—the employee may get a higher pay rate, depending on the job classification and wage and hour laws.

Assume Ryan Park was hired to work for Smart Touch Learning. His pay is as follows:

- Ryan earns wages of \$15 per hour for straight time (40 hours), so his weekly pay is \$600 (\$15 per hour \times 40 hours).
- The company pays *time-and-a-half* for overtime. That rate is 150% (1.5 times) the straight-time pay rate. Thus, Ryan earns \$22.50 per hour of overtime (\$15.00 \times 1.5).
- For working 42 hours during a week, he earns gross pay of \$645, computed as follows:

Straight-time pay for 40 hours	\$ 600
Overtime pay for 2 hours: $2 \times \$22.50$	45
Gross Pay	<u><u>\$ 645</u></u>

Gross Pay and Net (Take-Home) Pay

Gross Pay

The total amount of salary, wages, commissions, and any other employee compensation before taxes and other deductions.

Net Pay

Gross pay minus all deductions. The amount of compensation that the employee actually takes home.

Two pay amounts are important for accounting purposes. **Gross pay** is the total amount of salary, wages, commissions, and bonuses earned by the employee during a pay period before taxes or any other deductions. Gross pay is an expense to the employer. In the preceding example, Ryan Park's gross pay was \$645. **Net pay** is the amount the employee gets to keep. Net pay is also called *take-home pay*. Net pay equals gross pay minus all deductions such as income tax withheld. The employer either writes a paycheck to each employee for his or her take-home pay or directly deposits the employee's take-home pay into the employee's bank account.

Employee Payroll Withholding Deductions

The federal government, most states, and many municipalities require employers to deduct taxes from employee paychecks. Insurance companies and investment companies may also get some of the employee's gross pay. Amounts withheld from paychecks are called *withholding deductions*. Payroll withholding deductions are the difference between gross pay and take-home pay. These deductions are withheld from paychecks and sent directly to the government, to insurance companies, or to other entities. Payroll withholding deductions fall into two categories:

- *Required deductions*, such as employee federal and state income tax, Social Security tax, and other deductions required by federal, state, or local laws. For example, employees pay their income tax and Social Security tax through payroll deductions.
- *Optional deductions*, including insurance premiums, retirement plan contributions, charitable contributions, and other amounts that are withheld at the employee's request.



After being withheld, payroll deductions become the liability of the employer, who then pays the outside parties—taxes to the government and contributions to charitable organizations, for example.

Withholding for Employee Income Tax

U.S. law and some states, cities, and counties require companies to withhold income tax from employee paychecks. The income tax deducted from gross pay is called **income tax withholding**. The amount withheld depends on the employee's gross pay and on the number of *withholding allowances* he or she claims.

For federal tax withholdings, an employee files Form W-4 with his or her employer to indicate the number of allowances claimed for income tax withholding. Each allowance lowers the amount of tax withheld:

- An unmarried taxpayer usually claims one allowance.
- A childless married couple usually claims two allowances.
- A married couple with one child usually claims three allowances, and so on.

Exhibit 11-1 shows a W-4 for Ryan Park, who claims married with three allowances (lines 3 and 5).

Exhibit 11-1 | W-4

W-4		Employee's Withholding Allowance Certificate		OMB No. 1545-0074
Form Department of the Treasury Internal Revenue Service		► Whether you are entitled to claim a certain number of allowances or exemption from withholding is subject to review by the IRS. Your employer may be required to send a copy of this form to the IRS.		2016
1 Your first name and middle initial Ryan G.	Last name Park	2 Your social security number 123-45-6789		
Home address (number and street or rural route) 305 Lost Cove Drive		3 <input type="checkbox"/> Single <input checked="" type="checkbox"/> Married <input type="checkbox"/> Married, but withhold at higher Single rate. Note. If married, but legally separated, or spouse is a nonresident alien, check the "Single" box.	4 If your last name differs from that shown on your social security card, check here. You must call 1-800-772-1213 for a replacement card. ► <input type="checkbox"/>	
City or town, state, and ZIP code Pompton Plains, IL 07444				
5 Total number of allowances you are claiming (from line H above or from the applicable worksheet on page 2) 3		5 3		
6 Additional amount, if any, you want withheld from each paycheck		6 \$		
7 I claim exemption from withholding for 2016, and I certify that I meet both of the following conditions for exemption. • Last year I had a right to a refund of all federal income tax withheld because I had no tax liability, and • This year I expect a refund of all federal income tax withheld because I expect to have no tax liability. If you meet both conditions, write "Exempt" here. ► 7				
Under penalties of perjury, I declare that I have examined this certificate and, to the best of my knowledge and belief, it is true, correct, and complete.				
Employee's signature (This form is not valid unless you sign it.) ► <i>Ryan G. Park</i>		Date ► 11/15/2016		
8 Employer's name and address (Employer: Complete lines 8 and 10 only if sending to the IRS.) Smart Touch Learning, 227 Lake Street, Pompton Plains, IL 07444		9 Office code (optional)	10 Employer identification number (EIN) 20-1234567	
For Privacy Act and Paperwork Reduction Act Notice, see page 2.		Cat. No. 10220Q Form W-4 (2016)		

Withholding for Employee Social Security Tax (FICA)

The **Federal Insurance Contributions Act (FICA)**, also known as the Social Security Act, created the Social Security tax. The Social Security program provides retirement, disability, and medical benefits. The law requires employers to withhold **Social Security (FICA) tax** from employees' paychecks. The FICA tax has two components:

1. OASDI (old age, survivors, and disability insurance)
2. Medicare (medical benefits)

Federal Insurance Contributions Act (FICA)

The federal act that created the Social Security tax that provides retirement, disability, and medical benefits.

Social Security (FICA) Tax

Federal Insurance Contributions Act (FICA) tax, which is withheld from employees' pay and matched by the employer.



OASDI provides retirement benefits to individuals based upon age, benefits to survivors of qualified individuals, and disability insurance to individuals who cannot work because of a medical condition. The amount of tax withheld varies from year to year because the wage base is subject to OASDI tax changes each year. For 2016, the OASDI tax applies to the first \$118,500 of employee earnings in a year. The taxable amount of earnings is usually adjusted annually. The OASDI tax rate for employees at the time of this writing is 6.2%. Therefore, the maximum OASDI tax that an employee paid in 2016 was \$7,347 ($\$118,500 \times 0.062$).

The Medicare portion of the FICA tax provides health insurance to individuals based on age or disability. Medicare applies to all employee earnings—that means there is no maximum tax. At the time of this writing, this tax rate is 1.45% for earnings up to \$200,000. Earnings over \$200,000 are taxed an additional 0.9%, for a total of 2.35%. Therefore, an employee pays a combined FICA tax rate of 7.65% (6.2% + 1.45%) of the first \$118,500 of annual earnings, plus 1.45% of earnings above \$118,500 up to \$200,000, and 2.35% on earnings above \$200,000.

The percentage used and the wage base for payroll withholdings and taxes vary from year to year. We are using amounts that are current at the time of printing. You should use these numbers when you complete this chapter's assignments.

Assume that James Kolen, another employee of Smart Touch Learning, earned \$114,200 prior to December. Kolen's salary for December is \$10,000. Kolen's FICA tax withheld from his paycheck is calculated as follows:

	OASDI	Medicare
Employee earnings subject to tax	\$ 118,500	No Max
Employee earnings prior to the current month	<u>– 114,200</u>	
Current pay subject to tax	\$ 4,300	\$ 10,000
Tax rate	<u>× 0.062</u>	<u>× 0.0145</u>
Tax to be withheld from paycheck	<u>\$ 267*</u>	<u>\$ 145</u>
Total FICA tax withheld (\$267 + \$145)	<u><u>\$412</u></u>	

*Numbers in examples are rounded to nearest dollar for simplicity. Payroll amounts are usually rounded to the nearest cent.


Why did James Kolen only pay OASDI tax on \$4,300 of earnings?

Notice that only \$4,300 of Kolen's \$10,000 salary is subject to OASDI tax. This is because in December, Kolen reaches the maximum amount of earnings that is subject to OASDI. Once an employee has earned \$118,500, no further earnings are taxed for OASDI in that year.

Medicare tax, on the other hand, has no maximum. All earnings are subject to the tax. Kolen pays Medicare tax on the entire \$10,000 earned in December.

Optional Withholding Deductions

As a convenience to employees, some companies withhold payroll deductions and then pay designated organizations according to employee instructions. Insurance premiums, retirement savings, union dues, and gifts to charities are examples.

The table on the next page summarizes James Kolen's final pay period on December 31 assuming he authorized a \$180 payment for health insurance and a \$20 contribution to United Way. Employee income tax is assumed to be 20% of gross pay.



Gross pay	\$ 10,000
Withholding deductions:	
Employee income tax (20%)	\$ 2,000
Employee OASDI tax (calculated on prior page)	267
Employee Medicare tax (1.45%)	145
Employee health insurance	180
Employee contribution to United Way	20
Total withholdings	<u>2,612</u>
Net (take-home) pay	<u><u>\$ 7,388</u></u>

Payroll Register

Many companies use a **payroll register** to help summarize the earnings, withholdings, and net pay for each employee. Exhibit 11-2 shows the payroll register for Smart Touch Learning for the month of December.

Payroll Register

A schedule that summarizes the earnings, withholdings, and net pay for each employee.

Exhibit 11-2 | Payroll Register

Employee Name	Earnings			Withholdings						Net Pay	Check No.	Salaries and Wages Expense
	Beginning Cumulative Earnings	Current Period Earnings	Ending Cumulative Earnings	OASDI	Medicare	Income Tax	Health Insurance	Other	Total Withholdings			
James Kolen	\$ 114,200	\$ 10,000	\$ 124,200	\$ 267	\$ 145	\$ 2,000	\$ 180	\$ 20	\$ 2,612	\$ 7,388	530	\$ 10,000
Benito Munez	62,100	5,500	67,600	341	80	825	110	0	1,356	4,144	531	5,500
Ryan Park	37,400	2,580	39,980	160	37	465	110	0	772	1,808	532	2,580
Lisa Smart	0	4,000	4,000	248	58	1,400	65	0	1,771	2,229	533	4,000
Sharon Zapato	71,500	6,500	78,000	403	94	1,625	180	40	2,342	4,158	534	6,500
Total	\$ 285,200	\$ 28,580	\$ 313,780	\$ 1,419	\$ 414	\$ 6,315	\$ 645	\$ 60	\$ 8,853	\$ 19,727		\$ 28,580

*Don't confuse **corporate** income tax owed by the corporation, which creates **Income Tax Payable**, and **personal** income tax withheld from the employees' paychecks, which creates **Employee Income Taxes Payable**.*

A business's payroll register typically includes the following columns:

1. Employee Name
2. Beginning cumulative earnings—the amount the employee has earned through the last pay period.
3. Current period earnings—earnings for the current period (includes regular and overtime earnings, commissions, and bonuses).
4. Ending cumulative earnings—beginning cumulative earnings plus current period earnings.
5. OASDI—6.2% tax on the first \$118,500 earnings.
6. Medicare—1.45% tax on the first \$200,000; 2.35% on earnings over \$200,000.
7. Income Tax—includes federal, state, and any local government income tax withheld; varies depending on filing status and number of withholding allowances.
8. Health Insurance—withholdings made for employee-paid health care coverage.
9. Other—employees' voluntary withholdings such as charitable contributions and union dues.



10. Total Withholdings—total of all withholdings.
11. Net Pay—current period earnings less total withholdings. This is the amount that is paid to each employee.
12. Check No.—the check number used to make payment for earnings.
13. Salaries and Wages Expense—the amount debited to Salaries and Wages Expense for the current pay period.

Journalizing Employee Payroll

The information from the payroll register is used to record the payroll journal entry. Payroll and payroll withholdings are recorded as liabilities until the amounts are paid. The totals from the payroll register will be used to create the journal entry for Smart Touch Learning.

A	$L \uparrow$	$+ E \downarrow$	Date	Accounts and Explanation	Debit	Credit
$A \downarrow$	Various Payables↑		Dec. 31	Salaries and Wages Expense	28,580	
$Cash \downarrow$	Salaries and Wages and Wages Payable↑			FICA—OASDI Taxes Payable		1,419
				FICA—Medicare Taxes Payable		414
				Employee Income Taxes Payable		6,315
				Employee Health Insurance Payable		645
				United Way Payable		60
				Salaries and Wages Payable		19,727
				<i>To record salaries and wages expense and payroll withholdings.</i>		

In the above journal entry, Salaries and Wages Expense (\$28,580) represents the gross pay for all employees. Gross pay includes both the amount owed for salaries and wages (\$19,727) and payroll withholdings (\$1,419 + \$414 + \$6,315 + \$645 + \$60).

On payday, Smart Touch Learning will make payment of \$19,727 to its employees and record the following journal entry:

A↓	$L \downarrow$	$+ E$	Date	Accounts and Explanation	Debit	Credit
$Cash \downarrow$	Salaries and Wages and Wages Payable↓		Jan. 5	Salaries and Wages Payable	19,727	
				Cash		19,727
				<i>To record payment of salaries.</i>		

The other payable accounts, FICA, Income Taxes Payable, Health Insurance, and any charitable contributions, will be removed from the books when payments are made on those specific payables with debits to the liability accounts and a credit to Cash.

Employer Payroll Taxes

In addition to income tax and FICA tax, which are withheld from employee paychecks, employers must pay at least three payroll taxes. These taxes are not withheld from employees' gross earnings but instead are paid by the employer:

1. Employer FICA tax (OASDI and Medicare)
2. State unemployment compensation tax (SUTA)
3. Federal unemployment compensation tax (FUTA)



Employer FICA Tax

In addition to the FICA tax withheld from the employee's paycheck, the employer must also pay both OASDI and Medicare. The employer portion of OASDI is 6.2% on the first \$118,500 of each employee's annual earnings. The employer's tax rate for Medicare is 1.45% on all earnings. (The employer does not pay the additional 0.9% Medicare tax on earnings above \$200,000.) The Social Security system is funded by contributions from both the employer and employee.

State and Federal Unemployment Compensation Taxes

The Federal Unemployment Tax Act (FUTA) and the State Unemployment Tax Act (SUTA) finance workers' compensation for people laid off from work. These **unemployment compensation taxes** are paid by the employer; they are not deducted from employees' gross pay. (Some states require employees to contribute to SUTA. For our purposes, we will assume that unemployment compensation taxes are paid only by the employer.) In recent years, employers have paid a combined tax of 6.0% on the first \$7,000 of each employee's annual earnings for unemployment tax. The proportion paid to the state depends on the individual state, but for many it is 5.4% to the state plus 0.6% to the federal government. For this payroll tax, the employer uses two liability accounts:

- Federal Unemployment Taxes Payable (FUTA Payable)
- State Unemployment Taxes Payable (SUTA Payable)

Exhibit 11-3 shows the distribution of payroll for an employee who earns \$1,000, assuming the employee has not reached the payroll tax limits.

Exhibit 11-3 | Payroll Costs

Employee's taxes and other withholdings				Employer's taxes			
Net (Take- Home) Pay	OASDI (6.2% on first \$118,500)	Medicare (1.45% on first \$200,000, then 2.35%)	Income Tax (20% assumed)	OASDI (6.2% on first \$118,500)	Medicare (1.45% on all earnings)	FUTA (0.6% on first \$7,000)	SUTA (5.4% on first \$7,000)
\$723	+ \$62	+ \$15	+ \$200	\$62	+ \$15	+ \$6	+ \$54
		= \$1,000				= \$137	
Employer pays a total of \$1,137.							

Journalizing Employer Payroll Taxes

Smart Touch Learning's employer payroll taxes for December will be calculated as follows:

Employee Name	Earnings			Employer Payroll Taxes				
	Beginning Cumulative Earnings	Current Period Earnings	Ending Cumulative Earnings	OASDI (6.2%)	Medicare (1.45%)	FUTA (0.6%)	SUTA (5.4%)	Total Taxes
James Kolen	\$ 114,200	\$ 10,000	\$ 124,200	\$ 267	\$ 145	\$ 0	\$ 0	\$ 412
Benito Munez	62,100	5,500	67,600	341	80	0	0	421
Ryan Park	37,400	2,580	39,980	160	37	0	0	197
Lisa Smart	0	4,000	4,000	248	58	24	216	546
Sharon Zapato	71,500	6,500	78,000	403	94	0	0	497
Total	\$ 285,200	\$ 28,580	\$ 313,780	\$ 1,419	\$ 414	\$ 24	\$ 216	\$ 2,073



As with employee contributions, the federal FICA—OASDI is determined as 6.2% on the first \$118,500 earned by each employee. Smart Touch Learning must pay OASDI tax on all employees; however, the amount paid on James Kolen's earnings is limited to the first \$118,500 $[(\$118,500 - \$114,200) \times 6.2\% = \$267]$. FICA—Medicare applies to all earnings at a rate of 1.45%.

FUTA (0.6%) and SUTA (5.4%) tax is only paid on the first \$7,000 of each employee's earnings. Smart Touch Learning will only pay unemployment taxes on Lisa Smart because all other employees have earned more than \$7,000 prior to the December pay period.

Smart Touch Learning records the employer's payroll tax expense as a debit to Payroll Tax Expense and a credit to the various payable accounts:

$$\boxed{A} \left. \begin{array}{c} \\ \end{array} \right\} = \left\{ \begin{array}{c} \frac{L \uparrow}{\text{Various Payables} \uparrow} + \frac{E \downarrow}{\text{Payroll Tax Expense} \uparrow} \\ \end{array} \right.$$

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Payroll Tax Expense	2,073	
	FICA—OASDI Taxes Payable		1,419
	FICA—Medicare Taxes Payable		414
	Federal Unemployment Taxes Payable		24
	State Unemployment Taxes Payable		216
	<i>To record employer's payroll tax expense.</i>		

Payment of Employer Payroll Taxes and Employees' Withholdings

On payday, or shortly thereafter, Smart Touch Learning will make payments to the various government agencies and other designated organizations for the employees' withholdings and Smart Touch Learning's tax obligations. The information for the payment comes from the journal entries to record employee payroll and employer payroll taxes. Notice that FICA—OASDI Taxes Payable and FICA—Medicare Taxes Payable are included in the journal entry to record employee payroll and the journal entry to record employer payroll taxes. That is because the FICA taxes are obligations of both the employee and the employer. Smart Touch Learning will combine those amounts when recording the payments. Assuming the payments are made on January 15, the journal entry is:

$$\boxed{A \downarrow} \left. \begin{array}{c} \\ \end{array} \right\} = \left\{ \begin{array}{c} \frac{L \downarrow}{\text{Various Payables} \downarrow} + \frac{E}{\text{}} \\ \end{array} \right.$$

Date	Accounts and Explanation	Debit	Credit
Jan. 15	FICA—OASDI Taxes Payable (\$1,419 + \$1,419)	2,838	
	FICA—Medicare Taxes Payable (\$414 + \$414)	828	
	Employee Income Taxes Payable	6,315	
	Employee Health Insurance Payable	645	
	United Way Payable	60	
	Federal Unemployment Taxes Payable	24	
	State Unemployment Taxes Payable	216	
	Cash		10,926
	<i>To record payment of payroll liabilities.</i>		

Internal Control Over Payroll

There are two main controls for payroll:

- Controls for efficiency
- Controls to safeguard payroll disbursements



Controls for Efficiency

Payroll transactions are ideal for computer processing. The payroll data are stored in a file, and the computer makes the calculations, prints paychecks, and updates all records electronically. In addition, companies may require direct deposits for employees' pay so that paper checks do not have to be written to each employee. Direct deposits also increase efficiency by reducing the amount of reconciling needed on outstanding checks.

Controls to Safeguard Payroll Disbursements

A controller of a small business can monitor his or her payroll by personal contact with employees. Large companies cannot. A particular risk is that a paycheck may be written to a fictitious person and cashed by a dishonest employee. To guard against this, large businesses adopt strict internal controls for payroll.

Hiring and firing employees should be separated from accounting and from passing out paychecks. Photo IDs ensure that only actual employees are paid. Employees clock in at the start and clock out at the end of the workday to prove their attendance and hours worked.

The foundation of internal control is the separation of duties. This is why all but the smallest companies have separate departments for the following activities:

- The Human Resources Department hires and fires workers.
- The Payroll Department maintains employee earnings records.
- The Accounting Department records all transactions.
- The Treasurer distributes paychecks to employees.

Try It!

3. Theodore Simpson works for Blair Company all year and earns a monthly salary of \$4,000. There is no overtime pay. Based on Theodore's W-4, Blair withholds income taxes at 15% of his gross pay. As of July 31, Theodore had \$28,000 of cumulative earnings.

Journalize the accrual of salary expense for Blair Company related to the employment of Theodore Simpson for the month of August.

Check your answer online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercises S11-6 through S11-8. **Pearson MyLab Accounting**

HOW ARE CURRENT LIABILITIES THAT MUST BE ESTIMATED ACCOUNTED FOR?

A business may know that a liability exists but not know the exact amount. The business cannot simply ignore the liability. It must estimate the amount of the liability and report it on the balance sheet. Common examples of liabilities that are often estimated are bonus plans, vacation pay, health and pension benefits, and warranties.

Learning Objective 3

Account for current liabilities that must be estimated

Bonus Plans

Many companies give bonuses to their employees in addition to their regular wages. These bonuses are often based on meeting a specific goal, such as the employee meeting an expected sales goal or the business achieving a target profit. Usually a company does not know the amount of the year-end bonus at year-end; the company instead estimates the amount of the bonus based on a set percentage. For example, assume Smart Touch



Learning estimates that it will pay a 5% bonus on annual net income after deducting the bonus. Assume the company reports net income of \$315,000 before the calculation of the bonus. The accounting department will calculate the bonus as follows:

$$\begin{aligned} \text{Bonus} &= (\text{Bonus \%} \times \text{Net income before bonus}) / (1 + \text{Bonus \%}) \\ &= (0.05 \times \$315,000) / (1 + 0.05) \\ &= \$15,000 \end{aligned}$$

This formula allows you to back into the bonus amount. For example, net income minus the bonus is \$300,000 ($\$315,000 - \$15,000$). The bonus of \$15,000 is really 5% of net income after the bonus has been subtracted ($\$300,000 \times 0.05 = \$15,000$).

Assuming Smart Touch Learning will not make payment until the next year, it must record a liability for the bonus due to its employees. The accounting clerk will record the following entry:

A	=	L^{\uparrow}	+	E^{\downarrow}
		Employee Bonus Payable↑		Employee Bonus Expense↑

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Employee Bonus Expense	15,000	
	Employee Bonus Payable		15,000
<i>To record employee bonus expense.</i>			

When Smart Touch Learning makes payment, it will debit Employee Bonus Payable and credit Cash.

Vacation, Health, and Pension Benefits

Businesses typically offer vacation, health, and pension benefits to its employees. A **pension plan** provides benefits to retired employees. Vacation, health, and pension benefits must be estimated and recorded as a liability. Suppose Smart Touch Learning employees earn two weeks of vacation throughout the year. The company estimates that the cost of providing vacation benefits is \$1,000 per month. The accounting clerk will record the following journal entry monthly:

A	=	L^{\uparrow}	+	E^{\downarrow}
		Vacation Benefits Payable↑		Vacation Benefits Expense↑

Date	Accounts and Explanation	Debit	Credit
	Vacation Benefits Expense	1,000	
	Vacation Benefits Payable		1,000
<i>To record employee vacation benefits expense.</i>			

When an employee takes paid vacation, Smart Touch Learning will reduce the liability, Vacation Benefits Payable, with a debit and credit Cash. Other benefits, such as health and pension benefits, are recorded in the same manner.

Warranties

Warranty

An agreement that guarantees a company's product against defects.

Many corporations guarantee their products against defects under **warranty** agreements. The time period of warranty agreements varies. The matching principle requires businesses to record Warranty Expense in the same period that the company records the revenue related to that warranty. The expense, therefore, is incurred when the



company makes a sale, not when the company pays the warranty claims. At the time of the sale, the company does not know the exact amount of warranty expense but can estimate it.

Assume that Smart Touch Learning made sales on account of \$50,000 (cost of merchandise inventory sold, \$35,000) subject to product warranties on June 10 and estimates that warranty costs will be 3% of sales. The company would record the sales revenue, cost of goods sold, and estimated warranty expense as follows:

Date	Accounts and Explanation	Debit	Credit
Jun. 10	Accounts Receivable	50,000	
	Sales Revenue		50,000
	<i>Recorded sale on account.</i>		
10	Cost of Goods Sold	35,000	
	Merchandise Inventory		35,000
	<i>Recorded the cost of goods sold.</i>		
10	Warranty Expense (\$50,000 × 0.03)	1,500	
	Estimated Warranty Payable		1,500
	<i>To accrue warranty payable.</i>		

$$\begin{aligned}
 & \frac{\text{A} \uparrow}{\text{Accounts Receivable} \uparrow} = \left\{ \begin{array}{l} \text{L} \\ \end{array} \right\} + \frac{\text{E} \uparrow}{\text{Sales Revenue} \uparrow} \\
 & \frac{\text{A} \downarrow}{\text{Merchandise Inventory} \downarrow} = \left\{ \begin{array}{l} \text{L} \\ \end{array} \right\} + \frac{\text{E} \downarrow}{\text{Cost of Goods Sold} \uparrow} \\
 & \frac{\text{A}}{\text{Estimated Warranty Payable} \uparrow} = \left\{ \begin{array}{l} \text{L} \uparrow \\ \end{array} \right\} + \frac{\text{E} \downarrow}{\text{Warranty Expense} \uparrow}
 \end{aligned}$$

Assume that some of Smart Touch Learning's customers make claims that must be honored through the warranty offered by the company. The warranty costs total \$800 and are made on June 27. The company replaces the defective goods and makes the following journal entry:

Date	Accounts and Explanation	Debit	Credit
Jun. 27	Estimated Warranty Payable	800	
	Merchandise Inventory		800
	<i>To replace merchandise inventory under warranty.</i>		

$$\frac{\text{A} \downarrow}{\text{Merchandise Inventory} \downarrow} = \left\{ \begin{array}{l} \text{L} \downarrow \\ \end{array} \right\} + \frac{\text{E}}{\text{Estimated Warranty Payable} \downarrow}$$

Smart Touch Learning replaced the defective goods, so the credit was to Merchandise Inventory. If the company had given the customer a refund instead of a replacement, the credit would be to Cash.

Smart Touch Learning's expense on the income statement is \$1,500, the estimated amount, not the \$800 actually honored. After honoring these warranties, the company's liability account has a credit balance of \$700. This \$700 balance represents warranty claims Smart Touch Learning expects to honor in the future based on its estimates; therefore, the \$700 is a liability to Smart Touch Learning.

Estimated Warranty Payable			
Jun. 27	800	1,500	Jun. 10
		700	Bal.



TYING IT ALL TOGETHER

UnitedHealth Group Incorporated is a health and well-being company dedicated to helping people live healthier lives. The company provides products and services under two distinct brands: UnitedHealthcare and Optum. UnitedHealthcare provides health care coverage and benefits for more than 30 million people. Optum provides information and technology-enabled health services. The company currently employs more than 200,000 individuals. (You can find UnitedHealth Group Incorporated's annual report at <http://www.unitedhealthgroup.com/~media/UHG/PDF/2015/UNH-Q4-2015-Form-10-K.ashx?la=en>.)

On the UnitedHealth Group Incorporated's balance sheet, the company lists several different types of current liabilities including medical costs payable. What does medical costs payable represent?

In the notes to the financial statements, UnitedHealth Group states medical costs payable include the company's obligations for

medical care services that have been provided to insured consumers but that have not yet been paid. In addition, medical costs payable also includes physician, hospital, and other medical costs disputes.

How does UnitedHealth Group Incorporated estimate the amount of medical costs payable that is recorded on its balance sheet?

UnitedHealth Group estimates the amount of medical costs payable based on factors such as time from date of service to claim receipt, claim backlogs, and other medical cost trends. The estimated costs associated with medical disputes are based on an analysis of potential outcomes. The estimates are re-evaluated frequently and adjustments are made as needed.

Try It!

- O'Conner guarantees its vacuums for four years. Prior experience indicates that warranty costs will be approximately 6% of sales. Assume that O'Conner made sales totaling \$200,000 during 2018. Record the warranty expense for the year.

Check your answer online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercises S11-9 through S11-11. [Pearson MyLab Accounting](#)

HOW ARE CONTINGENT LIABILITIES ACCOUNTED FOR?

Learning Objective 4

Account for contingent liabilities

Contingent Liability

A potential liability that depends on some future event.

A **contingent liability** is a potential, rather than an actual, liability because it depends on a *future* event. For a contingent liability to be paid, some event (the contingency) must happen in the future. For example, suppose Smart Touch Learning is sued because of alleged patent infringement on one of its online learning videos. The company, therefore, faces a contingent liability, which may or may not become an actual liability. If the outcome of this lawsuit is unfavorable, it could hurt Smart Touch Learning by increasing its liabilities. Therefore, it would be unethical to withhold knowledge of the lawsuit from investors and creditors.

Another contingent liability arises when a company *co-signs a note payable* for another entity. The company co-signing has a contingent liability until the note comes due and is paid by the other entity. If the other company pays off the note, the contingent liability vanishes. If the other company doesn't pay off the note, the co-signing company must pay the debt for the other entity. How businesses record or don't record contingent liabilities is based on one of three likelihoods of the event occurring in the future:

- Remote
- Reasonably possible
- Probable



Remote Contingent Liability

A contingency that is remote has little chance of the event occurring in the future. If a contingency is remote, the company does not need to record a liability and does not need to disclose it in the notes to the financial statements. An example of a remote contingency would be a frivolous lawsuit.

Reasonably Possible Contingent Liability

Contingencies that are reasonably possible have a greater chance of occurring but are not likely. A reasonably possible contingency should be described in the notes to the financial statements. For example, consider a company that is the defendant in a significant lawsuit. If the company has been advised by legal counsel that it is reasonably possible that it will lose the lawsuit, then it should report the lawsuit in its notes to the financial statements.

Probable Contingent Liability

If a contingency is probable, it means that the future event is likely to occur. Only contingencies that are probable *and* can be estimated are recorded as a liability and an expense is accrued. An example of an estimable probable contingency is a warranty.

Contingencies that are probable but *cannot* be estimated are disclosed in the notes to the financial statements. A liability is not recorded because the amount of the contingency cannot be estimated. Exhibit 11-4 summarizes the rules for contingent liabilities.



Under IFRS, "probable" is defined more broadly as "more likely than not" that the future event will result in a liability. "More likely than not" means more than a 50% chance.

Exhibit 11-4 | Contingent Liabilities

Likelihood of Future Event	How to Report the Contingency
Remote	Do not disclose.
Reasonably possible	Describe the situation in a note to the financial statements.
Probable and the amount of the expense or loss <i>cannot</i> be estimated	Describe the situation in a note to the financial statements.
Probable and the amount of the expense or loss <i>can</i> be estimated	Record an expense or loss and a liability based on estimated amounts.

DECISIONS

How should the contingency be reported?

Emily Gallagher is the independent auditor of Tate Manufacturing, a maker of handheld drills and other carpentry tools. Emily is evaluating current lawsuits for the company to determine whether any contingent liabilities should be disclosed. Tate Manufacturing is currently in litigation for a product liability case. The suit claims that a Tate handheld drill heated up quickly and caused a fire. Tate's attorney has told Emily that it is likely that the manufacturer will lose the case, but he does not want to estimate the amount of damages. The attorney is concerned that estimating the amount of damages would establish a dollar amount for settlement and could place their case in jeopardy. What should Emily do?

Solution

GAAP requires that businesses report a contingency if it is probable that the event will occur in the future. The issue here is where the reporting should be made. If the attorney cannot reasonably estimate the amount of the possible damage award, Tate should report

the contingent liability in the notes to the financial statements. If an amount can be determined, Tate Manufacturing should record an expense or loss, and a liability based on the estimated amount. Emily should determine whether the attorney *can* estimate the damages but just doesn't want to. If the damages can be estimated, Emily should require that the company record a contingent liability.

Alternative Solution

The attorney's concern is understandable. He feels that disclosing the amount of the contingent liability could hurt the determination of the case. If the jury were to find out about the disclosure, it might be more likely to award damages to the plaintiff, or the plaintiff might be able to negotiate a larger settlement with Tate. The attorney has a right to be concerned about the transparency of the financial reporting and potential damage to the outcome of the case. The attorney should provide an estimate only if he is reasonably confident with the amount of damages.



Try It!

Match the likelihood of a future event with the reporting of the contingency. An answer may be selected more than once.

Likelihood of Future Event	How to Report the Contingency
5. Remote	a. Do not disclose.
6. Reasonably possible	b. Record an expense and a liability based on estimated amounts.
7. Probable and the amount of the loss <i>cannot</i> be estimated	c. Describe the situation in a note to the financial statements.
8. Probable and the amount of the loss <i>can</i> be estimated	

Check your answers online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercise S11-12. [Pearson MyLab Accounting](#)

HOW DO WE USE THE TIMES-INTEREST-EARNED RATIO TO EVALUATE BUSINESS PERFORMANCE?

Learning Objective 5

Use the times-interest-earned ratio to evaluate business performance

Times-Interest-Earned Ratio

Evaluates a business's ability to pay interest expense.

$$\frac{\text{Net income} + \text{Income tax expense} + \text{Interest expense}}{\text{Interest expense}}$$

Investors can use the **times-interest-earned ratio** to evaluate a business's ability to pay interest expense. This ratio measures the number of times earnings before interest and taxes (EBIT) can cover (pay) interest expense. The times-interest-earned ratio is also called the *interest-coverage ratio*. A high interest-coverage ratio indicates a business's ease in paying interest expense; a low ratio suggests difficulty. The times-interest-earned ratio is calculated as EBIT (Net income + Income tax expense + Interest expense) divided by Interest expense.

Let's evaluate **Kohl's Corporation's** ability to pay its interest expense. The following amounts (in millions) are taken from Kohl's income statement.

	Year Ended January 30, 2016	Year Ended January 31, 2015
Net income	\$ 673	\$ 867
Income tax expense	384	482
Interest expense	327	340

Kohl's times-interest-earned ratios for the years ended January 30, 2016 (2015 fiscal year), and January 31, 2015 (2014 fiscal year), are calculated as follows:

$$\text{Times-interest-earned ratio} = (\text{Net income} + \text{Income tax expense} + \text{Interest expense}) / \text{Interest expense}$$

2015

$$\begin{aligned}
 &= (\$673 + \$384 + \$327) / \$327 \\
 &= 4.23 \text{ (rounded)}
 \end{aligned}$$

2014

$$\begin{aligned}
 &= (\$867 + \$482 + \$340) / \$340 \\
 &= 4.97 \text{ (rounded)}
 \end{aligned}$$

Notice that from 2014 to 2015, Kohl's experienced a decrease in its times-interest-earned ratio. This is because Kohl's incurred slightly less interest expense but had a much larger decrease in net income to cover it. This decrease in net income decreases Kohl's times-interest-earned ratio from 4.97 times to 4.23 times. However, it would appear that Kohl's can still cover its interest expense.

Try It!

9. Fitzgerald Company reported the following amounts on its 2018 income statement:

Year Ended December 31, 2018	
Net income	\$ 19,300
Income tax expense	5,800
Interest expense	900

What is Fitzgerald's times-interest-earned ratio for 2018? (Round your answer to two decimals.)

Check your answer online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercise S11-13. [Pearson MyLab Accounting](#)

REVIEW

> Things You Should Know

1. How are current liabilities of known amounts accounted for?

- Current liabilities are liabilities that must be paid with cash or with goods and services within one year or within the entity's operating cycle if the cycle is longer than a year.
- Some examples of current liabilities are accounts payable, sales tax payable, income tax payable, unearned revenues, and short-term notes payable.
- Current liabilities also include any current portion of long-term notes payable.

2. How do companies account for and record payroll?

- Gross pay is the total amount of salary or wages earned by the employee. Net pay is the amount that each employee gets to keep (take-home pay).
- Payroll withholding deductions are the difference between gross pay and net pay. Examples of payroll deductions that *employees* pay include:
 - Income tax withholding: federal, state, and local income tax
 - Employee FICA tax (at time of printing):
 - OASDI: 6.2% on the first \$118,500 of annual earnings
 - Medicare: 1.45% on earnings up to \$200,000, 2.35% on all earnings above \$200,000
 - Optional withholdings: charitable contributions, union dues, and so on
- A payroll register can be used to help summarize the earnings, withholdings, and net pay for each employee.

- Businesses record a journal entry for payroll and payroll withholdings as a debit to Salaries and Wages Expense and a credit to various liabilities until the amounts are paid.
- Employers must pay at least three payroll taxes:
 - Employer FICA tax (at time of printing):
 - OASDI: 6.2% on the first \$118,500 of each employee's annual earnings
 - Medicare: 1.45% on all earnings
 - State unemployment compensation tax (SUTA): varies by state; we will use 5.4% on the first \$7,000 of each employee's annual earnings
 - Federal unemployment compensation tax (FUTA): 0.6% on the first \$7,000 of each employee's annual earnings
- Payroll taxes are recorded as a debit to Payroll Tax Expense and a credit to various liabilities until they are paid.
- Internal control over payroll involves efficiency and safeguarding of payroll disbursements.

3. How are current liabilities that must be estimated accounted for?

- Bonuses are based on meeting a specific goal and are considered liabilities (Employee Bonus Payable) until paid.
- Vacation, health, and pension benefits must be estimated and recorded as liabilities until paid.
- Warranty Expense (DR) and Estimated Warranty Payable (CR) must be recorded in the same period that the company records the revenue related to the warranty.
- As warranties are honored, the Estimated Warranty Payable account is reduced.

4. How are contingent liabilities accounted for?

- A contingent liability is a potential liability that depends on some future event.
- Accounting for contingent liabilities is based on the following likelihoods:
 - Remote: Do not disclose.
 - Reasonably possible: Describe the situation in a note to the financial statements.
 - Probable and the amount of the expense or loss *cannot* be estimated: Describe the situation in a note to the financial statements.
 - Probable and the amount of the expense or loss *can* be estimated: Record an expense or loss and a liability based on estimated amounts.

5. How do we use the times-interest-earned ratio to evaluate business performance?

- The times-interest-earned ratio is calculated as

$$\frac{\text{Net income} + \text{Income tax expense} + \text{Interest expense}}{\text{Interest expense}}$$
- It measures the number of times earnings before interest and taxes (EBIT) can cover (pay) interest expense.

> Check Your Understanding 11-1

Check your understanding of the chapter by completing this problem and then looking at the solution. Use this practice to help identify which sections of the chapter you need to study more.

Answer each question independently.

Requirements

1. A restaurant made cash sales of \$4,000 subject to a 5% sales tax. Record the sales and the related sales tax. Also record the payment of the tax to the state. (See Learning Objective 1)
2. On October 1, 2018, Rhodes Company purchased equipment at a cost of \$10,000, signing a nine-month, 8% note payable for that amount. Record the October 1 purchase. Also record the adjusting entry needed on December 31, 2018, and payment of the note plus interest at maturity on July 1, 2019. (See Learning Objective 1)
3. How does a contingent liability differ from a known liability? When would a contingent liability be journalized? (See Learning Objective 4)

> Solution

Requirement 1

Date	Accounts and Explanation	Debit	Credit
	Cash	4,200	
	Sales Revenue		4,000
	Sales Tax Payable ($\$4,000 \times 0.05$)		200
<i>To record cash sales and the related sales tax.</i>			
	Sales Tax Payable	200	
	Cash		200
<i>To record cash payment for sales tax payable.</i>			

Requirement 2

Date	Accounts and Explanation	Debit	Credit
2018			
Oct. 1	Equipment	10,000	
	Notes Payable		10,000
<i>Purchased equipment in exchange for nine-month, 8% note.</i>			
Dec. 31	Interest Expense ($\$10,000 \times 0.08 \times 3/12$)	200	
	Interest Payable		200
<i>Accrued interest expense at year-end.</i>			
2019			
Jul. 1	Notes Payable	10,000	
	Interest Expense ($\$10,000 \times 0.08 \times 6/12$)	400	
	Interest Payable		200
	Cash		10,600
<i>Paid note and interest at maturity.</i>			

Requirement 3

A contingent liability is a *potential*, rather than an actual, liability because it depends on a future event. Some event must happen (the contingency) for a contingent liability to have to be paid. Contingent liabilities are journalized when the likelihood of an actual loss is *probable* and the amount of the expense can be reasonably estimated.

> Check Your Understanding 11-2

Check your understanding of the chapter by completing this problem and then looking at the solution. Use this practice to help identify which sections of the chapter you need to study more.

Rags-to-Riches, a clothing resale store, employs one salesperson, Dee Hunter. Hunter's straight-time wage is \$10 per hour, with time-and-a-half pay for hours above 40. Rags-to-Riches withholds income tax (20%), FICA—OASDI (6.2%), and FICA—Medicare (1.45%) from Hunter's pay. Rags-to-Riches also pays payroll taxes for FICA—OASDI (6.2%), FICA—Medicare (1.45%), and state and federal unemployment (5.4% and 0.6%, respectively).

During the week ended December 26, Hunter worked 50 hours. Prior to this week, she had earned \$2,000.

Requirements

(Round all amounts to the nearest dollar.)

1. Compute Hunter's gross pay and net (take-home) pay for the week. (See Learning Objective 2)
2. Record the payroll entries that Rags-to-Riches would make for each of the following (See Learning Objective 2):
 - a. Accrual of salaries and wages expense and subsequent payment related to Hunter
 - b. Employer payroll taxes accrual related to Hunter
 - c. Payment of all payroll taxes (employee and employer related)
3. How much was Rags-to-Riches's total payroll expense for the week? (See Learning Objective 2)

> Solution

Requirement 1

Gross pay:

Straight-time pay (40 hours × \$10/hour)	\$ 400
--	--------

Overtime pay:

Rate per hour (\$10 × 1.5)	\$ 15
Hours (50 hours – 40 hours)	$\times 10$
	<u>150</u>

Gross pay	<u><u>\$ 550</u></u>
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Net pay:

Gross pay	\$ 550
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Withholding deductions:

Employee income tax (\$550 × 0.20)	\$ 110
Employee OASDI (\$550 × 0.062)	34
Employee Medicare (\$550 × 0.0145)	8
Total withholdings	<u>152</u>
Net (take-home) pay	<u><u>\$ 398</u></u>

Requirement 2

Date	Accounts and Explanation	Debit	Credit
a.	Salaries and Wages Expense	550	
	FICA—OASDI Taxes Payable		34
	FICA—Medicare Taxes Payable		8
	Employee Income Taxes Payable		110
	Salaries and Wages Payable		398
	<i>To record salaries and wages expense and payroll withholdings.</i>		
	Salaries and Wages Payable	398	
	Cash		398
	<i>To record payment of salaries and wages.</i>		
b.	Payroll Tax Expense	75	
	FICA—OASDI Taxes Payable ($\$550 \times 0.062$)		34
	FICA—Medicare Taxes Payable ($\$550 \times 0.0145$)		8
	Federal Unemployment Taxes Payable ($\$550 \times 0.006$)		3
	State Unemployment Taxes Payable ($\$550 \times 0.054$)		30
	<i>To record employer's payroll tax expense.</i>		
c.	FICA—OASDI Taxes Payable ($\$34 + \34)	68	
	FICA—Medicare Taxes Payable ($\$8 + \8)	16	
	Employee Income Taxes Payable	110	
	Federal Unemployment Taxes Payable	3	
	State Unemployment Taxes Payable	30	
	Cash		227
	<i>To record payment of payroll tax liabilities.</i>		

Requirement 3

Rags-to-Riches incurred *total payroll expense* of \$625 (gross pay of \$550 + payroll tax expense of \$75).

> Key Terms

Contingent Liability (p. 620)

Current Liability (p. 605)

Current Portion of Notes Payable
(p. 609)

Federal Insurance Contributions Act
(FICA) (p. 611)

Gross Pay (p. 610)

Income Tax Withholding (p. 611)

Liabilities (p. 605)

Long-term Liability (p. 605)

Net Pay (p. 610)

Payroll Register (p. 613)

Pension Plan (p. 618)

Short-term Note Payable (p. 607)

Social Security (FICA) Tax
(p. 611)

Times-Interest-Earned Ratio
(p. 622)

Unemployment Compensation
Taxes (p. 615)

Warranty (p. 618)

> Quick Check

Learning Objective 1

1. On January 1, 2018, a business borrowed \$18,000 on a five-year, 5% note payable. At December 31, 2018, the business should record
 - a. interest payable of \$900.
 - b. note receivable of \$18,000.
 - c. cash payment of \$18,000.
 - d. nothing. (The note is already on the books.)
2. A company sells \$180,000 (sales price) of goods and collects sales tax of 8%. What current liability does the sale create?
 - a. Sales tax payable of \$14,400
 - b. Sales revenue of \$194,400
 - c. Unearned revenue of \$14,400
 - d. None; the company collected cash up front.

Learning Objective 1

3. Jade Larson Antiques owes \$20,000 on a truck purchased for use in the business. Assume the company makes timely principal payments of \$5,000 each year at December 31 plus interest at 8%. Which of the following is true?
 - a. After the first payment is made, the company owes \$15,000 plus three years' interest.
 - b. After the first payment, \$15,000 would be shown as a long-term liability.
 - c. After the first payment is made, \$5,000 would be shown as the current portion due on the long-term note.
 - d. Just before the last payment is made, \$5,000 will appear as a long-term liability on the balance sheet.

Learning Objective 2

4. An employee has year-to-date earnings of \$114,600. The employee's gross pay for the next pay period is \$5,300. If the FICA—OASDI is 6.2% and the wage base is \$118,500, how much FICA—OASDI tax will be withheld from the employee's pay? (Answer is rounded to whole dollar.)

a. \$223	b. \$77	c. \$329	d. \$242
----------	---------	----------	----------
5. The employer is responsible for which of the following payroll taxes?

a. 6.2% FICA—OASDI tax	c. Federal and state unemployment taxes
b. 1.45% FICA—Medicare tax	d. All of the above

Learning Objective 3

6. Known liabilities of estimated amounts are
 - a. ignored. (Record them when paid.)
 - b. reported on the balance sheet.
 - c. reported on the income statement.
 - d. reported only in the notes to the financial statements.

Learning Objective 3

7. Smith Electric (SE) owed Estimated Warranty Payable of \$1,000 at the end of 2017. During 2018, SE made sales of \$150,000 and expects product warranties to cost the company 3% of the sales. During 2018, SE paid \$2,600 for warranties. What is SE's Estimated Warranty Payable at the end of 2018?

a. \$5,500	b. \$2,600	c. \$2,900	d. \$4,500
------------	------------	------------	------------

8. Vega Company expects to pay a 4% bonus on net income after deducting the bonus. Assume the company reports net income of \$130,000 before the calculation of the bonus. The journal entry to record the accrued bonus includes
- a debit to Employee Bonus Payable, \$5,000.
 - a debit to Employee Bonus Expense, \$5,200.
 - a credit to Employee Bonus Payable, \$5,000.
 - a credit to Cash, \$5,200.
9. Swell Company has a lawsuit pending from a customer claiming damages of \$100,000. Swell's attorney advises that the likelihood the customer will win is remote. GAAP requires at a minimum that this contingent liability be
- disclosed in the footnotes.
 - disclosed in the footnotes, with ranges of potential loss.
 - recorded as a journal entry, as well as disclosed in the footnotes.
 - No disclosure is required.
10. McDaniel and Associates reported the following amounts on its 2018 income statement:

Year Ended December 31, 2018	
Net income	\$ 118,800
Income tax expense	25,960
Interest expense	8,800

What was McDaniel's times-interest-earned ratio for 2018?

- a. 16.45 b. 14.50 c. 17.45 d. 13.50

Check your answers at the end of the chapter.

Learning Objective 3

Learning Objective 4

Learning Objective 5

ASSESS YOUR PROGRESS

> Review Questions

- What are the three main characteristics of liabilities?
- What is a current liability? Provide some examples of current liabilities.
- How is sales tax recorded? Is it considered an expense of a business? Why or why not?
- How do unearned revenues arise?
- What do short-term notes payable represent?
- Coltrane Company has a \$5,000 note payable that is paid in \$1,000 installments over five years. How would the portion that must be paid within the next year be reported on the balance sheet?
- What is the difference between gross pay and net pay?
- List the required employee payroll withholding deductions, and provide the tax rate for each.

9. How might a business use a payroll register?
10. What payroll taxes is the employer responsible for paying?
11. What are the two main controls for payroll? Provide an example of each.
12. When do businesses record warranty expense, and why?
13. What is a contingent liability? Provide some examples of contingencies.
14. Curtis Company is facing a potential lawsuit. Curtis's lawyers think that it is reasonably possible that it will lose the lawsuit. How should Curtis report this lawsuit?
15. How is the times-interest-earned ratio calculated, and what does it evaluate?

> Short Exercises

For all payroll calculations, use the following tax rates and round amounts to the nearest cent.

Employee: OASDI: 6.2% on first \$118,500 earned; Medicare: 1.45% up to \$200,000, 2.35% on earnings above \$200,000.

Employer: OASDI: 6.2% on first \$118,500 earned; Medicare: 1.45%; FUTA: 0.6% on first \$7,000 earned; SUTA: 5.4% on first \$7,000 earned.

Learning Objective 1

S11-1 Determining current versus long-term liabilities

Rios Raft Company had the following liabilities.

- | | |
|---------------------------------|-------------------------------------|
| a. Accounts Payable | e. Sales Tax Payable |
| b. Note Payable due in 3 years | f. Unearned Revenue due in 8 months |
| c. Salaries Payable | g. Income Tax Payable |
| d. Note Payable due in 6 months | |

Determine whether each liability would be considered a current liability (CL) or a long-term liability (LTL).

Learning Objective 1

S11-2 Recording sales tax

On July 5, Bramley Company recorded sales of merchandise inventory on account, \$25,000. The sales were subject to sales tax of 10%. On August 15, Bramley Company paid the sales tax owed to the state from the July 5 transaction.

Requirements

1. Journalize the transaction to record the sale on July 5. Ignore cost of goods sold.
2. Journalize the transaction to record the payment of sales tax to the state on August 15.

Learning Objective 1

S11-3 Recording unearned revenue

On September 1, *Baby Raising Magazine* collected cash of \$63,000 on future annual subscriptions starting on October 1.

Requirements

1. Journalize the transaction to record the collection of cash on September 1.
2. Journalize the transaction required at December 31, the magazine's year-end, assuming no revenue earned has been recorded. (Round adjustment to the nearest whole dollar.)

S11-4 Accounting for a note payable

On December 31, 2017, Franklin purchased \$13,000 of merchandise inventory on a one-year, 9% note payable. Franklin uses a perpetual inventory system.

Requirements

1. Journalize the company's purchase of merchandise inventory on December 31, 2017.
2. Journalize the company's accrual of interest expense on June 30, 2018, its fiscal year-end.
3. Journalize the company's payment of the note plus interest on December 31, 2018.

S11-5 Determining current portion of long-term note payable

On January 1, Kelly Company purchased equipment of \$100,000 with a long-term note payable. The debt is payable in annual installments of \$20,000 due on December 31 of each year. At the date of purchase, how will Kelly Company report the note payable?

S11-6 Computing and journalizing an employee's total pay

Lucy Rose works at College of Fort Worth and is paid \$12 per hour for a 40-hour workweek and time-and-a-half for hours above 40.

Requirements

1. Compute Rose's gross pay for working 60 hours during the first week of February.
2. Rose is single, and her income tax withholding is 15% of total pay. Rose's only payroll deductions are payroll taxes. Compute Rose's net (take-home) pay for the week. Assume Rose's earnings to date are less than the OASDI limit.
3. Journalize the accrual of wages expense and the payment related to the employment of Lucy Rose.

S11-7 Computing payroll amounts considering FICA tax limits

Lori Bailey works for ABC all year and earns a monthly salary of \$12,300. There is no overtime pay. Lori's income tax withholding rate is 10% of gross pay. In addition to payroll taxes, Lori elects to contribute 1% monthly to United Way. ABC also deducts \$150 monthly for co-payment of the health insurance premium. As of September 30, Lori had \$110,700 of cumulative earnings.

Requirements

1. Compute Lori's net pay for October.
2. Journalize the accrual of salaries expense and the payment related to the employment of Lori Bailey.

S11-8 Computing and journalizing the payroll expense and payments

Brentwood Company has monthly salaries of \$36,000. Assume Brentwood pays all the standard payroll taxes, no employees have reached the payroll tax limits, total income tax withheld is \$2,000, and the only payroll deductions are payroll taxes. Journalize the accrual of salaries expense, accrual of employer payroll taxes, and payment of employee and employer payroll taxes for Brentwood Company.

S11-9 Computing bonus payable

On December 31, Weston Company estimates that it will pay its employees a 5% bonus on net income after deducting the bonus. The company reports net income of \$64,000 before the calculation of the bonus. The bonus will be paid on January 15 of the next year.

Learning Objective 1

Learning Objective 1

Learning Objective 2

Learning Objective 2

Learning Objective 2

Learning Objective 3

Requirements

1. Journalize the December 31 transaction for Weston.
2. Journalize the payment of the bonus on January 15.

Learning Objective 3**S11-10 Journalizing vacation benefits**

Finn Industries has eight employees. Each employee earns two vacation days a month. Finn pays each employee a weekly salary of \$3,000 for a five-day workweek.

Requirements

1. Determine the amount of vacation expense for one month.
2. Journalize the entry to accrue the vacation expense for the month.

Learning Objective 3**S11-11 Accounting for warranty expense and warranty payable**

Sierra guarantees its snowmobiles for three years. Company experience indicates that warranty costs will be approximately 3% of sales.

Assume that the Sierra dealer in Colorado Springs made sales totaling \$575,000 during 2018. The company received cash for 10% of the sales and notes receivable for the remainder. Warranty payments totaled \$15,000 during 2018.

Requirements

1. Record the sales, warranty expense, and warranty payments for the company. Ignore cost of goods sold.
2. Assume the Estimated Warranty Payable is \$0 on January 1, 2018. Post the 2018 transactions to the Estimated Warranty Payable T-account. At the end of 2018, how much in Estimated Warranty Payable does the company owe?

Learning Objective 4**S11-12 Accounting treatment for contingencies**

Freeman Motors, a motorcycle manufacturer, had the following contingencies.

- a. Freeman estimates that it is reasonably possible but not likely that it will lose a current lawsuit. Freeman's attorneys estimate the potential loss will be \$4,500,000.
- b. Freeman received notice that it was being sued. Freeman considers this lawsuit to be frivolous.
- c. Freeman is currently the defendant in a lawsuit. Freeman believes it is likely that it will lose the lawsuit and estimates the damages to be paid will be \$75,000.

Determine the appropriate accounting treatment for each of the situations Freeman is facing.

Learning Objective 5**S11-13 Computing times-interest-earned ratio**

Orchard Electronics reported the following amounts on its 2018 income statement:

Year Ended December 31, 2018	
Net income	\$ 43,500
Income tax expense	6,525
Interest expense	3,450

What is Orchard's times-interest-earned ratio for 2018? (Round to two decimals.)

> Exercises

E11-14 Recording sales tax

Consider the following transactions of Oyster Software:

-
- Mar. 31 Recorded cash sales of \$190,000, plus sales tax of 6% collected for the state of New Jersey.
- Apr. 6 Sent March sales tax to the state.
-

Journalize the transactions for the company. Ignore cost of goods sold.

E11-15 Recording note payable transactions

Consider the following note payable transactions of Creative Video Productions.

2017

- Aug. 1 Purchased equipment costing \$16,000 by issuing a one-year, 9% note payable.
- Dec. 31 Accrued interest on the note payable.

2018

- Aug. 1 Paid the note payable plus interest at maturity.
-

Journalize the transactions for the company.

E11-16 Recording and reporting current liabilities

Trevor Publishing completed the following transactions during 2018:

-
- Oct. 1 Sold a six-month subscription (starting on November 1), collecting cash of \$390, plus sales tax of 7%.
- Nov. 15 Remitted (paid) the sales tax to the state of Tennessee.
- Dec. 31 Made the necessary adjustment at year-end to record the amount of subscription revenue earned during the year.
-

Journalize the transactions (explanations are not required). Round to the nearest dollar. (Record debits first, then credits. Exclude explanations from journal entries.)

E11-17 Journalizing current liabilities

Ed O'Connor Associates reported short-term notes payable and salaries payable as follows:

	2018	2017
Current Liabilities—partial:		
Short-term Notes Payable	\$ 16,600	\$ 15,800
Salaries Payable	4,100	3,700

During 2018, O'Connor paid off both current liabilities that were left over from 2017, borrowed cash on short-term notes payable, and accrued salaries expense. Journalize all four of these transactions for O'Connor during 2018. Assume no interest on short-term notes payable of \$15,800.

Learning Objective 1

Sales Tax Payable \$16,100

Learning Objective 1

Aug. 1, 2018 Interest Expense \$840

Learning Objective 1

Dec. 31 Subscription Revenue \$80

Learning Objectives 1, 2

Salaries Expense \$3,400

Learning Objective 2

1. Net Pay \$576.69

E11-18 Computing and recording gross and net pay

Harold Striker manages a Frosty Boy drive-in. His straight-time pay is \$13 per hour, with time-and-a-half for hours in excess of 40 per week. Striker's payroll deductions include withheld income tax of 30%, FICA tax, and a weekly deduction of \$6 for a charitable contribution to United Way. Striker worked 53 hours during the week.

Requirements

1. Compute Striker's gross pay and net pay for the week. Assume earnings to date are \$11,000.
2. Journalize Frosty Boy's wages expense accrual for Striker's work. An explanation is not required.
3. Journalize the subsequent payment of wages to Striker.

Learning Objective 2

1. Payroll Tax Expense \$6,063.00

E11-19 Recording employer payroll taxes and employee benefits

Felipe's Mexican Restaurant incurred salaries expense of \$69,000 for 2018. The payroll expense includes employer FICA tax, in addition to state unemployment tax and federal unemployment tax. Of the total salaries, \$19,000 is subject to unemployment tax. Also, the company provides the following benefits for employees: health insurance (cost to the company, \$2,400), life insurance (cost to the company, \$410), and retirement benefits (cost to the company, 8% of salaries expense).

Requirements

1. Journalize Felipe's expenses for employee benefits and for payroll taxes. Explanations are not required.
2. What was Felipe's total expense for 2018 related to payroll?

Learning Objective 22. Salaries & Wages Payable
\$15,923.20**E11-20 Recording employee and employer payroll taxes**

Town Company had the following partially completed payroll register:

Earnings			Withholdings						Salaries and Wages Expense		
Beginning Cumulative Earnings	Current Period Earnings	Ending Cumulative Earnings	OASDI	Medicare	Income Tax	Health Insurance	United Way	Total Withholdings	Net Pay	Check No.	
\$ 77,000	\$ 3,800				\$ 760	\$ 76	\$ 45				801
113,000	7,500				750	150	10				802
52,000	3,900				780	78	0				803
64,500	4,400				440	88	40				804
0	4,500				450	90	0				805
\$ 306,500	\$ 24,100				\$ 3,180	\$ 482	\$ 95				

Requirements

1. Complete the payroll register. Round to two decimals.
2. Journalize Town Company's salaries and wages expense accrual for the current pay period.
3. Journalize Town Company's expenses for employer payroll taxes for the current pay period.
4. Journalize the payment to employees.
5. Journalize the payment for withholdings and employer payroll taxes.

E11-21 Accounting for warranty expense and warranty payable

The accounting records of Earthtone Ceramics included the following at January 1, 2018:

Estimated Warranty Payable	
	5,500 Beg. Bal.

In the past, Earthtone's warranty expense has been 9% of sales. During 2018, Earthtone made sales of \$102,000 and paid \$6,000 to satisfy warranty claims.

Requirements

1. Journalize Earthtone's warranty expense and warranty payments during 2018. Explanations are not required.
2. What balance of Estimated Warranty Payable will Earthtone report on its balance sheet at December 31, 2018?

E11-22 Accounting for warranties, vacation, and bonuses

McDonald Industries completed the following transactions during 2018:

-
- | | |
|---------|--|
| Nov. 1 | Made sales of \$7,000. McDonald estimates that warranty expense is 3% of sales. (Record only the warranty expense.) |
| 20 | Paid \$200 to satisfy warranty claims. |
| Dec. 31 | Estimated vacation benefits expense to be \$3,000. |
| | 31 McDonald expected to pay its employees a 2% bonus on net income after deducting the bonus. Net income for the year is \$64,000. |
-

Journalize the transactions. Explanations are not required. Round to the nearest dollar. (Record debits first, then credits. Exclude explanations from journal entries.)

E11-23 Accounting treatment for contingencies

Analyze the following independent situations.

- a. Weaver, Inc. is being sued by a former employee. Weaver believes that there is a remote chance that the employee will win. The employee is suing Weaver for damages of \$40,000.
- b. Gulf Oil Refinery had a gas explosion on one of its oil rigs. Gulf believes it is likely that it will have to pay environmental clean-up costs and damages in the future due to the gas explosion. Gulf cannot estimate the amount of the damages.
- c. Lawson Enterprises estimates that it will have to pay \$75,000 in warranty repairs next year.

Determine how each contingency should be treated.

Learning Objective 3

1. Warranty Expense \$10,170

Learning Objective 3

- Dec. 31 Employee Bonus Expense \$1,515

Learning Objective 4

Learning Objective 5

1. Cash Ratio 118.80 times

E11-24 Computing times-interest-earned ratio

The following financial information was obtained from the year ended 2018 income statements for Johnson Automotive and Newman Automotive:

	Johnson	Newman
Net income	\$ 16,010	\$ 54,620
Income tax expense	6,280	19,960
Interest expense	150	2,200

Requirements

1. Compute the times-interest-earned ratio for each company. Round to two decimals.
2. Which company was better able to cover its interest expense?

> Problems Group A**Learning Objectives 1, 2**

1d. Rent Revenue \$3,000

P11-25A Journalizing and posting liabilities

The general ledger of Fast Shipping at June 30, 2018, the end of the company's fiscal year, includes the following account balances before payroll and adjusting entries.

Accounts Payable	\$ 111,000
Interest Payable	0
Salaries Payable	0
Employee Income Taxes Payable	0
FICA—OASDI Taxes Payable	0
FICA—Medicare Taxes Payable	0
Federal Unemployment Taxes Payable	0
State Unemployment Taxes Payable	0
Unearned Rent Revenue	5,400
Long-term Notes Payable	150,000

The additional data needed to develop the payroll and adjusting entries at June 30 are as follows:

- a. The long-term debt is payable in annual installments of \$30,000, with the next installment due on July 31. On that date, Fast Shipping will also pay one year's interest at 9%. Interest was paid on July 31 of the preceding year. Make the adjusting entry to accrue interest expense at year-end.
- b. Gross unpaid salaries for the last payroll of the fiscal year were \$4,100. Assume that employee income taxes withheld are \$900 and that all earnings are subject to OASDI.
- c. Record the associated employer taxes payable for the last payroll of the fiscal year, \$4,100. Assume that the earnings are not subject to unemployment compensation taxes
- d. On February 1, the company collected one year's rent of \$5,400 in advance.

Requirements

1. Using the T-accounts opened for you, insert the unadjusted June 30 balances.
2. Journalize and post the June 30 payroll and adjusting entries to the accounts that you opened. Identify each adjusting entry by letter. Round to the nearest dollar.
3. Prepare the current liabilities section of the balance sheet at June 30, 2018.

P11-26A Computing and journalizing payroll amounts

Logan White is general manager of Valuepoint Salons. During 2018, White worked for the company all year at a \$13,600 monthly salary. He also earned a year-end bonus equal to 15% of his annual salary.

White's federal income tax withheld during 2018 was \$1,360 per month, plus \$4,876 on his bonus check. State income tax withheld came to \$150 per month, plus \$60 on the bonus. FICA tax was withheld on the annual earnings. White authorized the following payroll deductions: Charity Fund contribution of 1% of total earnings and life insurance of \$40 per month.

Valuepoint incurred payroll tax expense on White for FICA tax. The company also paid state unemployment tax and federal unemployment tax.

Requirements

1. Compute White's gross pay, payroll deductions, and net pay for the full year 2018. Round all amounts to the nearest dollar.
2. Compute Valuepoint's total 2018 payroll tax expense for White.
3. Make the journal entry to record Valuepoint's expense for White's total earnings for the year, his payroll deductions, and net pay. Debit Salaries Expense and Bonus Expense as appropriate. Credit liability accounts for the payroll deductions and Cash for net pay. An explanation is not required.
4. Make the journal entry to record the accrual of Valuepoint's payroll tax expense for White's total earnings.
5. Make the journal entry for the payment of the payroll withholdings and taxes.

P11-27A Journalizing liability transactions

The following transactions of Brewton Pharmacies occurred during 2017 and 2018:

2017

- Jan. 9 Purchased computer equipment at a cost of \$14,000, signing a six-month, 6% note payable for that amount.
- 29 Recorded the week's sales of \$62,000, three-fourths on credit and one-fourth for cash. Sales amounts are subject to a 6% state sales tax. Ignore cost of goods sold.
- Feb. 5 Sent the last week's sales tax to the state.
- Jul. 9 Paid the six-month, 6% note, plus interest, at maturity.
- Aug. 31 Purchased merchandise inventory for \$12,000, signing a six-month, 10% note payable. The company uses the perpetual inventory system.
- Dec. 31 Accrued warranty expense, which is estimated at 2% of sales of \$604,000.
- 31 Accrued interest on all outstanding notes payable.

2018

- Feb. 28 Paid the six-month 10% note, plus interest, at maturity.

Learning Objective 2

1. Net Pay \$152,199

Learning Objectives 1, 3

- Jan. 29 Cash \$16,695

Journalize the transactions in Brewton's general journal. Explanations are not required. Round to the nearest dollar. (Record debits first, then credits. Exclude explanations from journal entries.)

Learning Objectives 3, 4

1. June 30 Warranty Expense \$7,000

P11-28A Journalizing liability transactions

The following transactions of Jasmine Reef occurred during 2018:

- | | |
|---------|---|
| Apr. 30 | Reef is party to a patent infringement lawsuit of \$190,000. Reef's attorney is certain it is remote that Reef will lose this lawsuit. |
| Jun. 30 | Estimated warranty expense at 2% of sales of \$350,000. |
| Jul. 28 | Warranty claims paid in the amount of \$5,500. |
| Sep. 30 | Reef is party to a lawsuit for copyright violation of \$80,000. Reef's attorney advises that it is probable Reef will lose this lawsuit. The attorney estimates the loss at \$80,000. |
| Dec. 31 | Reef estimated warranty expense on sales for the second half of the year of \$510,000 at 2%. |

Requirements

1. Journalize required transactions, if any, in Reef's general journal. Explanations are not required.
2. What is the balance in Estimated Warranty Payable assuming a beginning balance of \$0?

Learning Objective 5

1. Net Income \$4,305

P11-29A Computing times-interest-earned ratio

The income statement for Texas Communications follows. Assume Texas Communications signed a 3-month, 12%, \$7,000 note on June 1, 2018, and that this was the only note payable for the company.

TEXAS COMMUNICATIONS	
Income Statement	
Year Ended July 31, 2018	
Net Sales Revenue	\$ 32,000
Cost of Goods Sold	13,000
Gross Profit	19,000
Operating Expenses:	
Selling Expenses	\$ 650
Administrative Expenses	1,450
Total Operating Expenses	2,100
Operating Income	16,900
Other Income and (Expenses):	
Interest Expense	?
Total Other Income and (Expenses)	?
Net Income before Income Tax Expense	?
Income Tax Expense	3,350
Net Income	\$?

Requirements

- Fill in the missing information for Texas's year ended July 31, 2018 income statement. Round to the nearest dollar.
- Compute the times-interest-earned ratio for the company. Round to two decimals.

> Problems Group B

P11-30B Journalizing and posting liabilities

The general ledger of Fast Shipping at June 30, 2018, the end of the company's fiscal year, includes the following account balances before payroll and adjusting entries.

Accounts Payable	\$ 115,000
Interest Payable	0
Salaries Payable	0
Employee Income Taxes Payable	0
FICA—OASDI Taxes Payable	0
FICA—Medicare Taxes Payable	0
Federal Unemployment Taxes Payable	0
State Unemployment Taxes Payable	0
Unearned Rent Revenue	5,700
Long-term Notes Payable	270,000

The additional data needed to develop the payroll and adjusting entries at June 30 are as follows:

- The long-term debt is payable in annual installments of \$54,000, with the next installment due on July 31. On that date, Fast Shipping will also pay one year's interest at 10%. Interest was paid on July 31 of the preceding year. Make the adjusting entry to accrue interest expense at year-end.
- Gross unpaid salaries for the last payroll of the fiscal year were \$4,200. Assume that employee income taxes withheld are \$950 and that all earnings are subject to OASDI.
- Record the associated employer taxes payable for the last payroll of the fiscal year, \$4,200. Assume that the earnings are not subject to unemployment compensation taxes.
- On February 1, the company collected one year's rent of \$5,700 in advance.

Requirements

- Using T-accounts, open the listed accounts and insert the unadjusted June 30 balances.
- Journalize and post the June 30 payroll and adjusting entries to the accounts that you opened. Identify each adjusting entry by letter. Round to the nearest dollar.
- Prepare the current liabilities section of the balance sheet at June 30, 2018.

Learning Objectives 1, 2

- Rent Revenue \$2,250

Learning Objective 2

1. Net Pay \$128,360

P11-31B Computing and journalizing payroll amounts

Liam Wallace is general manager of Moonwalk Salons. During 2018, Wallace worked for the company all year at a \$13,400 monthly salary. He also earned a year-end bonus equal to 5% of his annual salary.

Wallace's federal income tax withheld during 2018 was \$2,010 per month, plus \$1,608 on his bonus check. State income tax withheld came to \$110 per month, plus \$80 on the bonus. FICA tax was withheld on the annual earnings. Wallace authorized the following payroll deductions: Charity Fund contribution of 2% of total earnings and life insurance of \$15 per month.

Moonwalk incurred payroll tax expense on Wallace for FICA tax. The company also paid state unemployment tax and federal unemployment tax.

Requirements

1. Compute Wallace's gross pay, payroll deductions, and net pay for the full year 2018. Round all amounts to the nearest dollar.
2. Compute Moonwalk's total 2018 payroll tax expense for Wallace.
3. Make the journal entry to record Moonwalk's expense for Wallace's total earnings for the year, his payroll deductions, and net pay. Debit Salaries Expense and Bonus Expense as appropriate. Credit liability accounts for the payroll deductions and Cash for net pay. An explanation is not required.
4. Make the journal entry to record the accrual of Moonwalk's payroll tax expense for Wallace's total earnings.
5. Make the journal entry for the payment of the payroll withholdings and taxes.

Learning Objectives 1, 3

Jan. 29 Cash \$18,020

P11-32B Journalizing liability transactions

The following transactions of Lexington Pharmacies occurred during 2017 and 2018:

2017

- Jan. 9 Purchased computer equipment at a cost of \$11,000, signing a six-month, 6% note payable for that amount.
- 29 Recorded the week's sales of \$61,000, three-fourths on credit and one-fourth for cash. Sales amounts are subject to a 6% state sales tax. Ignore cost of goods sold.
- Feb. 5 Sent the last week's sales tax to the state.
- Jul. 9 Paid the six-month, 6% note, plus interest, at maturity.
- Aug. 31 Purchased merchandise inventory for \$12,000, signing a six-month, 10% note payable. The company uses the perpetual inventory system.
- Dec. 31 Accrued warranty expense, which is estimated at 2% of sales of \$603,000.
- 31 Accrued interest on all outstanding notes payable.

2018

- Feb. 28 Paid the six-month 10% note, plus interest, at maturity.

Journalize the transactions in Lexington's general journal. Explanations are not required. Round to the nearest dollar. (Record debits first, then credits. Exclude explanations from journal entries.)

P11-33B Journalizing liability transactions

The following transactions of Belkin Howe occurred during 2018:

- | | | |
|---------|---|--|
| Apr. 30 | Howe is party to a patent infringement lawsuit of \$230,000. Howe's attorney is certain it is remote that Howe will lose this lawsuit. | |
| Jun. 30 | Estimated warranty expense at 3% of sales of \$390,000. | |
| Jul. 28 | Warranty claims paid in the amount of \$6,300. | |
| Sep. 30 | Howe is party to a lawsuit for copyright violation of \$90,000. Howe's attorney advises that it is probable Howe will lose this lawsuit. The attorney estimates the loss at \$90,000. | |
| Dec. 31 | Howe estimated warranty expense on sales for the second half of the year of \$520,000 at 3%. | |

Learning Objectives 3, 4

1. June 30 Warranty Expense \$11,700

Requirements

1. Journalize required transactions, if any, in Howe's general journal. Explanations are not required.
2. What is the balance in Estimated Warranty Payable assuming a beginning balance of \$0?

P11-34B Computing times-interest-earned ratio

The income statement for New York Communications follows. Assume New York Communications signed a 3-month, 12%, \$7,000 note on June 1, 2018, and that this was the only note payable for the company.

Learning Objective 5

1. Net Income \$9,620

NEW YORK COMMUNICATIONS	
Income Statement	
Year Ended July 31, 2018	
Net Sales Revenue	\$ 34,000
Cost of Goods Sold	9,500
Gross Profit	24,500
Operating Expenses:	
Selling Expenses	\$ 740
Administrative Expenses	1,500
Total Operating Expenses	2,240
Operating Income	22,260
Other Income and (Expenses):	
Interest Expense	?
Total Other Income and (Expenses)	?
Net Income before Income Tax Expense	?
Income Tax Expense	4,420
Net Income	\$?

Requirements

1. Fill in the missing information for New York's year ended July 31, 2018, income statement. Round to the nearest dollar.
2. Compute the times-interest-earned ratio for the company. Round to two decimals.

CRITICAL THINKING

> Excel Skill Problem

P11-35 Using Excel for Payroll

Download an Excel template for this problem online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

Ankel Footwear employees three salespeople, and pays time-and-a-half for overtime. Weekly paychecks are distributed on the Tuesday following the last day of the week (Saturday). Ankel withholds income tax (20%), FICA—OASDI (6.2%), and FICA—Medicare (1.45%). Ankel also pays payroll taxes for FICA—OASDI (6.2%), FICA—Medicare (1.45%), and state and federal unemployment (5.4% and 0.6% respectively). The payroll data for the three salespeople for the week ended March 31 follows:

Name	Straight Time Rate	Hours Worked	Beginning Cumulative Earnings
Jimmy Chew	\$ 15	46	\$ 420
Manny Blanik	17	50	540
Alexa King	22	38	480

Requirements

1. Complete the Payroll Register for the three employees for the week ended March 31, 2018.
2. Complete the Payroll Tax Register.
3. Compute the total payroll expense for the week ended March 31.
4. Record the payroll entries Ankel makes for each of the following:
 - a. Wage expense related to the three employees on Saturday, March 31.
 - b. Employer payroll taxes related to the three employees.
 - c. Payment of all payroll taxes (employee and employer related) on April 3.
 - d. Payment of wages on Tuesday, April 3.

> Continuing Problem

P11-36 Accounting for liabilities of a known amount

This problem continues the Let's Bike Company situation from Chapter 10. Cho and Lee are continuing their analysis of the company's position and believe the company will need to borrow \$120,000 in order to expand operations. They consult Russel Square Bank and secure a 7%, one-year note on October 1, 2019, with interest due at maturity. Additionally, the company hires an employee, Joanne Ma, on October 1. Joanne will receive a salary of \$4,000 per month. Payroll deductions include federal income tax at 25%, OASDI at 6.2%, Medicare at 1.45%, and monthly health insurance premium of \$300. The company will incur matching FICA taxes, FUTA tax at 0.6%, and SUTA tax at 5.4%. Omit explanations on journal entries.

Requirements

1. Record the issuance of the \$120,000 note payable on October 1, 2019.
2. Record the employee payroll and employer payroll tax entries on October 31, 2019.
3. Record all payments related to October's payroll. Payments are made on November 15, 2019.

4. Record the entry to accrue interest due on the note at December 31, 2019.
5. Record the entry Let's Bike Company would make to record the payment to the bank on October 1, 2020.

> Tying It All Together Case 11-1

Before you begin this assignment, review the *Tying It All Together* feature in the chapter. It will also be helpful if you review UnitedHealth Group Incorporated's 2015 annual report (<http://www.unitedhealthgroup.com/~media/UHG/PDF/2015/UNH-Q4-2015-Form-10-K.ashx?la=en>).

UnitedHealth Group Incorporated is a diversified health and well-being company dedicated to helping people live healthier lives. The company operates under two distinct platforms: health benefits (UnitedHealthcare) and health services (Optum).

Requirements

1. What are contingent liabilities?
2. Review Note 13 (Commitments and Contingencies), specifically the section labeled Legal Matters. Does UnitedHealth Group Incorporated report any contingencies? If so, provide a summary.
3. How should a company handle contingent liabilities that are reasonably possible or probable but cannot be estimated?
4. Review Note 13 (Commitments and Contingencies), specifically the section labeled California Claims Processing Matter. How did UnitedHealth Group Incorporated handle the recording of this contingent liability?

> Decision Cases

Decision Case 11-1

Golden Bear Construction operates throughout California. The owner, Gaylan Beavers, employs 15 work crews. Construction supervisors report directly to Beavers, and the supervisors are trusted employees. The home office staff consists of an accountant and an office manager.

Because employee turnover is high in the construction industry, supervisors hire and fire their own crews. Supervisors notify the office of all personnel changes. Also, supervisors forward the employee W-4 forms to the home office. Each Thursday, the supervisors submit weekly time sheets for their crews, and the accountant prepares the payroll. At noon on Friday, the supervisors come to the office to get paychecks for distribution to the workers at 5 p.m.

The company accountant prepares the payroll, including the paychecks. Beavers signs all paychecks. To verify that each construction worker is a bona fide employee, the accountant matches the employee's endorsement signature on the back of the canceled paycheck with the signature on that employee's W-4 form.

Requirements

1. Identify one way that a supervisor can defraud Golden Bear Construction under the present system.
2. Discuss a control feature that the company can use to safeguard against the fraud you identified in Requirement 1.

Decision Case 11-2

Sell-Soft is the defendant in numerous lawsuits claiming unfair trade practices. Sell-Soft has strong incentives not to disclose these contingent liabilities. However, GAAP requires that companies report their contingent liabilities.

Requirements

1. Why would a company prefer *not* to disclose its contingent liabilities?
2. Describe how a bank could be harmed if a company seeking a loan did not disclose its contingent liabilities.
3. What ethical tightrope must companies walk when they report contingent liabilities?

> Ethical Issue 11-1

Many small businesses have to squeeze down costs any way they can just to survive. One way many businesses do this is by hiring workers as “independent contractors” rather than as regular employees. Unlike rules for regular employees, a business does not have to pay Social Security (FICA) taxes and unemployment insurance payments for independent contractors. Similarly, it does not have to withhold federal, state, or local income taxes or the employee’s share of FICA taxes. The IRS has a “20 factor test” that determines whether a worker should be considered an employee or a contractor, but many businesses ignore those rules or interpret them loosely in their favor. When workers are treated as independent contractors, they do not get a W-2 form at tax time (they get a 1099 instead), they do not have any income taxes withheld, and they find themselves subject to “self-employment” taxes, by which they bear the brunt of both the employee’s and the employer’s shares of FICA taxes.

Requirements

1. When a business abuses this issue, how is the independent contractor hurt?
2. If a business takes an aggressive position—that is, interprets the law in a very slanted way—is there an ethical issue involved? Who is hurt?

> Financial Statement Case 11-1

Details about a company’s liabilities appear in a number of places in the annual report. Visit <http://www.pearsonglobaleditions.com/Sitemap/Horngren/> to view a link to Target Corporation’s Annual Report. Use **Target Corporation’s** fiscal 2015 financial statements to answer the following questions.

Requirements

1. Give the breakdown of Target’s current liabilities at January 30, 2016.
2. Calculate Target’s times-interest-earned ratio for the year ending January 30, 2016. How does Target’s ratio compare to **Kohl’s Corporation’s** ratio?

> Communication Activity 11-1

In 150 words or fewer, explain how contingent liabilities are accounted for.

Pearson MyLab Accounting

For a wealth of online resources, including exercises, problems, media, and immediate tutorial help, please visit <http://www.myaccountinglab.com>.

> Quick Check Answers

1. a 2. a 3. c 4. d 5. d 6. b 7. c 8. c 9. d 10. c

Long-Term Liabilities

12



Should the Business Take on Additional Debt?

Sophie Animations Studios, Inc. specializes in creating animated feature films for children and young-minded adults. The studio was started by founders Steve Lasseter and Lee Bird and has grown to produce many notable films. The corporation's stock is currently sold on a national stock exchange, and the company is widely respected for its consistent earnings each year.

The corporation plans on expanding its existing operations by building a new studio in Canada that will produce short movies and TV specials. In order to fund this expansion, the corporation is considering several options. One option is for the corporation to issue additional stock to raise the necessary cash. Another option is for the corporation to take on additional debt. As majority stockholders, Steve and Lee have expressed their concern over issuing additional shares of stock. The stockholders are concerned that the additional stock will decrease their ownership percentage in the corporation and also cause the market value of the stock to decrease. Due to these

concerns, the corporation has decided that the best option would be to explore ways to secure the cash needed for expansion by taking on additional debt.

Sophie Animations Studios is currently evaluating different types of long-term liability options such as long-term notes payable and mortgages payable. These debts will most likely be secured by the studio building and will offer a reasonable interest rate and time period for repayment. In addition, Sophie Animations Studios is considering a special type of long-term liability, called a *bonds payable*. Bonds payable are issued on a bond market and typically provides a larger cash inflow than notes payable and mortgages payable do. In addition, bonds payable also often provide a longer time period for repayment, some even lasting for as long as 100 years. Each of these long-term liabilities is unique and offers advantages and disadvantages that Sophie Animations Studios needs to consider before it can begin the expansion.



Why Issue a 100-Year Bond Payable?

On July 21, 1993, **The Walt Disney Company** issued a long-term liability, specifically called a *bonds payable*, that would be payable in 100 years! These bonds were issued with an annual interest rate of 7.55%, and the principal of approximately \$300 million was scheduled to be repaid in the year 2093. The Walt Disney Company is well known as an international family entertainment and media enterprise that includes broadcast networks, parks and resorts, the Walt Disney studios, consumer products, and interactive technology and games. Why would the Walt Disney Company issue a debt that wouldn't be paid back for 100 years? How are these types of long-term liabilities accounted for and reported on the balance sheet? In this chapter, you learn why companies might issue bonds payable and also how to account for other long-term liabilities, such as long-term notes payable and mortgages payable.





Chapter 12 Learning Objectives



- | | |
|---|---|
| <p>1 Journalize transactions for long-term notes payable and mortgages payable</p> <p>2 Describe bonds payable</p> <p>3 Journalize transactions for bonds payable and interest expense using the straight-line amortization method</p> <p>4 Journalize transactions to retire bonds payable</p> | <p>5 Report liabilities on the balance sheet</p> <p>6 Use the debt to equity ratio to evaluate business performance</p> <p>7 Use time value of money to compute present value and future value (Appendix 12A)</p> <p>8 Journalize transactions for bonds payable and interest expense using the effective-interest amortization method (Appendix 12B)</p> |
|---|---|

HOW ARE LONG-TERM NOTES PAYABLE AND MORTGAGES PAYABLE ACCOUNTED FOR?

Learning Objective 1

Journalize transactions for long-term notes payable and mortgages payable

Long-term Liability

A liability that does not need to be paid within one year or within the entity's operating cycle, whichever is longer.

You have learned that **long-term liabilities** are liabilities that do not need to be paid within one year or within the entity's operating cycle, whichever is longer. Both long-term notes payable and mortgages payable are common long-term liabilities.

Long-term Notes Payable

Long-term notes payable are typically reported in the long-term liabilities section of the balance sheet. You learned about the current portion of long-term notes payable in a previous chapter. Now, let's focus on the long-term portion of the notes payable and the payments made according to the note contract.

Recall that most long-term notes payable are paid in installments. The *current portion of notes payable* is the principal amount that will be paid within one year—a current liability. The remaining portion is long-term. For example, Smart Touch Learning signed a \$20,000 note payable on December 31, 2018. The note will be paid over four years with payments of \$5,000 plus 6% interest due each December 31, beginning December 31, 2019. Remember that the current portion of the note, the amount due December 31, 2019, \$5,000, is considered a current liability at December 31, 2018. We record the issuance of the note on December 31, 2018, in the following manner:

$$\frac{A \uparrow}{\text{Cash} \uparrow} = \left\{ \begin{array}{c} L \uparrow \\ \text{Notes} \\ \text{Payable} \uparrow \end{array} \right. + E$$

Date	Accounts and Explanation	Debit	Credit
2018			
Dec. 31	Cash Notes Payable	20,000 20,000	
<i>Received cash in exchange for a 4-year, 6% note.</i>			

Amortization Schedule

A schedule that details each loan payment's allocation between principal and interest and the beginning and ending loan balances.

On December 31, 2019, Smart Touch Learning will make a \$5,000 principal payment plus interest. Exhibit 12-1 shows an **amortization schedule** for the notes payable. An amortization schedule details each loan payment's allocation between principal and interest and also the beginning and ending balances of the loan. Using the calculation for interest



that you have already learned, Smart Touch Learning will calculate interest expense as beginning balance \times interest rate \times time. The total cash payment is the principal payment plus interest expense. Notice that at the end of the four years, Smart Touch Learning will have paid total interest of \$3,000. Also notice that the interest expense decreases each year, as this expense is based on the principal, which is decreasing with each installment payment.

Exhibit 12-1 | Long-term Notes Payable Amortization Schedule

	Beginning Balance	Principal Payment	Interest Expense	Total Payment	Ending Balance
12/31/2018				\$ 20,000	
12/31/2019	\$ 20,000	\$ 5,000	\$ 1,200	\$ 6,200	15,000
12/31/2020	15,000	5,000	900	5,900	10,000
12/31/2021	10,000	5,000	600	5,600	5,000
12/31/2022	5,000	5,000	300	5,300	0
Total				<u>\$ 20,000</u>	<u>\$ 3,000</u>
					<u>\$ 23,000</u>

Beginning balance \times Interest rate \times Time
 $= \$20,000 \times 0.06 \times 1 \text{ year} = \$1,200$

Principal payment + Interest expense
 $= \$5,000 + \$1,200 = \$6,200$

Beginning balance $-$ Principal payment
 $= \$20,000 - \$5,000 = \$15,000$

Assume it's now December 31, 2019, and Smart Touch Learning must make its first installment payment of \$5,000 principal plus interest on the note. The company's accounting clerk will record the following entry:

Date	Accounts and Explanation	Debit	Credit
2019			
Dec. 31	Notes Payable	5,000	
	Interest Expense	1,200	
	Cash		6,200
	<i>Paid principal and interest payment.</i>		

$$\left. \begin{array}{l} A \downarrow \\ \text{Cash} \downarrow \end{array} \right\} = \left\{ \begin{array}{l} L \downarrow \\ \text{Notes Payable} \downarrow \end{array} \right. + \left. \begin{array}{l} E \downarrow \\ \text{Interest Expense} \uparrow \end{array} \right.$$

After the December 31, 2019, entry, Smart Touch Learning owes \$15,000 (\$20,000 original note amount minus the \$5,000 principal paid on December 31, 2019). The company will record similar entries for the three remaining payments using the amounts calculated in the amortization schedule.

Mortgages Payable

Mortgages payable include the borrower's promise to transfer the legal title to specific assets if the mortgage isn't paid on schedule. Mortgages payable are a type of long-term notes payable that are secured with specific assets. Like long-term notes payable, the total mortgages payable amount has a portion due within one year (current) and a portion that is due more than one year from the balance sheet date.

Mortgages Payable

Long-term debts that are backed with a security interest in specific property.



Commonly, mortgages specify a monthly payment of principal and interest to the lender (usually a bank). The most common type of mortgage is on property—for example, a mortgage on your home. Let's review an example.

Assume that on December 31, 2018, Smart Touch Learning purchases a building for \$150,000, paying \$49,925 in cash and signing a 30-year mortgage for \$100,075, taken out at 6% interest that is payable in \$600 monthly payments, which includes principal and interest, beginning January 31, 2019. The following entry is used to record this acquisition:

Date	Accounts and Explanation	Debit	Credit
2018			
Dec. 31	Building	150,000	
	Mortgages Payable		100,075
	Cash		49,925
<i>Purchased building with a mortgage payable and cash payment.</i>			

$$\left. \begin{array}{c} A \uparrow \\ \text{Building} \\ \text{Cash} \downarrow \end{array} \right\} = \left. \begin{array}{c} L \uparrow \\ \text{Mortgages} \\ \text{Payable} \uparrow \end{array} \right\} + E$$

A partial amortization schedule for 2018 and 2019 is shown in Exhibit 12-2.

Total payment – Interest expense
= \$600.00 – \$500.38 = \$99.62

$$\begin{aligned} \text{Beginning balance} \times \text{Interest rate} \times \text{Time} \\ = \$100,075 \times 0.06 \times 1/12 = \$500.38 \end{aligned}$$

Exhibit 12-2 | Mortgages Payable Amortization Schedule

	Beginning Balance	Principal Payment	Interest Expense	Total Payment	Ending Balance
12/31/2018					\$ 100,075.00
01/31/2019	\$ 100,075.00	\$ 99.62	\$ 500.38	\$ 600.00	99,975.38
02/28/2019	99,975.38	100.12	499.88	600.00	99,875.26
03/31/2019	99,875.26	100.62	499.38	600.00	99,774.64
04/30/2019	99,774.64	101.13	498.87	600.00	99,673.51
05/31/2019	99,673.51	101.63	498.37	600.00	99,571.88
06/30/2019	99,571.88	102.14	497.86	600.00	99,469.74
07/31/2019	99,469.74	102.65	497.35	600.00	99,367.09
08/31/2019	99,367.09	103.16	496.84	600.00	99,263.93
09/30/2019	99,263.93	103.68	496.32	600.00	99,160.25
10/31/2019	99,160.25	104.20	495.80	600.00	99,056.05
11/30/2019	99,056.05	104.72	495.28	600.00	98,951.33
12/31/2019	98,951.33	105.24	494.76	600.00	98,846.09
Total		\$ 1,228.91	\$ 5,971.09	\$ 7,200.00	

$$\begin{aligned} \text{Beginning balance} - \text{Principal payment} \\ = \$100,075.00 - \$99.62 = \$99,975.38 \end{aligned}$$

Notice that as time goes by the portion of the payment applied to principal increases and interest expense decreases.



We can confirm the interest calculations provided in the amortization table. So, for the first payment on the interest is calculated as $\$100,075.00 \times 6\% \times 1/12$, or \$500.38. The principal of \$99.62 is the difference between the monthly payment of \$600.00 and the interest expense of \$500.38 ($\$600.00 - \$500.38 = \99.62). The \$99.62 reduces the mortgages payable from \$100,075.00 to \$99,975.38 ($\$100,075.00 - \$99.62 = \$99,975.38$). So, after reviewing the amortization schedule, Smart Touch Learning records the first mortgage payment as follows:

Date	Accounts and Explanation	Debit	Credit
2019			
Jan. 31	Mortgages Payable	99.62	
	Interest Expense	500.38	
	Cash		600.00
<i>Paid principal and interest payment.</i>			

$$\frac{A \downarrow}{\text{Cash} \downarrow} = \left\{ \begin{array}{l} \frac{L \downarrow}{\text{Mortgages Payable} \downarrow} + \frac{E \downarrow}{\text{Interest Expense} \uparrow} \end{array} \right.$$

Each mortgage payment will be recorded in a similar journal entry, using the amortization schedule amounts.

Take a moment to review Exhibits 12-1 and 12-2. In Exhibit 12-1, the principal payment stays the same and the total payment changes. In Exhibit 12-2, the principal payment varies while the total payment stays the same. Long-term liabilities can be structured either way—with an equal principal payment or equal total payment. One thing that always changes, though, is the amount of interest expense each period. The amount of interest expense is always calculated on the beginning balance of the loan, and because the beginning balance of the loan is decreasing, the amount of interest expense also decreases.

What is the difference between the mortgages payable amortization schedule and the long-term notes payable amortization schedule?



Try It!

On January 1, 2018, Fox Corporation signed an \$80,000, four-year, 4% note. The loan required Fox to make payments annually on December 31 of \$20,000 principal plus interest.

1. Journalize the issuance of the note on January 1, 2018.
2. Journalize the first payment on December 31, 2018.

Check your answers online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercises S12-1 and S12-2.

[Pearson MyLab Accounting](#)

WHAT ARE BONDS?

Large companies need large amounts of money to finance their operations. They may take out long-term loans from banks and/or issue bonds payable to the public to raise the money. **Bonds payable** are long-term debts issued to multiple lenders called bondholders, usually in increments of \$1,000 per bond. For example, a company could borrow \$100,000 from one lender (the bank), or it could issue 100 bonds payable, each at \$1,000, to 100 different lenders. By issuing bonds payable, companies can borrow millions of dollars from thousands of investors rather than depending on a loan from one single bank or lender. Each investor can buy a specified amount of the company's bonds.

Learning Objective 2

Describe bonds payable

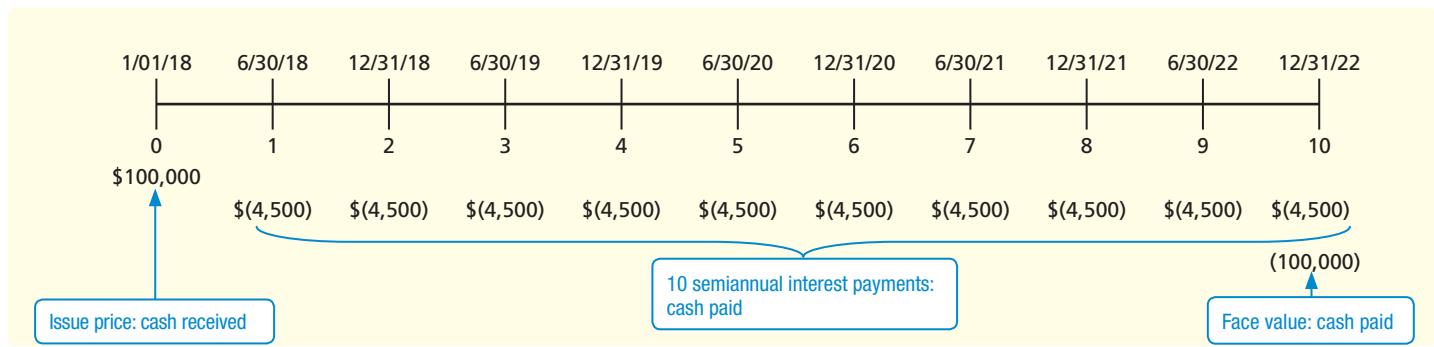
Bond Payable

A long-term debt issued to multiple lenders called bondholders, usually in increments of \$1,000 per bond.



Each bondholder gets a bond certificate that shows the name of the company that borrowed the money, exactly like a note payable. The certificate states the face value, which is the amount of the bond issue. The bond's face value is also called *maturity value, principal, or par value*. The company must then pay each bondholder the face value amount at a specific future date, called the maturity date.

People buy (invest in) bonds to earn interest. The bond certificate states the interest rate that the company will pay and the dates the interest is due, generally semiannually (twice per year). For example, a five-year, 9% bond issued at a face value of \$100,000 on January 1, 2018, will pay 10 semiannual interest payments of \$4,500 ($\$100,000 \times 0.09 \times 6/12$) in addition to the face value payment at the maturity date. The cash flow pattern for this bond is as follows:



Face Value

The amount a borrower must pay back to the bondholders on the maturity date.

Exhibit 12-3 shows a bond certificate issued by Smart Touch Learning. Review the following bond fundamentals in the exhibit:

- **Face value**—The amount the borrower must pay back to the bondholders on the maturity date (also called *maturity value, principal amount, or par value*).

Exhibit 12-3 | Bond Certificate





- **Maturity date**—The date on which the borrower must pay the principal amount to the bondholders.
- **Stated interest rate**—The interest rate that determines the amount of cash interest the borrower pays and the investor receives each year (also called *face rate*, *coupon rate*, or *nominal rate*).

Types of Bonds

There are various types of bonds, including the following:

- **Term bonds**—These bonds all mature at the same specified time. For example, \$100,000 of term bonds may all mature five years from today.
- **Serial bonds**—Such bonds mature in installments at regular intervals. For example, a \$500,000, five-year serial bond may mature in \$100,000 annual installments over a five-year period.
- **Secured bonds**—These bonds give the bondholder the right to take specified assets of the issuer if the issuer fails to pay principal or interest.
- **Debentures**—Such bonds are unsecured bonds that are not backed by assets. They are backed only by the credit worthiness of the bond issuer.

Bond Prices

A bond can be issued at any price agreed upon by the issuer and the bondholders. A bond can be issued at any of the following:

- **Face value**—Occurs when a bond is issued at face value. Example: A \$1,000 bond issued for \$1,000.
- **Discount**—A **discount on bonds payable** occurs when the issue price is less than face value. Example: A \$1,000 bond issued for \$980. The discount is \$20 (\$1,000 – \$980).
- **Premium**—A **premium on bonds payable** occurs when the issue price is above face value. Example: A \$1,000 bond issued for \$1,015. The premium is \$15 (\$1,015 – \$1,000).

The issue price of a bond does not affect the required payment at maturity. In all of the preceding cases, the company must pay the face value of the bonds at the maturity date stated on the face of the bond.

After a bond is issued, investors may buy and sell it through the bond market just as they buy and sell stocks through the stock market. The most well-known bond market is the NYSE Bonds, which lists several thousand bonds.

Bond prices are quoted as a percentage of face value. For example:

- a \$1,000 bond quoted at 100 is bought or sold for 100% of face value, \$1,000 ($\$1,000 \times 1.00$).
- a \$1,000 bond quoted at 88.375 is bought or sold for 88.375% of face value, \$883.75 ($\$1,000 \times 0.88375$).
- a \$1,000 bond quoted at 101.5 is bought or sold for 101.5% of face value, \$1,015 ($\$1,000 \times 1.015$).

The issue price of a bond determines the amount of cash the company receives when it issues the bond. In all cases, the company must pay the bond's face value to retire it at the maturity date.

Exhibit 12-4 (on the next page) shows example price information for the bonds of Smart Touch Learning. On this particular day, 12 of Smart Touch Learning's 9% bonds maturing in 2021 (indicated by 21) were traded. The bonds' highest price on this day was \$795 ($\$1,000 \times 0.795$). The lowest price of the day was \$784.50 ($\$1,000 \times 0.7845$). The closing price (last sale of the day) was \$795.

Stated Interest Rate

The interest rate that determines the amount of cash interest the borrower pays and the investor receives each year.

Term Bonds

Bonds that all mature at the same time.

Serial Bonds

Bonds that mature in installments at regular intervals.

Secured Bonds

Bonds that give bondholders the right to take specified assets of the issuer if the issuer fails to pay principal or interest.

Debentures

Unsecured bonds backed only by the credit worthiness of the bond issuer.

Discount on Bonds Payable

Occurs when a bond's issue price is less than face value.

Premium on Bonds Payable

Occurs when a bond's issue price is more than face value.


Exhibit 12-4 | Bond Price Information

Bonds	Volume	High	Low	Close
SMT 9% of 21	12	79.5	78.45	79.5

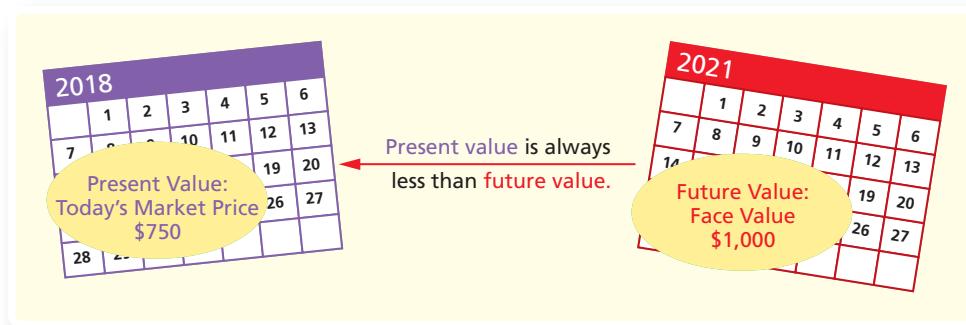
Present Value and Future Value

Time Value of Money

Recognition that money earns interest over time.

Money earns interest over time, a fact called the **time value of money**. Appendix 12A at the end of this chapter covers the time value of money in detail.

Let's see how the time value of money affects bond prices. Assume that a \$1,000 bond reaches maturity three years from now and carries no interest. Would you pay \$1,000 to purchase this bond? No, because paying \$1,000 today to receive \$1,000 later yields no interest on your investment. How much would you pay today in order to receive \$1,000 in three years? The answer is some amount less than \$1,000. Suppose \$750 is a fair price. By investing \$750 now to receive \$1,000 later, you will earn \$250 over the three years. The diagram that follows illustrates the relationship between a bond's price (present value) and its maturity amount (future value).



Present Value

The value of an investment today.

Future Value

The value of an investment at the end of a specific time frame.

The amount that a person would invest *at the present time* is called the **present value**. The present value is the bond's market price. In our example, \$750 is the present value (market price of the bond), and the \$1,000 face value to be received in three years is the **future value**, the value of the investment at a specific date in the future. We show how to compute the present value and future value in Appendix 12A.

Bond Interest Rates

Bonds are sold at their market price (issue price on the date the bonds are first sold), which is the present value of the interest payments the bondholder will receive while holding the bond plus the present value of the bond principal paid at the end of the bond's life. Two interest rates work together to set the price of a bond:

- The stated interest rate determines the amount of cash interest the borrower pays each year. The stated interest rate is printed on the bond and *does not change* from year to year. For example, Smart Touch Learning's 9% bonds payable have a stated interest rate of 9% (see Exhibit 12-3). Therefore, Smart Touch Learning pays \$90 of interest annually on each \$1,000 bond. The dollar amount of interest paid is not affected by the issue price of the bond.



- The **market interest rate** (also known as the *effective interest rate*) is the rate that investors demand to earn for loaning their money. The market interest rate *varies* constantly. A company may issue bonds with a stated interest rate that differs from the market interest rate, due to the time gap between the time the bonds were printed (engraved) showing the stated rate and the actual issuance of the bonds.

Smart Touch Learning may issue its 9% bonds when the market rate has risen to 10%. Will the Smart Touch Learning bonds attract investors in this market? No, because investors can earn 10% on other bonds. Therefore, investors will purchase Smart Touch Learning bonds only at a price *less* than face value. The difference between the lower price and the bonds' face value is a *discount* that will allow the investor to earn 10%, even though Smart Touch Learning's interest checks will be paid at the stated rate of 9%. The difference between what is paid for the bond (less than \$1,000) and the bond principal of \$1,000 is the interest rate difference between 9% and 10% over the life of the bond.

On the other hand, if the market interest rate is 8%, Smart Touch Learning's 9% bonds will be so attractive that investors will pay more than face value for them because investors will receive more in interest payments than expected. The difference between the higher price and face value is a *premium*. Exhibit 12-5 shows how the stated interest rate and the market interest rate work together to determine the price of a bond.

Exhibit 12-5 | Interaction Between Stated Interest Rate, Market Rate, and Price of Bond

Example: Bond with a Stated Interest Rate of 9%

Bond's Stated Interest Rate	Market Interest Rate	Issue Price of Bonds Payable
9%	= 9%	→ Face value of the bond
9%	< 10%	→ Discount (price below face value)
9%	> 8%	→ Premium (price above face value)

Issuing Bonds Versus Issuing Stock

Borrowing by issuing bonds payable carries a risk: The company may be unable to pay off the bonds and the related interest. Why do companies borrow instead of issuing stock?

Debt is a less expensive source of capital than stock, and bonds do not affect the percentage of ownership of the corporation. Companies face the following decision: How shall we finance a new project—with bonds or with stock?

Suppose Smart Touch Learning has net income of \$300,000 and 100,000 shares of common stock outstanding before it begins a new project. Smart Touch Learning needs \$500,000 for the project, and the company is considering two plans:

- Plan 1 is to borrow \$500,000 at 10% (issue \$500,000 of 10% bonds payable).
- Plan 2 is to issue 50,000 shares of common stock for \$500,000.

Smart Touch Learning management believes the new cash can be used to increase income before interest and taxes by \$200,000 each year. The company estimates income tax expense to be 40%. Exhibit 12-6 (on the next page) shows the advantage of borrowing as it relates to earnings per share.

Market Interest Rate

The interest rate that investors demand in order to loan their money.

Why would a corporation issue bonds payable instead of issuing stock?




Exhibit 12-6 | Issuing Bonds Payable Versus Issuing Common Stock

	Plan 1: Issue \$500,000 of 10% Bonds Payable	Plan 2: Issue \$500,000 of Common Stock
Net income before new project	\$ 300,000	\$ 300,000
Expected income on the new project before interest and income tax expenses	\$ 200,000	\$ 200,000
Less: Interest expense ($\$500,000 \times 0.10$)	50,000	0
Project income before income tax	150,000	200,000
Less: Income tax expense (40%)	60,000	80,000
Project net income	90,000	120,000
Net income with new project	\$ 390,000	\$ 420,000
Earnings per share with new project:		
Plan 1 (\$390,000 / 100,000 shares)	\$ 3.90	
Plan 2 (\$420,000 / 150,000 shares)		\$ 2.80

The earnings per share of stock is higher if Smart Touch Learning issues bonds. If all goes well, the company can earn more on the new project (\$90,000) than the interest it pays on the bonds (\$50,000). Earning more income on borrowed money than the related interest expense is called **financial leverage**. It is widely used to increase earnings per share of common stock. Notice that, even though net income is higher under Plan 2, the earnings per share is lower. Why? Because the earnings must be shared among 50,000 more shares of stock.

Borrowing can increase the earnings per share, but borrowing has its disadvantages. Debts must be paid during unprofitable years as well as profitable years. A company might not have enough cash flow to make the interest payment, thereby defaulting on the debt. Unlike cash dividends, which are optional payments to stockholders, the interest payment on bonds payable is required. Without the cash necessary to make the interest payment, a company could have to declare bankruptcy.

Try It!

Determine whether the following bonds payable will be issued at face value, at a premium, or at a discount:

3. A 10% bonds payable is issued when the market interest rate is 8%.
4. A 10% bonds payable is issued when the market interest rate is 10%.
5. A 10% bonds payable is issued when the market interest rate is 12%.

Check your answers online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercises S12-3 and S12-4. **Pearson MyLab Accounting**



HOW ARE BONDS PAYABLE ACCOUNTED FOR USING THE STRAIGHT-LINE AMORTIZATION METHOD?

The basic journal entry to record the issuance of bonds payable debits Cash and credits Bonds Payable. As noted previously, a company may issue bonds, a long-term liability, at *face value*, at a *discount*, or at a *premium*. We begin with the simplest case—issuing bonds payable at face value.

Issuing Bonds Payable at Face Value

Smart Touch Learning has \$100,000 of 9% bonds payable that mature in five years. The company issues these bonds at face value on January 1, 2018. The issuance entry is as follows:

Date	Accounts and Explanation	Debit	Credit
2018			
Jan. 1	Cash	100,000	
	Bonds Payable		100,000
	<i>Issued bonds at face value.</i>		

Learning Objective 3

Journalize transactions for bonds payable and interest expense using the straight-line amortization method

$$\frac{A \uparrow}{\text{Cash} \uparrow} = \left\{ \begin{array}{l} \frac{L \uparrow}{\text{Bonds Payable} \uparrow} + \frac{E}{\uparrow} \end{array} \right.$$

Smart Touch Learning, the borrower, makes this one-time journal entry to record the receipt of cash and issuance of bonds payable. Semiannual interest payments occur each June 30 and December 31. Smart Touch Learning's first semiannual interest payment is journalized as follows:

Date	Accounts and Explanation	Debit	Credit
2018			
Jun. 30	Interest Expense (\$100,000 × 0.09 × 6/12)	4,500	
	Cash		4,500
	<i>Paid semiannual interest on bonds payable.</i>		

$$\frac{A \downarrow}{\text{Cash} \downarrow} = \left\{ \begin{array}{l} \frac{L}{\downarrow} + \frac{E \downarrow}{\text{Interest Expense} \uparrow} \end{array} \right.$$

Each semiannual interest payment follows this same pattern.

Issuing Bonds Payable at a Discount

Now let's see how to issue bonds payable at a discount. This is one of the most common situations.

We know that market conditions may force a company such as Smart Touch Learning to accept a discounted price for its bonds. Suppose Smart Touch Learning issues \$100,000 of its 9%, five-year bonds that pay interest semiannually when the market interest rate is 10%. The market price of the bonds drops to 96.149, which means 96.149% of face value. Smart Touch Learning receives \$96,149 (\$100,000 × 0.96149) at issuance and makes the following journal entry:

Date	Accounts and Explanation	Debit	Credit
2018			
Jan. 1	Cash	96,149	
	Discount on Bonds Payable (\$100,000 – \$96,149)	3,851	
	Bonds Payable		100,000
	<i>Issued bonds at a discount.</i>		

$$\frac{A \uparrow}{\text{Cash} \uparrow} = \left\{ \begin{array}{l} \frac{L \uparrow}{\text{Bonds Payable} \uparrow} + \frac{E \uparrow}{\text{Discount on Bonds Payable} \uparrow} \end{array} \right.$$



After posting, the bond accounts have the following balances:

Main Account		Contra Account	
Bonds Payable		Discount on Bonds Payable	
	100,000 Jan. 1		Jan. 1 3,851
Carrying amount = \$100,000 - \$3,851 = \$96,149			

Carrying Amount of Bonds

A bond payable *minus* the discount account current balance or *plus* the premium account current balance.

Discount on Bonds Payable is a contra account to Bonds Payable. Bonds Payable *minus* the discount gives the **carrying amount of bonds** (also known as *carrying value*). Smart Touch Learning would report these bonds payable on the balance sheet as follows immediately after issuance:

Long-term Liabilities:

Bonds Payable	\$100,000
Less: Discount on Bonds Payable	(3,851) \$96,149

Interest Expense on Bonds Payable Issued at a Discount

In this case, we see that a bond's stated interest rate differs from the market interest rate. The market rate was 10% when Smart Touch Learning issued its 9% bonds. This 1% interest rate difference created the \$3,851 discount on the bonds. Smart Touch Learning needed to offer this discount because investors were willing to pay only \$96,149 for the \$100,000, 9% bonds when they could earn 10% on other bonds.

Smart Touch Learning borrowed \$96,149 but still must pay \$100,000 when the bonds mature five years later. What happens to the \$3,851 discount? The discount is additional interest expense to Smart Touch Learning. The discount raises Smart Touch Learning's true interest expense on the bonds to the market interest rate of 10%. The discount becomes interest expense for Smart Touch Learning through a process called *amortization*, the gradual reduction of an item over time.

Straight-Line Amortization of Bond Discount

We can amortize a bond discount by dividing it into equal amounts for each interest period. This is called the **straight-line amortization method**. It works very much like the straight-line depreciation method we discussed in the Plant Assets chapter. In our example, the initial discount is \$3,851 and there are 10 semiannual interest periods during the bonds' five-year life (5 year life \times 2 interest payments per year). Therefore, 1/10 of the \$3,851 bond discount (\$385, rounded) is amortized each interest period. Smart Touch Learning's first semiannual interest entry is as follows:

Straight-Line Amortization Method
An amortization method that allocates an equal amount of bond discount or premium to each interest period over the life of the bond.

$$\frac{A \downarrow}{\text{Cash} \downarrow} = \left\{ \begin{array}{l} \frac{L \uparrow}{\text{Discount on Bonds Payable} \downarrow} + \frac{E \downarrow}{\text{Interest Expense} \uparrow} \end{array} \right.$$

Date	Accounts and Explanation	Debit	Credit
2018			
Jun. 30	Interest Expense (\$4,500 + \$385) Discount on Bonds Payable (\$3,851 \times 1/10) Cash (\$100,000 \times 0.09 \times 6/12)	4,885 385 4,500	
<i>Paid semiannual interest and amortized discount.</i>			



Interest expense of \$4,885 for each six-month period is the sum of the following:

- Stated interest (\$4,500, which is paid in cash)
- The amortization of discount, \$385

This same entry would be made again on December 31, 2018. So, the bond discount balance would be \$3,081 on December 31, 2018.

Bonds Payable		Discount on Bonds Payable			
		Jan. 1	3,851	385	Jun. 30
				385	Dec. 31
		Bal.	3,081		

So, what would be the balance reported on the December 31, 2018, balance sheet for Bonds Payable?

Long-term Liabilities:		
Bonds Payable	\$100,000	
Less: Discount on Bonds Payable	(3,081)	\$96,919

Discount on Bonds Payable has a debit balance. Therefore, we credit the Discount on Bonds Payable account to amortize (reduce) its balance. Ten amortization entries will decrease the discount to zero (with rounding). Then the carrying amount of the bonds payable will be \$100,000 at maturity—\$100,000 in Bonds Payable minus \$0 in Discount on Bonds Payable. Exhibit 12-7 shows the amortization schedule of the bond.

Exhibit 12-7 | Bonds Payable—Discount Amortization Schedule

$$\text{Face value} \times \text{Stated interest rate} \times \text{Time} \\ = \$100,000 \times 0.09 \times 6/12 = \$4,500$$

	Cash Paid	Interest Expense	Discount Amortized	Carrying Amount
01/01/2018				\$ 96,149
06/30/2018	\$ 4,500	\$ 4,885	\$ 385	96,534
12/31/2018	4,500	4,885	385	96,919
06/30/2019	4,500	4,885	385	97,304
12/31/2019	4,500	4,885	385	97,689
06/30/2020	4,500	4,885	385	98,074
12/31/2020	4,500	4,885	385	98,459
06/30/2021	4,500	4,885	385	98,844
12/31/2021	4,500	4,885	385	99,229
06/30/2022	4,500	4,885	385	99,614
12/31/2022	4,500	4,886	386*	100,000
Total	\$ 45,000	\$ 48,851	\$ 3,851	

*rounded

$$\text{Discount amortized} = \$3,851 / 10 = \$385$$



Issuing Bonds Payable at a Premium

To illustrate a bond premium, let's change the Smart Touch Learning example. Assume that the market interest rate is 8% when Smart Touch Learning issues its 9%, five-year bonds. These 9% bonds are attractive in an 8% market, and investors will pay a premium to acquire them. Assume the bonds are priced at 104.1 (104.1% of face value). In that case, Smart Touch Learning receives \$104,100 cash upon issuance. Smart Touch Learning's entry to borrow money and issue these bonds is as follows:

$$\begin{array}{c} \text{A} \uparrow \\ \text{Cash} \uparrow \\ \left\{ \begin{array}{l} \text{L} \uparrow \\ \text{Bonds} \\ \text{Payable} \uparrow \\ \text{Premium} \\ \text{on Bonds} \\ \text{Payable} \uparrow \end{array} \right. + \text{E} \end{array}$$

Date	Accounts and Explanation	Debit	Credit
2018			
Jan. 1	Cash	104,100	
	Premium on Bonds Payable (\$104,100 – \$100,000)		4,100
	Bonds Payable		100,000
	<i>Issued bonds at a premium.</i>		

After posting, the bond accounts have the following balances:

Main Account	Adjunct Account
Bonds Payable	Premium on Bonds Payable
100,000 Jan. 1	4,100 Jan. 1
<i>Carrying amount = \$100,000 + \$4,100 = \$104,100</i>	

Adjunct Account

An account that is directly related to another account. Adjunct accounts have the same normal balance as the related account and are added to the related account on the balance sheet.

The Bonds Payable account and the Premium on Bonds Payable account each carry a credit balance. The premium is an adjunct account to Bonds Payable. **Adjunct accounts** have the same normal balance as the related account and are added to the related account on the balance sheet. Adjunct accounts work similarly to contra accounts—the only difference is that the adjunct account has the same type of balance as the main account, whereas the contra account has the opposite type of balance of its main account. Therefore, we add the Premium on Bonds Payable to Bonds Payable to determine the bonds' carrying amount. Smart Touch Learning would report these bonds payable on the balance sheet as follows immediately after issuance:

Long-term Liabilities:		
Bonds Payable		\$100,000
Add: Premium on Bonds Payable	4,100	\$104,100

Interest Expense on Bonds Payable Issued at a Premium

The 1% difference between the bonds' 9% stated interest rate and the 8% market rate creates the \$4,100 premium (\$104,100 – \$100,000 face value). Smart Touch Learning borrows \$104,100 but must pay back only \$100,000 at maturity. The premium is like a saving of interest expense to Smart Touch Learning. The premium cuts Smart Touch Learning's cost of borrowing and reduces interest expense to 8%, the market rate. The amortization of bond premium decreases interest expense over the life of the bonds.



Straight-Line Amortization of Bond Premium

In our example, the beginning premium is \$4,100 and there are 10 semiannual interest periods during the bonds' five-year life. Therefore, 1/10 of the \$4,100 (\$410) of bond premium is amortized each interest period. Smart Touch Learning's first semiannual interest entry is as follows:

Date	Accounts and Explanation	Debit	Credit
2018			
Jun. 30	Interest Expense (\$4,500 – \$410)	4,090	
	Premium on Bonds Payable ($\$4,100 \times 1/10$)	410	
	Cash ($\$100,000 \times 0.09 \times 6/12$)		4,500
	<i>Paid semiannual interest and amortized premium.</i>		

$$\frac{A\downarrow}{\text{Cash}\downarrow} = \left\{ \begin{array}{l} \frac{L\downarrow}{\text{Premium on Bonds Payable}\downarrow} + \frac{E\downarrow}{\text{Interest Expense}\uparrow} \end{array} \right.$$

Interest expense of \$4,090 is

- Stated interest (\$4,500), which is paid in cash)
- Minus the amortization of the premium of \$410

This same entry would be made again on December 31, 2018. So, the bond premium balance would be \$3,280 on December 31, 2018.

Bonds Payable		Premium on Bonds Payable			
		Jun. 30	410	4,100	Jan. 1
		100,000			
			410		
				3,280	Bal.

At December 31, 2018, immediately after amortizing the bond premium, the bonds have the following carrying amount:

Long-term Liabilities:	
Bonds Payable	\$100,000
Add: Premium on Bonds Payable	<u>3,280</u> \$103,280

At maturity on December 31, 2022, the bond premium will have been fully amortized (it will have a zero balance), and the bonds' carrying amount will be \$100,000 (the amount in the Bonds Payable account). Exhibit 12-8 (on the next page) shows the amortization schedule of the bond.


Exhibit 12-8 | Bonds Payable—Premium Amortization Schedule

$$\text{Face value} \times \text{Stated interest rate} \times \text{Time} \\ = \$100,000 \times 0.09 \times 6/12 = \$4,500$$

	Cash Paid	Interest Expense	Premium Amortized	Carrying Amount
01/01/2018				\$ 104,100
06/30/2018	\$ 4,500	\$ 4,090	\$ 410	103,690
12/31/2018	4,500	4,090	410	103,280
06/30/2019	4,500	4,090	410	102,870
12/31/2019	4,500	4,090	410	102,460
06/30/2020	4,500	4,090	410	102,050
12/31/2020	4,500	4,090	410	101,640
06/30/2021	4,500	4,090	410	101,230
12/31/2021	4,500	4,090	410	100,820
06/30/2022	4,500	4,090	410	100,410
12/31/2022	4,500	4,090	410	100,000
Total	<u>\$ 45,000</u>	<u>\$ 40,900</u>	<u>\$ 4,100</u>	

$$\text{Carrying amount} - \text{Premium amortized} \\ = \$104,100 - \$410 = \$103,690$$

$$\text{Cash paid} - \text{Premium amortized} \\ = \$4,500 - \$410 = \$4,090$$

$$\text{Premium amortized} \\ = \$4,100 / 10 = \$410$$

Try It!

Schmidt Company issued \$100,000, 4%, 10-year bonds payable at 98 on January 1, 2018.

6. Journalize the issuance of the bonds payable on January 1, 2018.
7. Journalize the payment of semiannual interest and amortization of the bond discount or premium (using the straight-line amortization method) on July 1, 2018.
8. Assume the bonds payable was instead issued at 106. Journalize the issuance of the bonds payable and the payment of the first semiannual interest and amortization of the bond discount or premium.

Check your answers online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercises S12-5 through S12-8. [Pearson MyLab Accounting](#)

HOW IS THE RETIREMENT OF BONDS PAYABLE ACCOUNTED FOR?

Learning Objective 4

Journalize transactions to retire bonds payable

Retirement of bonds payable involves paying the face value of the bond. Bonds can be retired at the maturity date or before.

Retirement of Bonds at Maturity

When the bond is matured, the carrying value always equals the face value. In the case of Smart Touch Learning, with both the discount and premium examples, on December



31, 2022, the carrying amount and face value are \$100,000. The entry to retire the bonds, assuming the last interest payment has already been recorded, is as follows:

Date	Accounts and Explanation	Debit	Credit
2022			
Dec. 31	Bonds Payable	100,000	
	Cash		100,000
<i>Retired bonds payable at maturity.</i>			

$$\frac{A \downarrow}{\text{Cash} \downarrow} = \left\{ \begin{array}{l} L \downarrow \\ \text{Bonds} \\ \text{Payable} \downarrow \end{array} \right\} + E$$

Retirement of Bonds Before Maturity

Normally, companies wait until maturity to pay off, or *retire*, their bonds payable. But companies sometimes retire their bonds prior to maturity. The main reason for retiring bonds early is to relieve the pressure of paying the interest payments.

Some bonds are **callable**, which means the company may *call*, or pay off, the bonds at a specified price. The call price is usually 100 or a few percentage points above face value, perhaps 101 or 102, to provide an incentive to the bondholder. Callable bonds give the issuer the flexibility to pay off the bonds when it benefits the company. An alternative to calling the bonds is to purchase any available bonds in the open market at their current market price. Whether the bonds are called or purchased in the open market, the same accounts are used in the journal entry.

Suppose on December 31, 2018, Smart Touch Learning has \$100,000 of bonds payable outstanding with a remaining discount balance of \$3,081 (the original discount of \$3,851 on January 1, 2018, [$\$100,000 - \$96,149$] less the straight-line amortization of \$385 in June and December of 2018 [$\$3,851 - \$385 - \$385$]).

Lower interest rates have convinced management to pay off these bonds now. These bonds are callable at 100. If the market price of the bonds is 95, should Smart Touch Learning call the bonds at 100 or purchase them in the open market at 95? The market price is lower than the call price, so Smart Touch Learning should buy the bonds on the open market at their market price. Retiring the bonds on December 31, 2018, at 95 results in a gain of \$1,919, computed as follows:

Face value of the bonds being retired	\$ 100,000
Less: Discount	(3,081)
Carrying amount of bonds payable	96,919
Less: Market price paid to retire the bonds ($\$100,000 \times 0.95$)	(95,000)
Gain on retirement of bonds payable	<u>\$ 1,919</u>

The following entry records retirement of the bonds, immediately after the December 31, 2018, interest payment:

Date	Accounts and Explanation	Debit	Credit
2018			
Dec. 31	Bonds Payable	100,000	
	Discount on Bonds Payable		3,081
	Gain on Retirement of Bonds Payable		1,919
	Cash		95,000
<i>Retired bonds payable prior to maturity.</i>			

$$\frac{A \downarrow}{\text{Cash} \downarrow} = \left\{ \begin{array}{l} L \downarrow \\ \text{Bonds} \\ \text{Payable} \downarrow \\ \text{Discount} \\ \text{on Bonds} \\ \text{Payable} \downarrow \end{array} \right\} + \left\{ \begin{array}{l} E \uparrow \\ \text{Gain} \\ \text{on} \\ \text{Retirement} \\ \text{of Bonds} \\ \text{Payable} \uparrow \end{array} \right\}$$



After posting, the bond accounts have zero balances.

Bonds Payable			Discount on Bonds Payable			
	100,000	Jan. 1	Jan. 1	3,851	385	Jun. 30
Dec. 31	100,000				385	Dec. 31
		0	Bal.		3,081	Dec. 31
				Bal.	0	

The journal entry removes the bonds from the books and records a gain on retirement. If the bonds being retired have a premium rather than a discount, any existing premium would be removed with a debit. If Smart Touch Learning retired only half of these bonds, it would remove only half the discount or premium.

When retiring bonds before maturity, follow these steps:

1. Record partial-period amortization of discount or premium and partial-period interest payment if the retirement date does not fall on an interest payment date.
2. Remove the portion of unamortized Discount or Premium that relates to the bonds being retired.
3. Debit Bonds Payable at face value.
4. Credit a gain or debit a loss on retirement.
5. Credit Cash for amount paid to retire the bonds.

Try It!

9. Herrera Corporation issued a \$400,000, 4.5%, 10-year bond payable on January 1, 2018. Journalize the payment of the bond payable at maturity. (Give the date.)

Check your answer online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercises S12-9 and S12-10. [Pearson MyLab Accounting](#)

HOW ARE LIABILITIES REPORTED ON THE BALANCE SHEET?

Learning Objective 5

Report liabilities on the balance sheet

At the end of each period, a company reports all of its current and long-term liabilities on the balance sheet. As we have seen throughout the textbook, there are two categories of liabilities, current and long-term. Exhibit 12-9 shows Smart Touch Learning's liabilities portion of its balance sheet (amounts assumed) that we have discussed up to this point.


Exhibit 12-9 | Liabilities

SMART TOUCH LEARNING Balance Sheet (Partial) December 31, 2018	
Liabilities	
Current Liabilities:	
Accounts Payable	\$ 12,620
Employee Income Taxes Payable	2,000
FICA—OASDI Taxes Payable	1,158
FICA—Medicare Taxes Payable	855
Employee Health Insurance Payable	180
United Way Payable	20
Federal Unemployment Taxes Payable	15
State Unemployment Taxes Payable	60
Employee Bonus Payable	1,000
Vacation Benefits Payable	800
Income Tax Payable	3,780
Sales Tax Payable	600
Estimated Warranty Payable	700
Notes Payable (short-term)	400
Current Portion of Mortgage Payable	1,305
Current Portion of Long-term Notes Payable	<u>5,000</u>
Total Current Liabilities	<u>\$ 30,493</u>
Long-term Liabilities:	
Notes Payable	15,000
Mortgage Payable	97,541
Bonds Payable	\$ 100,000
Less: Discount on Bonds Payable	(3,081) <u>96,919</u>
Total Long-term Liabilities	<u>209,460</u>
Total Liabilities	<u>\$ 239,953</u>

TYING IT ALL TOGETHER

The Walt Disney Company is a diversified entertainment company that is comprised of five different business segments: Media Networks (cable and broadcast television), Parks and Resorts (various Walt Disney Resorts), Studio Entertainment (motion pictures), consumer products (Disney merchandise), and Interactive (multi-platform games). Walt Disney began as a cartoon studio in 1920 and today is known as a leading worldwide entertainment provider. (You can find the Walt Disney Company's annual report at https://www.sec.gov/Archives/edgar/data/1001039/000100103915000255/fy2015_q4x10k.htm)

What are the different types of long-term debt that The Walt Disney Company reports on its balance sheet?

The Walt Disney Company reports borrowings (\$12,773 million), deferred income taxes (\$4,051 million), and other long-term liabilities (\$6,369 million) for total long-term debt of \$23,193 million.

In order for a borrowing to be listed as long-term, it must be owed in more than one year. Where do companies, such as Walt Disney, report the current portion of long-term debt?

The current portion of long-term debt should be reported in the current liabilities section of the balance sheet. For example, The Walt Disney Company reports \$4,563 million of current portion of long-term borrowings.



Try It!

10. Weaver Corporation includes the following selected accounts in its general ledger at December 31, 2018:

Notes Payable (long-term)	\$ 75,000	Interest Payable (due next year)	\$ 720
Bonds Payable (long-term)	195,000	Sales Tax Payable	480
Accounts Payable	20,400	Premium on Bonds Payable	5,850
Salaries Payable	1,680	Estimated Warranty Payable	1,080

Prepare the liabilities section of Weaver Corporation's balance sheet at December 31, 2018.

Check your answer online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercise S12-11. [Pearson MyLab Accounting](#)

HOW DO WE USE THE DEBT TO EQUITY RATIO TO EVALUATE BUSINESS PERFORMANCE?

Learning Objective 6

Use the debt to equity ratio to evaluate business performance

Debt to Equity Ratio

A ratio that measures the proportion of total liabilities relative to total equity. Total liabilities / Total equity.

The relationship between total liabilities and total equity—called the **debt to equity ratio**—shows the proportion of total liabilities relative to the total equity. Thus, this ratio measures financial leverage. If the debt to equity ratio is greater than 1, then the company is financing more assets with debt than with equity. If the ratio is less than 1, then the company is financing more assets with equity than with debt. The higher the debt to equity ratio, the greater the company's financial risk.

Kohl's Corporation reported total liabilities and total equity (in millions) on its Fiscal 2015 Annual Report as follows:

	January 30, 2016	January 31, 2015
Total liabilities	\$8,115	\$8,342
Total equity	5,491	5,991

Kohl's debt to equity ratio as of January 30, 2016 (2015 fiscal year), and January 31, 2015 (2014 fiscal year), can be calculated as follows:

$$\begin{aligned}
 \text{Debt to equity ratio} &= \text{Total liabilities} / \text{Total equity} \\
 2015 &= \$8,115 / \$5,491 \\
 &= 1.48 \\
 2014 &= \$8,342 / \$5,991 \\
 &= 1.39
 \end{aligned}$$

Kohl's debt to equity ratio as of January 30, 2016, is above 1, indicating that the company is financing more assets with debt than with equity. Notice that its debt to equity ratio has not improved from January 31, 2015, when Kohl's had a debt to equity ratio of 1.39. This has to do with the fact that Kohl's experienced a decrease in liabilities that was smaller than the decrease in equity during 2015. Kohl's debt to equity ratios for both years indicate the company is taking advantage of financial leverage but is at a higher risk than a company that finances assets with less debt and more equity.



ETHICS

Should additional debt be issued?

Phillip Mader is president and majority stockholder of Knightly Corporation. Phillip owns 54% of the stock in the corporation. The corporation is in dire need of additional cash inflow in order to maintain operations. Phillip is urging the board of directors to issue additional debt even though he knows that the corporation already has a substantial amount of debt. Phillip is well aware that by issuing additional debt, the corporation's debt to equity ratio will increase significantly. He believes this will negatively affect the corporation's credit rating and will further limit the company's ability to borrow at low interest rates in the future. Phillip, however, believes all of this is offset by his desire to retain control of the corporation. If the corporation doesn't issue additional debt, it will be forced to issue stock in order to obtain the necessary funds. Phillip does

not have the ability to purchase any of the additional shares of stock, and he knows that he will lose his majority stockholder status. What should Phillip do? What would you do?

Solution

Phillip's overall ethical responsibility lies with the good of the company over what is best for him. In urging the corporation to issue additional debt, he is putting his needs and desires above the best interests of the corporation and other stockholders. Phillip is aware that by issuing additional debt the corporation will be negatively affected. He should urge the board to issue stock—even though he will not gain personally from the situation. His leadership role as president of the corporation should take precedence over his role as majority stockholder.

Try It!

11. Payne Corporation has the following accounts as of December 31, 2018:

Total Assets	\$ 60,000
Total Liabilities	20,000
Total Equity	40,000

Compute the debt to equity ratio at December 31, 2018.

Check your answer online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercise S12-12. [Pearson MyLab Accounting](#)

APPENDIX 12A: The Time Value of Money

WHAT IS THE TIME VALUE OF MONEY, AND HOW IS PRESENT VALUE AND FUTURE VALUE CALCULATED?

A dollar received today is worth more than a dollar to be received in the future because you can invest today's dollar and earn additional interest so you'll have more cash next year. The fact that invested cash earns interest over time is called the *time value of money*. This concept explains why we would prefer to receive cash sooner rather than later. The time value of money is used to determine the present value of a bond—its market price.

Learning Objective 7

Use time value of money to compute present value and future value

Time Value of Money Concepts

The time value of money depends on these key factors:

1. The principal amount (p)
2. The number of periods (n)
3. The interest rate (i)

The principal (p) refers to the amount of the investment or borrowing. We state the principal as either a single lump sum or an annuity. For example, if you win the lottery, you have the choice of receiving all the winnings now (a single lump sum) or receiving a series of equal payments for a period of time in the future (an annuity). An **annuity** is a stream of *equal cash payments* made at *equal time intervals*.¹ For example, \$100 cash received per month for 12 months is an annuity.

The number of periods (n) is the length of time from the beginning of the investment or borrowing until termination. All else being equal, the shorter the investment or borrowing period, the lower the total amount of interest earned or paid. If you withdraw your savings after four years rather than five years, you will earn less interest. For bonds, the number of periods is the number of interest payments made. For example, if a five-year bond pays interest semiannually, the number of periods will be 10 (5 years \times 2 payments per year).

The interest rate (i) is the percentage earned on the investment or paid on the borrowing and can be stated annually or in days, months, or quarters. The interest rate must reflect the number of time periods in the year. A five-year semiannual bond that has an annual market interest rate of 10% will reflect a market interest rate of 5% semiannually (10% per year / 2 periods per year). Interest can be computed as either simple interest or compound interest.

Simple Interest Versus Compound Interest

Simple interest means that interest is calculated *only* on the principal amount. **Compound interest** means that interest is calculated on the principal *and* on all previously earned interest. *Compound interest assumes that all interest earned will remain invested and earn additional interest at the same interest rate.* Exhibit 12A-1 compares simple interest of 6% on a five-year, \$10,000 investment with interest compounded yearly (rounded to the nearest dollar). As you can see, the amount of compound interest earned yearly grows as the base on which it is calculated (principal plus cumulative interest to date) grows. Over the life of this investment, the total amount of compound interest is more than the total amount of simple interest. Most investments yield compound interest, so we assume compound interest, rather than simple interest, for this chapter.

Exhibit 12A-1 | Simple Interest Versus Compound Interest—\$10,000 at 6% for 5 Years

Year	Simple Interest Calculation	Simple Interest	Compound Interest Calculation	Compound Interest
1	$\$10,000 \times 6\%$	\$ 600	$\$10,000 \times 6\%$	\$ 600
2	$\$10,000 \times 6\%$	600	$(\$10,000 + \$600) \times 6\%$	636
3	$\$10,000 \times 6\%$	600	$(\$10,000 + \$600 + \$636) \times 6\%$	674*
4	$\$10,000 \times 6\%$	600	$(\$10,000 + \$600 + \$636 + \$674) \times 6\%$	715
5	$\$10,000 \times 6\%$	600	$(\$10,000 + \$600 + \$636 + \$674 + \$715) \times 6\%$	758
	Total interest	<u>\$ 3,000</u>	Total interest	<u>\$ 3,383</u>

*all calculations rounded to the nearest dollar for the rest of this chapter

¹ An *ordinary annuity* is an annuity in which the installments occur at the *end* of each period. An *annuity due* is an annuity in which the installments occur at the beginning of each period. Throughout this chapter, we use ordinary annuities.

Future Value and Present Value Factors

The future value or present value of an investment simply refers to the value of an investment at different points in time. We can calculate the future value or present value of any investment by knowing (or assuming) information about the three factors we listed earlier: (1) the principal amount, (2) number of periods, and (3) the interest rate. For example, in Exhibit 12A-1, we calculated the interest that would be earned on (1) a \$10,000 principal, (2) invested for five years, (3) at 6% interest. The future value of the investment is simply its worth at the end of a specific time frame (for example, five years), or the original principal *plus* the interest earned. In our example, the future value of the investment is as follows:

$$\begin{aligned}\text{Future value} &= \text{Principal} + \text{Interest earned} \\ &= \$10,000 + \$3,383 \\ &= \$13,383\end{aligned}$$

If we invest \$10,000 *today*, its *present value* is simply \$10,000. Present value is the value of an investment today. So another way of stating the future value is as follows:

$$\text{Future value} = \text{Present value} + \text{Interest earned}$$

If we know the future value and want to find the present value, we can rearrange the equation as follows:

$$\begin{aligned}\text{Present value} &= \text{Future value} - \text{Interest earned} \\ \$10,000 &= \$13,383 - \$3,383\end{aligned}$$

The only difference between present value and future value is the amount of interest that is earned in the intervening time span.

Calculating each period's compound interest, as we did in Exhibit 12A-1, and then adding it to the present value to determine the future value (or subtracting it from the future value to determine the present value) is tedious. Fortunately, mathematical formulas have been developed that specify future values and present values for unlimited combinations of interest rates (i) and time periods (n). Separate formulas exist for single lump sum investments and annuities.

These formulas are programmed into most business calculators, so the user only needs to correctly enter the principal amount, interest rate, and number of time periods to find present or future values. These formulas are also programmed into spreadsheet functions in Microsoft Excel. Using Excel to calculate present values is illustrated later in the Capital Investment Decisions chapter. In this chapter, we use present value tables. The present value tables contain the results of the formulas for various interest rate and time period combinations.

The formulas and resulting tables are shown in Appendix A at the end of this book:

1. Present Value of \$1 (Appendix A, Table A-1)—used to calculate the value today of one future amount (a lump sum)
2. Present Value of Ordinary Annuity of \$1 (Appendix A, Table A-2)—used to calculate the value today of a series of equal future amounts (annuities)
3. Future Value of \$1 (Appendix A, Table A-3)—used to calculate the value in the future of one present amount (a lump sum)
4. Future Value of Ordinary Annuity of \$1 (Appendix A, Table A-4)—used to calculate the value in the future of a series of equal future amounts (annuities)

Take a moment to look at these tables because we are going to use them throughout the rest of the appendix. Note that the columns are interest rates (i) and the rows are periods (n).

The numbers in each table, known as present value factors (PV factors) and future value factors (FV factors), are for an investment (or loan) of \$1. For example, in Appendix A, Table A-1, the PV factor for interest rate of 6% ($i = 6\%$) and 5 periods ($n = 5$) is 0.747. To find the present value of an amount other than \$1, multiply the PV factor by the future amount.

The annuity tables are derived from the lump sum tables. For example, the Annuity PV factors (in the Present Value of Ordinary Annuity of \$1 table) are the *sums* of the PV factors found in the Present Value of \$1 tables for a given number of time periods. The annuity tables allow us to perform one-step calculations rather than separately computing the present value of each annual cash installment and then summing the individual present values or future values.

Present Value of a Lump Sum

The process for calculating present values is often called *discounting future cash flows* because future amounts are discounted (interest removed) to their present value. Let's consider the investment in Exhibit 12A-1. The future value of the investment is \$13,383. So the question is "How much would I have to invest today (in the present time) to have \$13,383 five years in the future if I invested at 6%?" Let's calculate the present value using PV factors.

$$\text{Present value} = \text{Future value} \times \text{PV factor for } i = 6\%, n = 5$$

We determine the PV factor from the table labeled Present Value of \$1 (Appendix A, Table A-1). We use this table for lump sum amounts. We look down the 6% column and across the 5 periods row and find the PV factor is 0.747. We finish our calculation as follows:

$$\begin{aligned}\text{Present value} &= \text{Future value} \times \text{PV factor for } i = 6\%, n = 5 \\ &= \$13,383 \times 0.747 \\ &= \$9,997\end{aligned}$$

Notice the calculation is off by \$3 due to rounding (\$10,000 – \$9,997). The PV factors are rounded to three decimal places, so the calculations may not be exact. Also, the interest calculations in Exhibit 12A-1 were rounded to the nearest dollar. Therefore, there are two rounding issues in this exhibit. However, we do have the answer to our question: If approximately \$10,000 is invested today at 6% for five years, at the end of five years, the investment will grow to \$13,383. Or, conversely, if we expect to receive \$13,383 five years from now, its equivalent (discounted) value today is approximately \$10,000. In other words, we need to invest approximately \$10,000 today at 6% to have \$13,383 five years from now.

Present Value of an Annuity

Let's now assume that instead of receiving a lump sum at the end of the five years, you will receive \$2,000 at the end of each year. This is a series of equal payments (\$2,000) over equal intervals (years), so it is an annuity. How much would you have to invest today to receive these payments, assuming an interest rate of 6%?

We determine the annuity PV factor from the table labeled Present Value of Ordinary Annuity of \$1 (Appendix A, Table A-2). We use this table for annuities. We look down the 6% column and across the 5 periods row and find the annuity PV factor is 4.212. We finish our calculation as follows:

$$\begin{aligned}\text{Present value} &= \text{Amount of each cash inflow} \times \text{Annuity PV factor for } i = 6\%, n = 5 \\ &= \$2,000 \times 4.212 \\ &= \$8,424\end{aligned}$$

This means that an investment today of \$8,424 at 6% will yield \$2,000 per year for the next five years, or total payments of \$10,000 over 5 years (\$2,000 per year \times 5 years). The reason is that interest is being earned on principal that is left invested each year. Let's verify the calculation.

Year	[1] Beginning Balance	[2] Interest	[3] Withdrawal	[4] Ending Balance
	Previous [4]	[1] \times 6%	\$2,000	[1] + [2] - [3]
0				\$ 8,424
1	\$ 8,424	\$ 505	\$ 2,000	6,929
2	6,929	416	2,000	5,345
3	5,345	321	2,000	3,666
4	3,666	220	2,000	1,886
5	1,886	114*	2,000	0

*rounded up by \$1

The chart shows that the initial investment of \$8,424 is invested for one year, earning \$505 in interest. At the end of that period, the first withdrawal of \$2,000 takes place, leaving a balance of \$6,929 (\$8,424 + \$505 - \$2,000). At the end of the five years, the ending balance is \$0 proving that the present value of the \$2,000 annuity is \$8,424.

Present Value of Bonds Payable

We can use what we have just learned about the present value of a lump sum and present value of an annuity to calculate the present value of bonds payable. The present value of a bond—its market price—is the sum of:

- the present value of the principal amount to be paid at maturity, a single amount (present value of a lump sum)
- plus the present value of the future stated interest payments, an annuity because it occurs in equal amounts over equal time periods (present value of an annuity).

Present Value of a Bonds Payable Issued at a Discount

Let's compute the present value of Smart Touch Learning's 9%, five-year bonds. The face value of the bonds is \$100,000, and they pay $(9\% \times 6/12)$ or 4.5% stated interest semiannually. At issuance, the annual market interest rate is 10% (5% semiannually). Therefore, the market interest rate for each of the 10 semiannual periods is 5%. We use 5% to compute the present value (PV) of the maturity value and the present value (PV) of the stated interest. The present value of these bonds is \$96,149, computed as shown on the next page:

Present value of principal:

$$\begin{aligned}\text{Present value} &= \text{Future value} \times \text{PV factor for } i = 5\%, n = 10 \\ &= \$100,000 \times 0.614 \\ &= \$61,400\end{aligned}$$

Present value of stated interest:

$$\begin{aligned}\text{Present value} &= \text{Amount of each cash flow} \times \text{Annuity PV factor for } i = 5\%, n = 10 \\ &= (\$100,000 \times 0.09 \times 6/12) \times 7.722 \\ &= \$34,749\end{aligned}$$

Present value of bonds payable:

$$\begin{aligned}\text{Present value} &= \text{PV of principal} + \text{PV of stated interest} \\ &= \$61,400 + \$34,749 \\ &= \$96,149\end{aligned}$$

Notice that the stated interest rate ($9\% \times 6/12 = 4.5\%$), not the market interest rate (5%), is used to calculate the amount of each cash flow for interest. This is because the bonds payable pay interest based on the rate stated in the contract, not the rate of the market.

Present Value of a Bonds Payable Issued at a Premium

Let's consider a premium price for the Smart Touch Learning bonds. Suppose the market interest rate is 8% at issuance (4% for each of the 10 semiannual periods). We would compute the market price of these bonds as follows:

Present value of principal:

$$\begin{aligned}\text{Present value} &= \text{Future value} \times \text{PV factor for } i = 4\%, n = 10 \\ &= \$100,000 \times 0.676 \\ &= \$67,600\end{aligned}$$

Present value of stated interest:

$$\begin{aligned}\text{Present value} &= \text{Amount of each cash flow} \times \text{Annuity PV factor for } i = 4\%, n = 10 \\ &= (\$100,000 \times 0.09 \times 6/12) \times 8.111 \\ &= \$36,500\end{aligned}$$

Present value of bonds payable:

$$\begin{aligned}\text{Present value} &= \text{PV of principal} + \text{PV of stated interest} \\ &= \$67,600 + \$36,500 \\ &= \$104,100\end{aligned}$$

Future Value of a Lump Sum

Let's now use the tables to calculate the future value of a lump sum considering the investment in Exhibit 12A-1. Instead of calculating present value, though, we will change the scenario to evaluate the future value. "If I invested \$10,000 today (in the present time), how much would I have in five years at an interest rate of 6%?" We will calculate the future value using FV factors.

$$\text{Future value} = \text{Present value} \times \text{FV factor for } i = 6\%, n = 5$$

We determine the FV factor from the table labeled Future Value of \$1 (Appendix A, Table A-3). We use this table for lump sum amounts. We look down the 6% column and across the 5 periods row and find the FV factor is 1.338. We finish our calculation as follows:

$$\begin{aligned}\text{Future value} &= \text{Present value} \times \text{FV factor for } i = 6\%, n = 5 \\ &= \$10,000 \times 1.338 \\ &= \$13,380\end{aligned}$$

Notice the calculation is off by \$3 due to rounding (\$13,380 – \$13,383). The FV factors are rounded to three decimal places, so the calculations may not be exact. Also, the interest calculations in Exhibit 12A-1 were rounded to the nearest dollar. Therefore, there are two rounding issues in this exhibit. However, we do have the answer to our question: If \$10,000 is invested today at 6% for five years, at the end of five years, the investment will grow to \$13,380.

Future Value of an Annuity

Let's now calculate the future value of an annuity assuming that you will receive \$2,000 at the end of each year. This is a series of equal payments (\$2,000) over equal intervals (years), so it is an annuity. How much would these payments be worth five years from now, assuming an interest rate of 6%?

We determine the annuity FV factor from the table labeled Future Value of Ordinary Annuity of \$1 (Appendix A, Table A-4). We use this table for annuities. We look down the 6% column and across the 5 periods row and find the annuity FV factor is 5.637. We finish our calculation as follows:

$$\begin{aligned}\text{Future value} &= \text{Amount of each cash inflow} \times \text{Annuity FV factor for } i = 6\%, n = 5 \\ &= \$2,000 \times 5.637 \\ &= \$11,274\end{aligned}$$

This means investing \$2,000 per year for five years at 6% will yield \$11,274. The reason is that interest is being earned on principal that is left invested each year.

Try It!

- 12A. On December 31, 2018, when the market interest rate is 8%, Arnold Corporation issues \$200,000 of 6%, 10-year bonds payable. The bonds pay interest semiannually. Determine the present value of the bonds at issuance.

Check your answer online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercises S12A-13 through S12A-15. **Pearson MyLab Accounting**

APPENDIX 12B: Effective-Interest Method of Amortization

HOW ARE BONDS PAYABLE ACCOUNTED FOR USING THE EFFECTIVE-INTEREST AMORTIZATION METHOD?

Learning Objective 8

Journalize transactions for bonds payable and interest expense using the effective-interest amortization method

Effective-Interest Amortization Method

An amortization model that calculates interest expense based on the current carrying amount of the bond and the market interest rate at issuance, and then amortizes the difference between the cash interest payment and calculated interest expense as a decrease to the discount or premium.

We began this chapter with straight-line amortization to introduce the concept of amortizing bonds. A more precise way of amortizing bonds used in practice is called the **effective-interest amortization method**. This method calculates interest expense based on the current carrying amount of the bond and the market interest rate at issuance, and then amortizes the difference between the cash interest payment and calculated interest expense as a decrease to the discount or premium. This appendix explains the present value concepts used to amortize bond discounts and premiums using the effective-interest amortization method.

Generally Accepted Accounting Principles require that interest expense be measured using the *effective-interest amortization method* unless the straight-line amounts are similar. In that case, either method is permitted. Total interest expense over the life of the bonds is the same under both methods; however, interest expense each year is different between the two methods. Let's look at how the effective-interest amortization method works.

Effective-Interest Amortization for a Bond Discount

Assume that Smart Touch Learning issues \$100,000 of 9% bonds at a time when the market rate of interest is 10%. These bonds mature in five years and pay interest semiannually, so there are 10 semiannual interest payments. As you just saw in Appendix 12A, the issue price of the bonds is \$96,149, and the discount on these bonds is \$3,851 ($\$100,000 - \$96,149$).

When using the effective-interest amortization method, the amount of the interest expense is calculated using the *carrying amount* of the bonds and the *market interest rate*. The interest payment is calculated using the *face value* of the bonds and the *stated interest rate*. The amount of discount amortization is the excess of the calculated interest expense over the interest payment. Exhibit 12B-1 shows how to calculate interest expense by the effective-interest amortization method.

Exhibit 12B-1 | Bonds Payable—Discount Amortization Schedule; Effective-Interest Amortization Method

	Cash Paid	Interest Expense	Discount Amortized	Carrying Amount
01/01/2018				\$ 96,149
06/30/2018	\$ 4,500	\$ 4,807	\$ 307	96,456
12/31/2018	4,500	4,823	323	96,779
06/30/2019	4,500	4,839	339	97,118
12/31/2019	4,500	4,856	356	97,474
06/30/2020	4,500	4,874	374	97,848
12/31/2020	4,500	4,892	392	98,240
06/30/2021	4,500	4,912	412	98,652
12/31/2021	4,500	4,933	433	99,085
06/30/2022	4,500	4,954	454	99,539
12/31/2022	4,500	4,961*	461	100,000
Total	\$ 45,000	\$ 48,851	\$ 3,851	

*rounded

$$\text{Interest Expense} - \text{Cash paid} = \$4,807 - \$4,500 = \$307$$

$$\text{Carrying amount} + \text{Discount amortized} = \$96,149 + \$307 = \$96,456$$

$$\text{Face value} \times \text{Stated Interest rate} \times \text{Time} = \$100,000 \times 0.09 \times 6/12 = \$4,500$$

$$\text{Carrying amount} \times \text{Market interest rate} \times \text{Time} = \$96,149 \times 0.10 \times 6/12 = \$4,807$$

When recording the interest payment for the bonds payable, the *accounts* debited and credited under the effective-interest amortization method and the straight-line amortization method are the same. Only the *amounts* differ. Smart Touch Learning would record the first interest payment on June 30 as follows:

Date	Accounts and Explanation	Debit	Credit
2018			
Jun. 30	Interest Expense (\$96,149 × 0.10 × 6/12)	4,807	
	Discount on Bonds Payable (\$4,807 – \$4,500)		307
	Cash (\$100,000 × 0.09 × 6/12)		4,500
	<i>Paid semiannual interest and amortized discount.</i>		

$$\frac{A \downarrow}{\text{Cash} \downarrow} = \left\{ \begin{array}{l} \frac{L \uparrow}{\text{Discount on Bonds Payable}} + \frac{E \downarrow}{\text{Interest Expense} \uparrow} \end{array} \right.$$

Regardless of which method is used, the *total* amount of cash paid and *total* interest expense is the same. You can verify this by reviewing the totals from Exhibit 12-7 and Exhibit 12B-1.

Effective-Interest Amortization of a Bond Premium

Smart Touch Learning may issue its bonds payable at a premium. Assume that Smart Touch Learning issues \$100,000 of five-year, 9% bonds when the market interest rate is 8%. The bonds' issue price is \$104,100, and the premium is \$4,100, as calculated in Appendix 12A. When a bond is issued at a premium, the interest expense calculation using the

effective-interest amortization method uses the *carrying amount* of the bonds and the *market interest rate* as shown with a discounted bond. The calculation for the amount of premium amortization is calculated as the difference between the cash paid and the calculated interest expense. Exhibit 12B-2 provides the amortization schedule using the effective-interest amortization method for Smart Touch Learning.

Exhibit 12B-2 | Bonds Payable—Premium Amortization Schedule; Effective-Interest Amortization Method

	Cash Paid	Interest Expense	Premium Amortized	Carrying Amount
01/01/2018				\$ 104,100
06/30/2018	\$ 4,500	\$ 4,164	\$ 336	103,764
12/31/2018	4,500	4,151	349	103,415
06/30/2019	4,500	4,137	363	103,052
12/31/2019	4,500	4,122	378	102,674
06/30/2020	4,500	4,107	393	102,281
12/31/2020	4,500	4,091	409	101,872
06/30/2021	4,500	4,075	425	101,447
12/31/2021	4,500	4,058	442	101,005
06/30/2022	4,500	4,040	460	100,545
12/31/2022	4,500	3,955*	545	100,000
Total	\$ 45,000	\$ 40,900	\$ 4,100	

*rounded

$$\text{Face value} \times \text{Stated Interest rate} \times \text{Time} = \$100,000 \times 0.09 \times 6/12 = \$4,500$$

$$\text{Carrying amount} \times \text{Market interest rate} \times \text{Time} = \$104,100 \times 0.08 \times 6/12 = \$4,164$$

$$\text{Cash paid} - \text{Interest expense} = \$4,500 - \$4,164 = \$336$$

$$\text{Carrying amount} - \text{Premium amortized} = \$104,100 - \$336 = \$103,764$$

Smart Touch Learning will record the first interest payment on June 30 as follows:

$\frac{A \downarrow}{\text{Cash} \downarrow}$	$\frac{L \downarrow}{\text{Premium on Bonds Payable} \downarrow}$	$\frac{E \downarrow}{\text{Interest Expense} \uparrow}$	Date	Accounts and Explanation	Debit	Credit
			2018			
			Jun. 30	Interest Expense (\$104,100 \times 0.08 \times 6/12)	4,164	
				Premium on Bonds Payable (\$4,500 – \$4,164)	336	
				Cash (\$100,000 \times 0.09 \times 6/12)		4,500
				<i>Paid semiannual interest and amortized premium.</i>		

Regardless of which method is used, the *total* amount of cash paid and *total* interest expense is the same. You can verify this by reviewing the totals from Exhibit 12-8 and Exhibit 12B-2.

Try It!

13B. On January 1, 2018, when the market interest rate is 6%, Hawkins Corporation issues \$200,000 of 8%, five-year bonds payable. The bonds pay interest semiannually. Hawkins Corporation received \$217,040 in cash at issuance. Assume interest payment dates are June 30 and December 31.

Prepare an effective-interest amortization method amortization table for the first two semiannual interest periods.

Check your answer online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercises S12B-16 and S12B-17. **Pearson MyLab Accounting**

REVIEW

> Things You Should Know

1. How are long-term notes payable and mortgages payable accounted for?

- Long-term notes payable and mortgages payable are reported in the long-term liabilities section of the balance sheet unless there is a portion due within one year. That portion is shown in the current liabilities section of the balance sheet.
- An amortization schedule should be prepared that details each loan payment's allocation between principal and interest and also the beginning and ending balances of the loan.
- Mortgages payable are long-term debts that are backed with a security interest in specific property.

2. What are bonds?

- Bonds payable represent long-term debt issued to multiple lenders called bondholders, usually in increments of \$1,000 per bond.
- The bond requires a face value payment at maturity and interest payments based on a stated interest rate over the life of the bond.
- A bond can be issued at face value, a discount, or a premium.
 - Face value—Bond is issued at face value. The stated interest rate is equal to the market interest rate.
 - A discount—Bond is issued at less than face value. The stated interest rate is less than the market interest rate.
 - A premium—Bond is issued for more than face value. The stated interest rate is higher than the market interest rate.

3. How are bonds payable accounted for using the straight-line amortization method?

- The basic journal entry to record the issuance of bonds payable debits Cash and credits Bonds Payable.
 - If a bond is issued at a discount, Discount on Bonds Payable, a contra account, will be debited for the difference between the face value and cash received.
 - If a bond is issued at a premium, Premium on Bonds Payable, an adjunct account, will be credited for the difference between the cash received and face value.

- Interest payments must be recorded with a debit to Interest Expense and a credit to Cash.

- Discount on Bonds Payable and Premium on Bonds Payable must be amortized over the life of the bond.
- The straight-line amortization method allocates an equal amount of the bond discount or premium to each interest period.

4. How is the retirement of bonds payable accounted for?

- When bonds are retired at maturity, the entry involves a debit to Bonds Payable and a credit to Cash for the face value of the bond.
- Retirement of bonds before maturity involves removing the remaining portion of the discount or premium account and crediting a gain or debiting a loss on retirement.

5. How are liabilities reported on the balance sheet?

- Current and long-term liabilities are reported separately on the balance sheet.
- Bonds payable are shown at the carrying amount.

6. How do we use the debt to equity ratio to evaluate business performance?

- The debt to equity ratio shows the proportion of total liabilities relative to the total equity. The ratio measures financial leverage.
- Total liabilities / Total equity.

7. What is the time value of money, and how is present value and future value calculated? (Appendix 12A)

- The fact that invested money earns interest over time is called the time value of money. This concept explains why we would prefer to receive cash sooner rather than later.
- Lump sum payments are one-time cash payments.
- Annuities are streams of equal cash payments made at equal time intervals.
- To calculate the present value of a lump sum:

$$\text{Present value} = \text{Future value} \times \text{PV factor for } i = ?\%, n = ?$$

- To calculate the present value of an annuity:

$$\text{Present value} = \text{Amount of each cash inflow} \times \text{Annuity PV factor for } i = ?\%, n = ?$$

- To calculate the future value of a lump sum:

$$\text{Future value} = \text{Present value} \times \text{FV factor for } i = ?\%, n = ?$$

- To calculate the future value of an annuity:

$$\text{Future value} = \text{Amount of each cash inflow} \times \text{Annuity FV factor for } i = ?\%, n = ?$$

8. How are bonds payable accounted for using the effective-interest amortization method? (Appendix 12B)

- The effective-interest amortization method calculates interest expense based on the current carrying amount of the bond and the market interest rate at issuance, and then amortizes the difference between the cash interest payment and calculated interest expense as a decrease to the discount or premium.
- Using the effective-interest amortization method, the amount of interest expense is calculated using the carrying amount of the bonds and the market interest rate.

> Check Your Understanding

Check your understanding of the chapter by completing this problem and then looking at the solution. Use this practice to help identify which sections of the chapter you need to study more.

West Virginia Power Company has 8%, 10-year bonds payable that mature on June 30, 2028. The bonds are issued on June 30, 2018, and West Virginia Power pays interest each June 30 and December 31.

Requirements

- Will the bonds be issued at face value, at a premium, or at a discount if the market interest rate on the date of issuance is 7%? If the market interest rate is 10%? (See Learning Objective 2)
- West Virginia Power issued \$100,000 of the bonds at 87.548. Round all calculations to the nearest dollar. (See Learning Objective 2)
 - Record issuance of the bonds on June 30, 2018.
 - Record the payment of interest and amortization of the discount on December 31, 2018. Use the straight-line amortization method.
 - Compute the bonds' carrying amount at December 31, 2018.
 - Record the payment of interest and amortization of discount on June 30, 2019.

> Solution

Requirement 1

If the market interest rate is 7%, the bonds will be issued at a premium.

If the market interest rate is 10%, the bonds will be issued at a discount.

Requirement 2

Date	Accounts and Explanation	Debit	Credit
2018			
(a) Jun. 30	Cash ($\$100,000 \times 0.87548$)	87,548	
	Discount on Bonds Payable ($\$100,000 - \$87,548$)	12,452	
	Bonds Payable		100,000
	<i>Issued bonds at a discount.</i>		
(b) Dec. 31	Interest Expense ($\$4,000 + \623)	4,623	
	Discount on Bonds Payable ($\$12,452 \times 1/20$)		623
	Cash ($\$100,000 \times 0.08 \times 6/12$)		4,000

- c. Carrying amount at December 31, 2018

Long-term Liabilities:			
Bonds Payable		\$100,000	
Less: Discount on Bonds Payable (\$12,452 – \$623)		(11,829)	\$ 88,171

Date	Accounts and Explanation	Debit	Credit
2019			
(d) Jun. 30	Interest Expense (\$4,000 + \$623) Discount on Bonds Payable (\$12,452 × 1/20) Cash (\$100,000 × 0.08 × 6/12)	4,623 623 4,000	

> Key Terms

Adjunct Account (p. 658)
 Amortization Schedule (p. 646)
 Annuity (p. 666) (Appendix 12A)
 Bond Payable (p. 649)
 Callable Bonds (p. 661)
 Carrying Amount of Bonds (p. 656)
 Compound Interest (p. 666) (Appendix 12A)
 Debentures (p. 651)
 Debt to Equity Ratio (p. 664)

Discount on Bonds Payable (p. 651)
 Effective-Interest Amortization Method (p. 672) (Appendix 12B)
 Face Value (p. 650)
 Financial Leverage (p. 654)
 Future Value (p. 652)
 Long-term Liability (p. 646)
 Market Interest Rate (p. 653)
 Mortgages Payable (p. 647)
 Premium on Bonds Payable (p. 651)
 Present Value (p. 652)
 Secured Bonds (p. 651)
 Serial Bonds (p. 651)
 Simple Interest (p. 666) (Appendix 12A)
 Stated Interest Rate (p. 651)
 Straight-Line Amortization Method (p. 656)
 Term Bonds (p. 651)
 Time Value of Money (p. 652)

> Quick Check

Learning Objective 1

- Transco signed a 7-year note payable on January 1, 2018, of \$665,000. The note requires annual principal payments each December 31 of \$95,000 plus interest at 15%. The entry to record the annual payment on December 31, 2022, includes
 - a credit to Cash of \$194,750.
 - a credit to Notes Payable for \$95,000.
 - a debit to Interest Expense for \$99,750.
 - a debit to Interest Expense for \$42,750.

Learning Objective 2

- Daniels's bonds payable carry a stated interest rate of 5%, and the market rate of interest is 7%. The issue price of the Daniels's bonds will be at

a. par value.	c. face value.
b. a premium.	d. a discount.
- A bond that matures in installments at regular intervals is a

a. term bond.	c. periodic bond.
b. serial bond.	d. terminal bond.

Learning Objective 2

4. Nick Spanos Antiques issued its 7%, 20-year bonds payable at a price of \$168,520 (face value is \$200,000). The company uses the straight-line amortization method for the bond discount or premium. Interest expense for each year is
- a. \$11,796.
 - b. \$14,000.
 - c. \$12,426.
 - d. \$15,574.
5. Sarah Jackson Fitness Gym has \$400,000 of 10-year bonds payable outstanding. These bonds had a discount of \$24,000 at issuance, which was 5 years ago. The company uses the straight-line amortization method. The current carrying amount of these bonds payable is
- a. \$400,000.
 - b. \$412,000.
 - c. \$376,000.
 - d. \$388,000.
6. Vasquez issued a \$400,000 face value, 8%, 20-year bond at 95. Which of the following is the correct journal entry to record the retirement of the bond at maturity?

Date	Accounts and Explanation	Debit	Credit
a.	Bonds Payable Cash	380,000	380,000
b.	Cash Bonds Payable	400,000	400,000
c.	Bonds Payable Cash	400,000	400,000
d.	Cash Bonds Payable	380,000	380,000

7. Dynasystem's trial balance shows \$300,000 face value of bonds with a discount balance of \$2,500. The bonds mature in 10 years. How will the bonds be presented on the balance sheet?
- a. Bonds payable \$300,000 will be listed as a long-term liability. A \$2,500 discount on bonds payable will be listed as a contra current liability.
 - b. Bonds payable \$300,000 will be listed as a long-term liability.
 - c. Bonds payable \$297,500 (net of \$2,500 discount) will be listed as a long-term liability.
 - d. Bonds payable \$300,000 will be listed as a long-term liability. A \$2,500 discount on bonds payable will be listed as a current liability.
8. The debt to equity ratio is calculated as
- a. Total assets / Total equity.
 - b. Current liabilities / Total equity.
 - c. Total liabilities / Total assets.
 - d. Total liabilities / Total equity.
- 9A. Josh Robinson wishes to have \$90,000 in six years. If he can earn annual interest of 6%, how much must he invest today?
- a. \$84,780
 - b. \$63,450
 - c. \$127,710
 - d. \$10,450

Learning Objective 3**Learning Objective 3****Learning Objective 4****Learning Objective 5****Learning Objective 6****Learning Objective 7**
Appendix 12A

Learning Objective 8
Appendix 12B

- 10B.** Hicks Corporation issued \$500,000 of 5%, 10-year bonds payable at a price of 92. The market interest rate at the date of issuance was 6%, and the bonds pay interest semiannually. The journal entry to record the first semiannual interest payment using the effective-interest amortization method is

Date	Accounts and Explanation	Debit	Credit
a.	Interest Expense Discount on Bonds Payable Cash	14,500 2,000 12,500	
b.	Interest Expense Discount on Bonds Payable Cash	13,800 1,300 12,500	
c.	Interest Expense Discount on Bonds Payable Cash	17,000 2,000 15,000	
d.	Interest Expense Discount on Bonds Payable Cash	16,300 1,300 15,000	

Check your answers at the end of the chapter.

ASSESS YOUR PROGRESS

> Review Questions

- Where is the current portion of notes payable reported on the balance sheet?
- What is an amortization schedule?
- What is a mortgage payable?
- What is a bond payable?
- What is the difference between the stated interest rate and the market interest rate?
- When does a discount on bonds payable occur?
- When does a premium on bonds payable occur?
- When a bond is issued, what is its present value?
- Why would a company choose to issue bonds instead of issuing stock?
- What is the carrying amount of a bond?
- In regard to a bond discount or premium, what is the straight-line amortization method?
- What type of account is Discount on Bonds Payable? What is its normal balance? Is it added to or subtracted from the Bonds Payable account to determine the carrying amount?
- What type of account is Premium on Bonds Payable? What is its normal balance? Is it added to or subtracted from the Bonds Payable account to determine the carrying amount?

14. What is the journal entry to retire bonds at maturity?
15. What does it mean when a company calls a bond?
16. What are the two categories of liabilities reported on the balance sheet? Provide examples of each.
17. What does the debt to equity ratio show, and how is it calculated?
- 18A. Explain each of the key factors that the time value of money depends on.
- 19A. What is an annuity?
- 20A. How does compound interest differ from simple interest?
- 21B. In regard to a bond discount or premium, what is the effective-interest amortization method?

> Short Exercises

Assume bonds payable are amortized using the straight-line amortization method unless stated otherwise.

S12-1 Accounting for a long-term note payable

On January 1, 2018, Lynd–Flint signed a \$840,000, 12-year, 6% note. The loan required Lynd–Flint to make annual payments on December 31 of \$70,000 principal plus interest.

Requirements

1. Journalize the issuance of the note on January 1, 2018.
2. Journalize the first note payment on December 31, 2018.

Learning Objective 1

S12-2 Accounting for mortgages payable

Ember Company purchased a building with a market value of \$280,000 and land with a market value of \$55,000 on January 1, 2018. Ember Company paid \$15,000 cash and signed a 25-year, 12% mortgage payable for the balance.

Requirements

1. Journalize the January 1, 2018, purchase.
2. Journalize the first monthly payment of \$3,370 on January 31, 2018. (Round to the nearest dollar.)

Learning Objective 1

S12-3 Determining bond prices

Durham Clinics issued a \$200,000 face value, 7%, 10-year bond when the market interest rate was 8%. The bonds pay interest semiannually.

Requirements

1. Determine the interest payment for each period. Will this amount fluctuate from year to year with the change in market interest rate?
2. Determine the total number of interest payments.
3. Justify whether the bonds were priced at par, at a discount or at a premium.
4. Will your answer change if the market interest rate was 6% upon issue of the bonds? Explain.

Learning Objective 2

Learning Objective 2**S12-4 Pricing bonds**

Bond prices depend on the market rate of interest, stated rate of interest, and time.

Requirements

1. Compute the price of the following 7% bonds of Partner Telecom.
 - a. \$300,000 issued at 75.50
 - c. \$300,000 issued at 95.50
 - b. \$300,000 issued at 104.25
 - d. \$300,000 issued at 103.75
2. Which bond will Partner Telecom have to pay the most to retire at maturity? Explain your answer.

Learning Objective 3**S12-5 Determining bond amounts**

Starlight Drive-Ins borrowed money by issuing \$5,500,000 of 11% bonds payable at 92.5. Interest is paid semiannually.

Requirements

1. How much cash did Starlight receive when it issued the bonds payable?
2. How much must Starlight pay back at maturity?
3. How much cash interest will Starlight pay each six months?

Learning Objective 3**S12-6 Journalizing bond transactions**

Power Company issued a \$1,000,000, 5%, 5-year bond payable at face value on January 1, 2018. Interest is paid semiannually on January 1 and July 1.

Requirements

1. Journalize the issuance of the bond payable on January 1, 2018.
2. Journalize the payment of semiannual interest on July 1, 2018.

Learning Objective 3**S12-7 Journalizing bond transactions**

Omar Company issued a \$90,000, 10%, 10-year bond payable at 87 on January 1, 2018. Interest is paid semiannually on January 1 and July 1.

Requirements

1. Journalize the issuance of the bond payable on January 1, 2018.
2. Journalize the payment of semiannual interest and amortization of the bond discount or premium on July 1, 2018.

Learning Objective 3**S12-8 Journalizing bond transactions**

Wilkes Mutual Insurance Company issued a \$100,000, 5%, 10-year bond payable at 111 on January 1, 2018. Interest is paid semiannually on January 1 and July 1.

Requirements

1. Journalize the issuance of the bond payable on January 1, 2018.
2. Journalize the payment of semiannual interest and amortization of the bond discount or premium on July 1, 2018.

S12-9 Journalizing bond transactions including retirement at maturity

McQueen Company issued a \$100,000, 7.5%, 10-year bond payable. Journalize the following transactions for McQueen Company, and include an explanation for each entry:

- a. Issuance of the bond payable at face value on January 1, 2018.
- b. Payment of semiannual cash interest on July 1, 2018.
- c. Payment of the bond payable at maturity, assuming the last interest payment had already been recorded. (Give the date.)

S12-10 Retiring bonds payable before maturity

On January 1, 2018, Patterson Company issued \$100,000 of 10%, five-year bonds payable at 107. Patterson Company has extra cash and wishes to retire the bonds payable on January 1, 2019, immediately after making the second semiannual interest payment. To retire the bonds, Patterson Company pays the market price of 94.

Requirements

1. What is Patterson Company's carrying amount of the bonds payable on the retirement date?
2. How much cash must Patterson Company pay to retire the bonds payable?
3. Compute Patterson Company's gain or loss on the retirement of the bonds payable.

S12-11 Preparing the liabilities section of the balance sheet

Luxury Suites Hotels includes the following selected accounts in its general ledger at December 31, 2018:

Notes Payable (long-term)	\$ 200,000	Accounts Payable	\$ 33,000
Bonds Payable (due 2022)	450,000	Discount on Bonds Payable	13,500
Interest Payable (due next year)	1,000	Salaries Payable	2,600
Estimated Warranty Payable	1,300	Sales Tax Payable	400

Prepare the liabilities section of Luxury Suites's balance sheet at December 31, 2018.

S12-12 Computing the debt to equity ratio

Roland Corporation has the following amounts as of December 31, 2018.

Total assets	\$ 38,480
Total liabilities	17,680
Total equity	20,800

Compute the debt to equity ratio at December 31, 2018. (Round the debt to equity ratio to two decimal places, X.XX.)

S12A-13 Determining present value

Your grandfather would like to share some of his fortune with you. He offers to give you money under one of the following scenarios (you get to choose):

1. \$8,750 per year at the end of each of the next six years
2. \$49,650 (lump sum) now
3. \$100,450 (lump sum) six years from now

Learning Objectives 3, 4**Learning Objectives 3, 4****Learning Objective 5****Learning Objective 6****Learning Objective 7
Appendix 12A**

Learning Objective 7
Appendix 12A**Learning Objective 7**
Appendix 12A**Learning Objective 8**
Appendix 12B**Learning Objective 8**
Appendix 12B**Requirements**

1. Calculate the present value of each scenario using a 6% discount rate. Which scenario yields the highest present value? Round to the nearest dollar.
2. Would your preference change if you used a 12% discount rate?

S12A-14 Determining the present value of bond at issuance

On December 31, 2018, when the market interest rate is 10%, Randall Realty issues \$300,000 of 7.25%, 10-year bonds payable. The bonds pay interest semiannually. Determine the present value of the bonds at issuance.

S12A-15 Determining future value

David is entering high school and is determined to save money for college. David feels he can save \$5,000 each year for the next four years from his part-time job. If David is able to invest at 6%, how much will he have when he starts college?

S12B-16 Using the effective-interest amortization method

On December 31, 2018, when the market interest rate is 10%, McCann Realty issues \$450,000 of 7.25%, 10-year bonds payable. The bonds pay interest semiannually. The present value of the bonds at issuance is \$372,936.

Requirements

1. Prepare an amortization table using the effective interest amortization method for the first two semiannual interest periods. (Round to the nearest dollar.)
2. Using the amortization table prepared in Requirement 1, journalize issuance of the bonds and the first two interest payments.

S12B-17 Using the effective-interest amortization method

On December 31, 2018, when the market interest rate is 6%, Benson Realty issues \$700,000 of 6.25%, 10-year bonds payable. The bonds pay interest semiannually. Benson Realty received \$713,234 in cash at issuance.

Requirements

1. Prepare an amortization table using the effective interest amortization method for the first two semiannual interest periods. (Round to the nearest dollar.)
2. Using the amortization table prepared in Requirement 1, journalize issuance of the bonds and the first two interest payments.

> Exercises

Assume bonds payable are amortized using the straight-line amortization method unless stated otherwise.

E12-18 Accounting for long-term notes payable transactions

Consider the following note payable transactions of Caleb Video Productions.

2018

- Oct. 1 Purchased equipment costing \$80,000 by issuing a five-year, 8% note payable. The note requires annual principal payments of \$16,000 plus interest each October 1.
 Dec. 31 Accrued interest on the note payable.

2019

- Oct. 1 Paid the first installment on the note.
 Dec. 31 Accrued interest on the note payable.

Requirements

1. Journalize the transactions for the company.
2. Considering the given transactions only, what are Caleb Video Productions' total liabilities on December 31, 2019?

E12-19 Preparing an amortization schedule and recording mortgages payable entries

Kanta Company purchased a building and land with a fair market value of \$550,000 (building, \$450,000, and land, \$100,000) on January 1, 2018. Kanta signed a 20-year, 6% mortgage payable. Kanta will make monthly payments of \$3,940.37. Round to two decimal places. Explanations are not required for journal entries.

Requirements

1. Journalize the mortgage payable issuance on January 1, 2018.
2. Prepare an amortization schedule for the first two payments.
3. Journalize the first payment on January 31, 2018.
4. Journalize the second payment on February 28, 2018.

E12-20 Analyzing alternative plans to raise money

SB Electronics is considering two plans for raising \$4,000,000 to expand operations. Plan A is to issue 9% bonds payable, and plan B is to issue 500,000 shares of common stock. Before any new financing, SB Electronics has net income of \$350,000 and 300,000 shares of common stock outstanding. Management believes the company can use the new funds to earn additional income of \$700,000 before interest and taxes. The income tax rate is 30%. Analyze the SB Electronics situation to determine which plan will result in higher earnings per share. Use Exhibit 12-6 as a guide.

E12-21 Determining bond prices and interest expense

Jones Company is planning to issue \$490,000 of 9%, five-year bonds payable to borrow for a major expansion. The owner, Shane Jones, asks your advice on some related matters.

Learning Objective 1

2. Total Liabilities \$65,280

Learning Objective 1

3. Interest Expense \$2,750.00

Learning Objective 2

- EPS Plan A \$1.96

Learning Objectives 2, 3

2. Market price \$436,100

Learning Objective 3

2. Interest Exp. \$6,600

Learning Objective 3

1. June 30 Discount \$18,200

Learning Objective 3

2. Interest Expense \$3,430

Requirements

1. Answer the following questions:
 - a. At what type of bond price will Jones Company have total interest expense equal to the cash interest payments?
 - b. Under which type of bond price will Jones Company's total interest expense be greater than the cash interest payments?
 - c. If the market interest rate is 12%, what type of bond price can Jones Company expect for the bonds?
2. Compute the price of the bonds if the bonds are issued at 89.
3. How much will Jones Company pay in interest each year? How much will Jones Company's interest expense be for the first year?

E12-22 Journalizing bond issuance and interest payments

On June 30, Price Company issues 4%, five-year bonds payable with a face value of \$50,000. The bonds are issued at face value and pay interest on June 30 and December 31.

Requirements

1. Journalize the issuance of the bonds on June 30.
2. Journalize the semiannual interest payment on December 31.

E12-23 Journalizing bond issuance and interest payments

On June 30, Daughtry Limited issues 8%, 20-year bonds payable with a face value of \$130,000. The bonds are issued at 86 and pay interest on June 30 and December 31.

Requirements

1. Journalize the issuance of the bonds on June 30.
2. Journalize the semiannual interest payment and amortization of bond discount on December 31.

E12-24 Journalizing bond transactions

Jefferson Company issued \$110,000 of 10-year, 8% bonds payable on January 1, 2018. Jefferson Company pays interest each January 1 and July 1 and amortizes discount or premium by the straight-line amortization method. The company can issue its bonds payable under various conditions.

Requirements

1. Journalize Jefferson Company's issuance of the bonds and first semiannual interest payment assuming the bonds were issued at face value. Explanations are not required.
2. Journalize Jefferson Company's issuance of the bonds and first semiannual interest payment assuming the bonds were issued at 93. Explanations are not required.
3. Journalize Jefferson Company's issuance of the bonds and first semiannual interest payment assuming the bonds were issued at 106. Explanations are not required.
4. Which bond price results in the most interest expense for Jefferson Company? Explain in detail.

E12-25 Journalizing bond issuance and interest payments

On January 1, 2018, Roberts Unlimited issues 8%, 20-year bonds payable with a face value of \$240,000. The bonds are issued at 104 and pay interest on June 30 and December 31.

Requirements

1. Journalize the issuance of the bonds on January 1, 2018.
 2. Journalize the semiannual interest payment and amortization of bond premium on June 30, 2018.
 3. Journalize the semiannual interest payment and amortization of bond premium on December 31, 2018.
 4. Journalize the retirement of the bond at maturity, assuming the last interest payment has already been recorded. (Give the date.)

E12-26 Retiring bonds payable before maturity

Parkview Magazine issued \$630,000 of 15-year, 6% callable bonds payable on July 31, 2018, at 99. On July 31, 2021, *Parkview* called the bonds at 104. Assume annual interest payments.

Requirements

- Without making journal entries, compute the carrying amount of the bonds payable at July 31, 2021.
 - Assume all amortization has been recorded properly. Journalize the retirement of the bonds on July 31, 2021. No explanation is required.

E12-27 Reporting current and long-term liabilities

Pediatric Dispensary borrowed \$390,000 on January 2, 2018, by issuing a 15% serial bond payable that must be paid in three equal annual installments plus interest for the year. The first payment of principal and interest comes due January 2, 2019. Complete the missing information. Assume the bonds are issued at face value.

	December 31		
	2018	2019	2020
Current Liabilities:			
Bonds Payable	\$ _____	\$ _____	\$ _____
Interest Payable	_____	_____	_____
Long-term Liabilities:			
Bonds Payable	_____	_____	_____

E12-28 Reporting liabilities

At December 31, MediStat Precision Instruments owes \$52,000 on Accounts Payable, Salaries Payable of \$12,000, and Income Tax Payable of \$10,000. MediStat also has \$300,000 of Bonds Payable that were issued at face value that require payment of a \$35,000 installment next year and the remainder in later years. The bonds payable require an annual interest payment of \$4,000, and MediStat still owes this interest for the current year. Report MediStat's liabilities on its classified balance sheet on December 31, 2018.

Learning Objectives 3, 4

- ### 1. Premium \$9,600

Learning Objective 4

- ? Cash \$606 000

Learning Objectives 2, 3, 5

Total Liabilities \$378,000

Total Liabilities \$378,000

Learning Objective 6**E12-29 Computing the debt to equity ratio**

Ludwig Corporation has the following data as of December 31, 2018:

Total Current Liabilities	\$ 36,210	Total Stockholders' Equity	\$?
Total Current Assets	58,200	Other Assets	36,800
Long-term Liabilities	139,630	Property, Plant, and Equipment, Net	206,440

Compute the debt to equity ratio at December 31, 2018.

Learning Objective 7
Appendix 12A

2. Present Value \$77,594

Learning Objective 8
Appendix 12B

2. Interest Expense \$4,995

E12A-30 Determining the present value of bonds payable

Interest rates determine the present value of future amounts. (Round to the nearest dollar.)

Requirements

1. Determine the present value of seven-year bonds payable with face value of \$91,000 and stated interest rate of 12%, paid semiannually. The market rate of interest is 12% at issuance.
2. Same bonds payable as in Requirement 1, but the market interest rate is 16%.
3. Same bonds payable as in Requirement 1, but the market interest rate is 10%.

E12B-31 Journalizing bond transactions using the effective-interest amortization method

Journalize issuance of the bond and the first semiannual interest payment under each of the following three assumptions. The company amortizes bond premium and discount by the effective-interest amortization method. Explanations are not required.

1. Seven-year bonds payable with face value of \$83,000 and stated interest rate of 10%, paid semiannually. The market rate of interest is 10% at issuance. The present value of the bonds at issuance is \$83,000.
2. Same bonds payable as in assumption 1, but the market interest rate is 16%. The present value of the bonds at issuance is \$62,433.
3. Same bonds payable as in assumption 1, but the market interest rate is 8%. The present value of the bonds at issuance is \$91,727.

Total Current Liabilities	\$ 36,210	Total Stockholders' Equity	\$?
Total Current Assets	58,200	Other Assets	36,800
Long-term Liabilities	139,630	Property, Plant, and Equipment, Net	206,440

> Problems Group A

P12-32A Journalizing liability transactions and reporting them on the balance sheet

The following transactions of Emergency Pharmacies occurred during 2018 and 2019:

2018

- Mar. 1 Borrowed \$300,000 from Milton Bank. The 15-year, 9% note requires payments due annually, on March 1. Each payment consists of \$20,000 principal plus one year's interest.
- Dec. 1 Mortgaged the warehouse for \$350,000 cash with Sawyer Bank. The mortgage requires monthly payments of \$2,000. The interest rate on the note is 6% and accrues monthly. The first payment is due on January 1, 2019.
- 31 Recorded interest accrued on the Sawyer Bank note.
- 31 Recorded interest accrued on the Milton Bank note.

2019

- Jan. 1 Paid Sawyer Bank monthly mortgage payment.
- Feb. 1 Paid Sawyer Bank monthly mortgage payment.
- Mar. 1 Paid Sawyer Bank monthly mortgage payment.
- 1 Paid first installment on note due to Milton Bank.

Requirements

1. Journalize the transactions in the Emergency Pharmacies general journal. Round to the nearest dollar. Explanations are not required.
2. Prepare the liabilities section of the balance sheet for Emergency Pharmacies on March 1, 2019 after all the journal entries are recorded.

P12-33A Analyzing, journalizing, and reporting bond transactions

Danny's Hamburgers issued 6%, 10-year bonds payable at 90 on December 31, 2018. At December 31, 2020, Danny reported the bonds payable as follows:

Long-term Liabilities:		
Bonds Payable		\$ 600,000
Less: Discount on Bonds Payable	(48,000)	\$ 552,000

Danny's pays semiannual interest each June 30 and December 31.

Requirements

1. Answer the following questions about Danny's bonds payable:
 - a. What is the maturity value of the bonds?
 - b. What is the carrying amount of the bonds at December 31, 2020?
 - c. What is the semiannual cash interest payment on the bonds?
 - d. How much interest expense should the company record each year?
2. Record the June 30, 2020, semiannual interest payment and amortization of discount.

Learning Objectives 1, 5

2. Total Liabilities \$653,334

Learning Objectives 2, 3

2. Discount \$3,000

Learning Objectives 2, 3, 4

3. June 30, 2018, Interest Expense \$25,200

Learning Objectives 2, 3, 4

June 30, 2018, Interest Expense
\$37,750

Learning Objectives 5, 6

1. Total Liabilities \$276,200

**Learning Objectives 7, 8
Appendices 12A, 12B**

3. Jan. 1, 2018, Cash \$629,634

P12-34A Analyzing and journalizing bond transactions

On January 1, 2018, Neighborhood Credit Union (NCU) issued 6%, 20-year bonds payable with face value of \$100,000. The bonds pay interest on June 30 and December 31.

Requirements

1. If the market interest rate is 5% when NCU issues its bonds, will the bonds be priced at face value, at a premium, or at a discount? Explain.
2. If the market interest rate is 7% when NCU issues its bonds, will the bonds be priced at face value, at a premium, or at a discount? Explain.
3. The issue price of the bonds is 97. Journalize the following bond transactions:
 - a. Issuance of the bonds on January 1, 2018.
 - b. Payment of interest and amortization on June 30, 2018.
 - c. Payment of interest and amortization on December 31, 2018.
 - d. Retirement of the bond at maturity on December 31, 2037, assuming the last interest payment has already been recorded.

P12-35A Analyzing and journalizing bond transactions

On January 1, 2018, Educators Credit Union (ECU) issued 8%, 20-year bonds payable with face value of \$1,000,000. These bonds pay interest on June 30 and December 31. The issue price of the bonds is 109.

Journalize the following bond transactions:

- a. Issuance of the bonds on January 1, 2018.
- b. Payment of interest and amortization on June 30, 2018.
- c. Payment of interest and amortization on December 31, 2018.
- d. Retirement of the bond at maturity on December 31, 2037, assuming the last interest payment has already been recorded.

P12-36A Reporting liabilities on the balance sheet and computing debt to equity ratio

The accounting records of Router Wireless include the following as of December 31, 2018:

Accounts Payable	\$ 68,000	Salaries Payable	\$ 8,000
Mortgages Payable (long-term)	75,000	Bonds Payable (current portion)	35,000
Interest Payable	22,000	Premium on Bonds Payable	11,000
Bonds Payable (long-term)	57,000	Unearned Revenue (short-term)	3,300
Total Stockholders' Equity	175,000		

Requirements

1. Report these liabilities on the Router Wireless balance sheet, including headings and totals for current liabilities and long-term liabilities.
2. Compute Router Wireless's debt to equity ratio at December 31, 2018.

P12AB-37A Determining the present value of bonds payable and journalizing using the effective-interest amortization method

Brad Nelson, Inc. issued \$600,000 of 7%, six-year bonds payable on January 1, 2018. The market interest rate at the date of issuance was 6%, and the bonds pay interest semiannually.

Requirements

- How much cash did the company receive upon issuance of the bonds payable? (Round to the nearest dollar.)
- Prepare an amortization table for the bond using the effective-interest method, through the first two interest payments. (Round to the nearest dollar.)
- Journalize the issuance of the bonds on January 1, 2018, and the first and second payments of the semiannual interest amount and amortization of the bonds on June 30, 2018, and December 31, 2018. Explanations are not required.

P12AB-38A Determining the present value of bonds payable and journalizing using the effective-interest amortization method

Soothing, Inc. is authorized to issue 7%, 10-year bonds payable. On January 1, 2018, when the market interest rate is 8%, the company issues \$100,000 of the bonds. The bonds pay interest semiannually.

Requirements

- How much cash did the company receive upon issuance of the bonds payable? (Round to the nearest dollar.)
- Prepare an amortization table for the bond using the effective-interest method, through the first two interest payments. (Round to the nearest dollar.)
- Journalize the issuance of the bonds on January 1, 2018, and the first and second payments of the semiannual interest amount and amortization of the bonds on June 30, 2018, and December 31, 2018. Explanations are not required.

Learning Objectives 7, 8 Appendices 12A, 12B

3. Jan. 1, 2018, Cash \$214,035

> Problems Group B

P12-39B Journalizing liability transactions and reporting them on the balance sheet

The following transactions of Great Value Pharmacies occurred during 2018 and 2019:

2018

- Mar. 1 Borrowed \$390,000 from Bartow Bank. The six-year, 13% note requires payments due annually, on March 1. Each payment consists of \$65,000 principal plus one year's interest.
- Dec. 1 Mortgaged the warehouse for \$350,000 cash with Saylor Bank. The mortgage requires monthly payments of \$7,000. The interest rate on the note is 9% and accrues monthly. The first payment is due on January 1, 2019.
- 31 Recorded interest accrued on the Saylor Bank note.
- 31 Recorded interest accrued on the Bartow Bank note.

2019

- Jan. 1 Paid Saylor Bank monthly mortgage payment.
- Feb. 1 Paid Saylor Bank monthly mortgage payment.
- Mar. 1 Paid Saylor Bank monthly mortgage payment.
- 1 Paid first installment on note due to Bartow Bank.

Learning Objectives 1, 5

2. Total Liabilities \$661,776

Requirements

- Journalize the transactions in the Great Value Pharmacies general journal. Round to the nearest dollar. Explanations are not required.
- Prepare the liabilities section of the balance sheet for Great Value Pharmacies on March 1, 2019 after all the journal entries are recorded.

Learning Objectives 2, 3

2. Discount \$2,250

P12-40B Analyzing, journalizing, and reporting bond transactions

Bruce's Hamburgers issued 9%, 10-year bonds payable at 90 on December 31, 2018. At December 31, 2018, Bruce reported the bonds payable as follows:

Long-term Liabilities:		
Bonds Payable	\$ 600,000	
Less: Discount on Bonds Payable	(48,000)	\$ 552,000

Bruce pays semiannual interest each June 30 and December 31.

Requirements

1. Answer the following questions about Bruce's bonds payable:
 - a. What is the maturity value of the bonds?
 - b. What is the carrying amount of the bonds at December 31, 2020?
 - c. What is the semiannual cash interest payment on the bonds?
 - d. How much interest expense should the company record each year?
2. Record the June 30, 2020 semiannual interest payment and amortization of discount.

Learning Objectives 2, 3, 4

3. June 30 Interest Expense \$7,350

P12-41B Analyzing and journalizing bond transactions

On January 1, 2018, Doctors Credit Union (DCU) issued 7%, 20-year bonds payable with face value of \$200,000. The bonds pay interest on June 30 and December 31.

Requirements

1. If the market interest rate is 5% when DCU issues its bonds, will the bonds be priced at face value, at a premium, or at a discount? Explain.
2. If the market interest rate is 8% when DCU issues its bonds, will the bonds be priced at face value, at a premium, or at a discount? Explain.
3. The issue price of the bonds is 93. Journalize the following bond transactions:
 - a. Issuance of the bonds on January 1, 2018.
 - b. Payment of interest and amortization on June 30, 2018.
 - c. Payment of interest and amortization on December 31, 2018.
 - d. Retirement of the bond at maturity on December 31, 2037, assuming the last interest payment has already been recorded.

Learning Objectives 2, 3, 4

June 30 Interest Expense \$15,600

P12-42B Analyzing and journalizing bond transactions

On January 1, 2018, Mechanics Credit Union (MCU) issued 9%, 20-year bonds payable with face value of \$1,100,000. The bonds pay interest on June 30 and December 31. The issue price of the bonds is 106.

Journalize the following bond transactions:

- a. Issuance of the bonds on January 1, 2018.
- b. Payment of interest and amortization on June 30, 2018.
- c. Payment of interest and amortization on December 31, 2018.
- d. Retirement of the bond at maturity on December 31, 2037, assuming the last interest payment has already been recorded.

P12-43B Reporting liabilities on the balance sheet and computing debt to equity ratio

The accounting records of Placeless Wireless include the following as of December 31, 2018:

Accounts Payable	\$ 70,000	Salaries Payable	\$ 7,000
Mortgages Payable (long-term)	78,000	Bonds Payable (current portion)	35,000
Interest Payable	21,000	Premium on Bonds Payable	9,000
Bonds Payable (long-term)	64,000	Unearned Revenue (short-term)	2,600
Total Stockholders' Equity	175,000		

Requirements

- Report these liabilities on the Placeless Wireless balance sheet, including headings and totals for current liabilities and long-term liabilities.
- Compute Placeless Wireless's debt to equity ratio at December 31, 2018.

P12AB-44B Determining the present value of bonds payable and journalizing using the effective-interest amortization method

Ari Goldstein issued \$300,000 of 11%, five-year bonds payable on January 1, 2018. The market interest rate at the date of issuance was 10%, and the bonds pay interest semiannually.

Requirements

- How much cash did the company receive upon issuance of the bonds payable? (Round to the nearest dollar.)
- Prepare an amortization table for the bond using the effective-interest method, through the first two interest payments. (Round to the nearest dollar.)
- Journalize the issuance of the bonds on January 1, 2018, and the first second payments of the semiannual interest amount and amortization of the bonds on June 30, 2018, and December 31, 2018. Explanations are not required.

P12AB-45B Determining the present value of bonds payable and journalizing using the effective-interest amortization method

Stressless, Inc. is authorized to issue 11%, 10-year bonds payable. On January 1, 2018, when the market interest rate is 16%, the company issues \$800,000 of the bonds. The bonds pay interest semiannually.

Requirements

- How much cash did the company receive upon issuance of the bonds payable? (Round to the nearest dollar.)
- Prepare an amortization table for the bond using the effective-interest method, through the first two interest payments. (Round to the nearest dollar.)
- Journalize the issuance of the bonds on January 1, 2018, and the first and second payment of the semiannual interest amount and amortization of the bonds on June 30, 2018, and December 31, 2018. Explanations are not required.

Learning Objectives 5, 6

- Total Liabilities \$286,200

Learning Objectives 7, 8 Appendices 12A, 12B

- Jan. 1, 2018, Cash \$311,613

Learning Objectives 7, 8 Appendices 12A, 12B

- Jan. 1, 2018, Cash \$468,895

CRITICAL THINKING

> Using Excel

P12-46 Using Excel for long-term notes payable amortization schedule

Download an Excel template for this problem online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

Patrick's Delivery Services is buying a van to help with deliveries. The cost of the vehicle is \$35,000, the interest rate is 6%, and the loan is for three years. The van is to be repaid in three equal installment payments. Payments are due at the end of each year.

Requirements

1. Complete the data table.
2. Using the present value of an ordinary annuity table, calculate the payment amount and complete the amortization schedule.
 - a. Calculate the loan payment by dividing the loan amount by the appropriate present value factor.
 - b. Round values to two decimal places and ignore rounding errors on the last payment.
 - c. Use absolute cell references and relative cell references in formulas.
3. Using the Excel PMT function, calculate the payment amount and complete the amortization schedule.
 - a. The PMT function calculates a payment amount that results in a negative number. Reverse this to a positive number for calculations in the amortization schedule.
 - b. Round values to two decimal places and ignore rounding errors on the last payment.
 - c. Use absolute cell references and relative cell references in formulas.

> Continuing Problem

P12-47 Describing bonds, journalizing transactions for bonds payable using the straight-line amortization method, and journalizing transactions for a mortgage payable

This problem continues the Let's Bike Company situation from Chapter 11. Let's Bike Company is considering raising additional capital for further expansion. The company wants to finance a new business venture into guided mountain bike trips across some of the European countries. Additionally, the company wants to add another building on their land to offer more services for local customers.

Let's Bike Company plans to raise the capital by issuing \$250,000 of 8%, six-year bonds on January 1, 2020. The bonds pay interest semiannually on June 30 and December 31. The company receives \$262,079 when the bonds are issued.

The company also issues a mortgage payable for \$300,000 on January 1, 2020. The proceeds from the mortgage will be used to construct the new building. The mortgage requires annual payments of \$30,000 plus interest for ten years, payable on December 31. The mortgage interest rate is 7%.

Requirements

1. Will the bonds issue at face value, a premium, or a discount?
2. Record the following transactions. Include dates and round to the nearest dollar. Omit explanations.
 - a. Cash received from the bond issue.
 - b. Cash received from the mortgage payable.

- c. Semiannual bond interest payments for 2020. Amortize the premium or discount using the straight-line amortization method.
 - d. Payment on the mortgage payable for 2020.
3. Calculate the total interest expense incurred in 2020.

> Tying It All Together Case 12-1

Before you begin this assignment, review the Tying It All Together feature in the chapter. It will also be helpful if you review The Walt Disney Company's 2015 annual report (https://www.sec.gov/Archives/edgar/data/1001039/000100103915000255/fy2015_q4x10k.htm).

The Walt Disney Company is a diversified entertainment company that is comprised of five different business segments. Walt Disney began as a cartoon studio in 1920 and today is known as a leading worldwide entertainment provider.

Requirements

1. On The Walt Disney Company's balance sheet dated October 3, 2015, the company reports borrowings of \$12,773 million. Review Note 8 (Borrowings) of the company's annual report. What are the different types of borrowings the company holds?
2. Perform a web search for the terms commercial paper and U.S. medium-term notes. What do each of these terms mean?
3. Review the information included in Note 8. What are the maturity dates for The Walt Disney Company's U.S. medium-term notes?

> Decision Case 12-1

The following questions are not related.

Requirements

1. Duncan Brooks needs to borrow \$500,000 to open new stores. Brooks can borrow \$500,000 by issuing 5%, 10-year bonds at 96. How much will Brooks actually receive in cash under this arrangement? How much must Brooks pay back at maturity? How will Brooks account for the difference between the cash received on the issue date and the amount paid back?
2. Brooks prefers to borrow for longer periods when interest rates are low and for shorter periods when interest rates are high. Why is this a good business strategy?

> Ethical Issue 12-1

Raffie's Kids, a nonprofit organization that provides aid to victims of domestic violence, low-income families, and special-needs children, has a 30-year, 5% mortgage on the existing building. The mortgage requires monthly payments of \$3,000. Raffie's bookkeeper is preparing financial statements for the board and, in doing so, lists the mortgage balance of \$287,000 under current liabilities because the board hopes to be able to pay the mortgage off in full next year. Of the mortgage principal, \$20,000 will be paid next year if Raffie's pays according to the mortgage agreement. The board members call you, their trusted CPA, to advise them on how Raffie's Kids should report the mortgage on its balance sheet. What is the ethical issue? Provide and discuss the reason for your recommendation.

> Fraud Case 12-1

Bill and Edna had been married two years and had just reached the point where they had enough savings to start investing. Bill's uncle Dave told them that he had recently inherited some very rare railroad bonds from his grandmother's estate. He wanted to help Bill and Edna get a start in the world and would sell them 50 of the bonds at \$100 each. The bonds were dated 1873, beautifully engraved, showing a face value of \$1,000 each. Uncle Dave pointed out that "United States of America" was printed prominently at the top and that the U.S. government had established a sinking fund to retire the old railroad bonds. A sinking fund is a fund established for the purpose of repaying the debt. It allows the organization (the U.S. government, in this example) to set aside money over time to retire the bonds. All Bill and Edna needed to do was hold on to them until the government contacted them, and they would eventually get the full \$1,000 for each bond. Bill and Edna were overjoyed—until a year later when they saw the exact same bonds for sale at a coin and stamp shop priced as "collectors' items" for \$9.95 each!

Requirements

1. If a company goes bankrupt, what happens to the bonds it issued and the investors who bought the bonds?
2. When investing in bonds, how can you tell whether the bond issue is a legitimate transaction?
3. Is there a way to determine the relative risk of corporate bonds?

> Financial Statement Case 12-1

Use the **Target Corporation** financial statements to answer the following questions. Visit <http://www.pearsonhighered.com/Horngren> to view a link to Target Corporation's Fiscal 2015 Annual Report.

Requirements

1. How much was Target Corporation's long-term debt at January 30, 2016?
2. Compute Target Corporation's debt to equity ratio at January 30, 2016. How does it compare to **Kohl's Corporation's** ratio?

Pearson MyLab Accounting

For a wealth of online resources, including exercises, problems, media, and immediate tutorial help, please visit <http://www.myaccountinglab.com>.

> Quick Check Answers

1. d 2. d 3. b 4. d 5. d 6. c 7. c 8. d 9A. b 10B. b

Stockholders' Equity

13



How Do We Raise More Cash?

Lacey Snyder and Alison Mason, stockholders of Sharemymovie.com, were reviewing the latest financial statements of their business. Sharemymovie.com, a video-sharing Web site in which users can upload, share, and view videos, started five years ago with a cash contribution from each owner and a small bank loan. In the past five years, the site has grown rapidly with more than 1 million video views each day. Lacey and Alison are excited about the success of the business, but the business has recently been experiencing growing pains.

With the increase in the number of users visiting the site and uploading new videos daily, Lacey and Alison know they need to invest in a new Web site design and purchase updated software. But these expansions will take cash, and they are reluctant to borrow more money from the bank. Lacey and Alison considered asking friends and family to invest in the business.

They realized that in order to gain enough cash to meet the growing needs of the business, they would need a large influx of money. After talking to their accountant, they are considering expanding their corporation and taking their business public. In other words, the business will offer ownership (through stock) for anyone who is willing to invest.

By offering the opportunity to own a share in the business, Sharemymovie.com can quickly raise the necessary cash to meet its expansion needs. In addition, the corporate form of business offers liability protection for the stockholders. But there are also some disadvantages to the corporate form, such as double taxation and increased government regulation. As Lacey and Alison move forward with their decision, they need to understand the pros and cons of corporations and carefully evaluate the impact of this decision.



How Much Is the Business Worth?

On February 1, 2012, **Facebook, Inc.**, the popular social media Web site, announced that it planned to issue shares of stock on the stock market under the ticker symbol FB. On May 18, Mark Zuckerberg, the mastermind behind Facebook, rang the opening bell of the stock exchange and shares of Facebook stock began selling at \$42.05 per share. On that day, more than 500 million shares were sold and exchanged with an estimated market capitalization of more than \$104 billion, one of the largest initial public offerings (IPO) to date. It's interesting to note that in less than a month after its IPO, Facebook stock lost more than a quarter of its value and continues to fluctuate.

Why did Facebook decide to issue stock? What are the advantages and disadvantages of a corporation? How is stock reported on the financial statements? What does the drop in market price of the stock mean to Facebook? In this chapter, we explore the answers to these questions and many more. You learn why businesses decide to organize as a corporation and how to account for transactions unique to a corporation.





Chapter 13 Learning Objectives



- | | |
|--|---|
| <ol style="list-style-type: none">1 Identify the characteristics of a corporation2 Journalize the issuance of stock3 Account for the purchase and sale of treasury stock4 Account for cash dividends, stock dividends, and stock splits | <ol style="list-style-type: none">5 Prepare a corporate income statement including earnings per share6 Explain how equity is reported for a corporation7 Use earnings per share, rate of return on common stockholders' equity, and the price/earnings ratio to evaluate business performance |
|--|---|

WHAT IS A CORPORATION?

Learning Objective 1

Identify the characteristics of a corporation

Corporation

A business organized under state law that is a separate legal entity.

Characteristics of Corporations

A corporation has many unique characteristics:

- **Separate legal entity**—A corporation is a separate legal entity. It is organized independently of its owners.
- **Number of owners**—Corporations have one or more owners (called *stockholders*). A *public* corporation is a corporation whose stock can be purchased on an organized stock exchange, such as the New York Stock Exchange (NYSE) or the NASDAQ Stock Market. Public corporations often have thousands of owners. Some corporations are *privately held*, which means that the stock cannot be purchased on a stock exchange. These corporations often have only a few stockholders.
- **No personal liability of the owner(s) for business's debts**—Stockholders are not personally liable for the debts of the corporation.
- **Lack of mutual agency**—Unlike owners of a sole proprietorship and partnership, stockholders of the corporation are not mutual agents of the business. Stockholders cannot bind the business to a contract.
- **Indefinite life**—Corporations have an indefinite life. They can exist until the business decides to terminate. Withdrawal or death of an owner does not cause termination of the business.
- **Taxation**—Corporations are separate taxable entities. The corporation pays the income tax on the business earnings and is also responsible for paying payroll taxes on employee salaries and wages. Corporations also experience double taxation. Double taxation occurs when corporations make cash payments (called *dividends*) to stockholders. These payments are taxed once as earnings of the corporation and then again when the stockholder receives the dividend. The tax is first paid by the corporation on its corporate income tax return, and then the dividends received by the stockholder are reported on the stockholder's personal income tax return.
- **Capital accumulation**—Corporations can raise more money than sole proprietorships and partnerships. This is completed through an initial public offering (IPO) and represents the initial offering of corporate shares of stock to the public.



Exhibit 13-1 summarizes the advantages and disadvantages of a corporation.

Exhibit 13-1 | Corporations: Advantages and Disadvantages

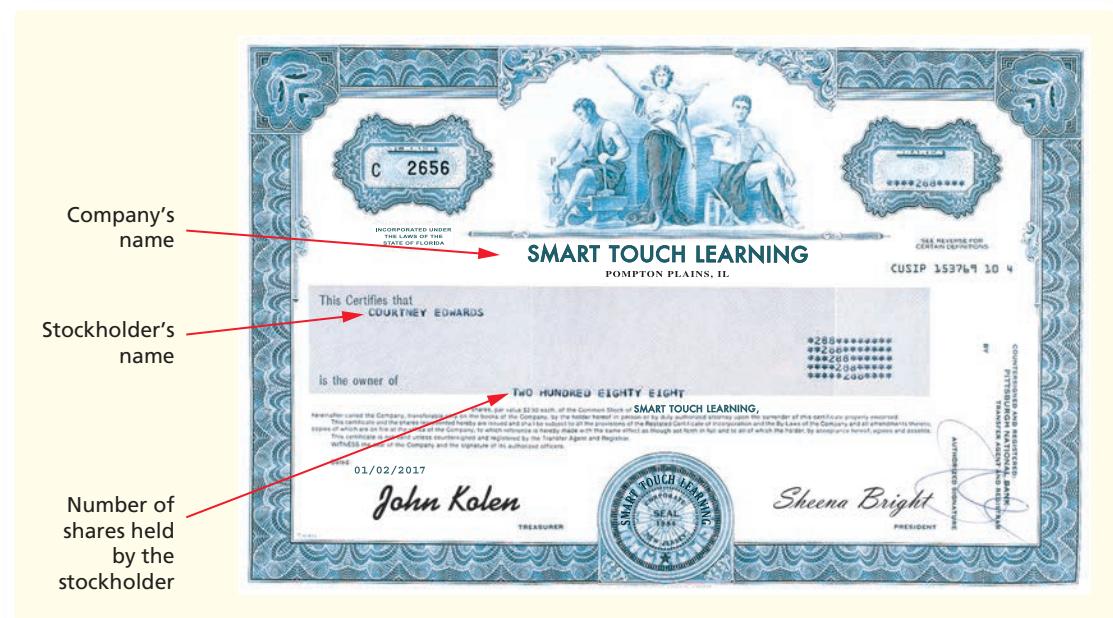
Advantages	Disadvantages
1. Corporations can raise more money than a proprietorship or partnership.	1. Ownership and management are often separated.
2. A corporation has a continuous life.	2. The earnings of a corporation may be subject to double taxation.
3. The transfer of corporate ownership is easy.	3. Government regulation is expensive.
4. There is no mutual agency among the stockholders and the corporation.	4. Start-up costs are higher than other business forms.
5. Stockholders have limited liability.	

Stockholders' Equity Basics

A corporation is created by filing a certificate of formation with a state. The state authorizes the business to be organized as a corporation and grants the entity a charter or articles of incorporation. The corporation then prepares a set of bylaws, which provide the rules and procedures that the corporation will follow.

The corporate charter of a corporation identifies the maximum number of shares of stock the corporation may issue, called **authorized stock**. The charter provides a state's permission for the corporation to operate. Authorized stock can be issued or unissued. **Issued stock** has been issued by the corporation but may or may not be held by stockholders. A corporation issues **stock certificates** to the stockholders when they buy the stock. The stock certificate represents the individual's ownership of the corporation's capital, so it is called **capital stock**. The basic unit of stock is a share. A corporation may issue a physical stock certificate for any number of shares. Today, many corporations issue the stocks electronically rather than printing a paper certificate. Exhibit 13-2 shows a stock certificate for 288 shares of Smart Touch Learning common stock owned by Courtney Edwards.

Exhibit 13-2 | Stock Certificate



Authorized Stock

The maximum number of shares of stock that the corporate charter allows the corporation to issue.

Issued Stock

Stock that has been issued but may or may not be held by stockholders.

Stock Certificate

Paper evidence of ownership in a corporation.

Capital Stock

Represents the individual's ownership of the corporation's capital.



The stock certificate shows the following:

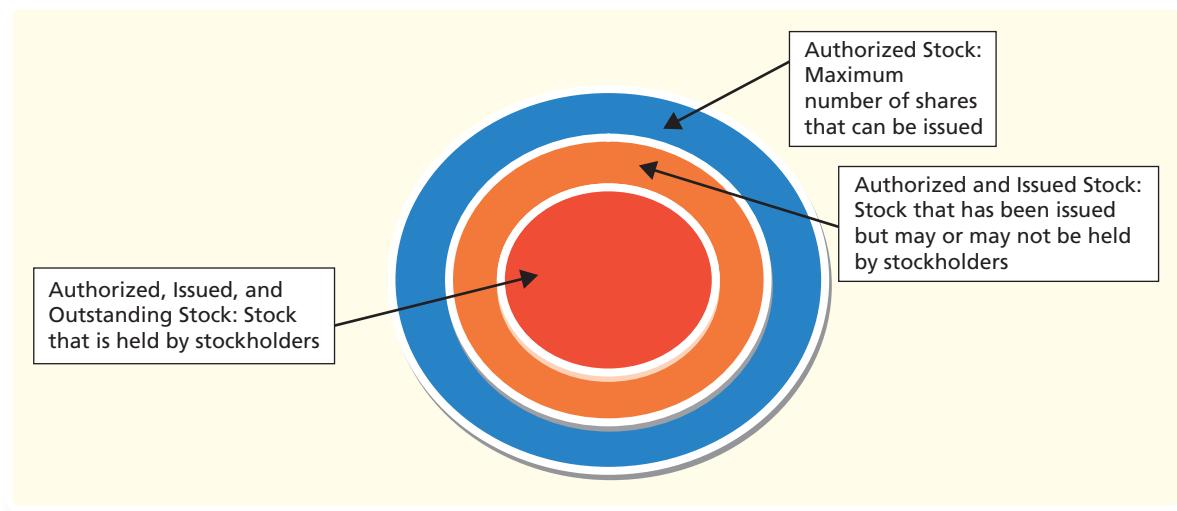
- Company name
- Stockholder name
- Number of shares owned by the stockholder

Outstanding Stock

Issued stock in the hands of stockholders.

Stock that is held by the stockholders is said to be **outstanding stock**. The outstanding stock of a corporation represents 100% of its ownership. The numbers of shares of authorized stock, issued stock, and outstanding stock are most likely going to be different amounts. Exhibit 13-3 explains the differences between these categories of stock.

Exhibit 13-3 | Categories of Stock



Stockholders' Rights

A stockholder has four basic rights, unless a right is withheld by contract:

1. **Vote.** Stockholders participate in management indirectly by voting on corporate matters at stockholders' meetings (or sometimes through the mail or electronic voting). This is the only way in which a stockholder can help to manage the corporation. Normally, each share of basic ownership in the corporation carries one vote.
2. **Dividends.** Stockholders receive a proportionate part of any **dividend** that is declared and paid. A dividend is a distribution of a corporation's earnings to stockholders. Each share of stock receives an equal dividend so, for example, a shareholder who owns 1% of the total shares in the company receives 1% of any total dividend.
3. **Liquidation.** Stockholders receive their proportionate share of any assets remaining after the corporation pays its debts and liquidates (goes out of business).
4. **Preemptive right.** Stockholders have a **preemptive right** to maintain their proportionate ownership in the corporation. For example, suppose a stockholder owns 5% of a corporation's stock. If the corporation issues 100,000 new shares of stock, it must offer the stockholder the opportunity to buy 5% (5,000) of the new shares. This right, however, is usually withheld by contract for most corporations.

Capital Stock

Corporations can issue different classes of stock. The stock of a corporation may be either common or preferred. Every corporation issues **common stock**, which represents the basic ownership of the corporation. Some companies issue Class A common stock, which

Dividend

A distribution of a corporation's earnings to stockholders.

Preemptive Right

Stockholder's right to maintain his or her proportionate ownership in the corporation.

Common Stock

Represents the basic ownership of a corporation.



carries the right to vote. They may also issue Class B common stock, which may be nonvoting. There must be at least one voting class of stock. However, there is no limit as to the number or types of classes of stock that a corporation may issue. Each class of stock has a separate account in the company's ledger.

Preferred stock gives its owners certain advantages over common stock. Most notably, preferred stockholders receive a dividend preference over common stockholders. This ensures that if a corporation pays dividends, the preferred stockholders receive their dividends first. They also receive assets before common stockholders if the corporation liquidates. When dividends are declared, corporations pay a fixed dividend on preferred stock. The amount of the preferred dividend is printed on the face of the preferred stock certificate. Investors usually buy preferred stock to earn those fixed dividends. With these advantages, preferred stockholders take less investment risk than common stockholders.

Owners of preferred stock also have the four basic stockholder rights, unless a right is withheld. The right to vote, for example, is usually withheld from preferred stock. Companies may issue different series of preferred stock (Series A and Series B, for example). Each series is recorded in a separate account. Preferred stock is rarer than you might think. Many corporations have the authorization to issue preferred stock, but few actually issue the preferred shares.

Stock may carry a par value or it may be no-par stock. **Par value is an amount assigned by a company to a share of its stock. Most companies set par value low to avoid issuing their stock below par. The par value of a stock has no relation to the market value, which is the price at which the stock is bought and sold.**

The par value of preferred stock may be higher per share than common stock par values. Par value is arbitrary and is assigned when the organizers file the corporate charter with the state. There is no real reason for why par values vary. It is a choice made by the organizers of the corporation.

Some states allow the issuance of no-par stock. **No-par stock** does not have par value. No-par value stock has an advantage because there is no confusion between the par value and market value of the stock. **Stated value stock** is no-par stock that has been assigned an amount similar to par value. Stated value represents the minimum amount that the corporation can issue the stock for. Usually the state the company incorporates in will determine whether a stock may be par or stated value stock. For accounting purposes, par value stock is treated the same as stated value stock except for the account names.

Stockholders' Equity

A corporation's equity is called **stockholders' equity**. State laws require corporations to report their sources of owners' capital because some of the capital must be maintained by the company. The two basic sources of stockholders' equity are as follows:

- **Paid-in capital** (also called *contributed capital*) represents amounts received from the stockholders in exchange for stock. Common stock is the main source of paid-in capital. Paid-in capital is *externally* generated capital and results from transactions with outsiders.
- **Retained earnings** is equity earned by profitable operations that is not distributed to stockholders. Retained earnings is *internally* generated equity because it results from corporate decisions to retain net income to use in future operations or for expansion.

Preferred Stock

Stock that gives its owners certain advantages over common stockholders, such as the right to receive dividends before the common stockholders and the right to receive assets before the common stockholders if the corporation liquidates.

Par Value

An amount assigned by a company to a share of its stock.

Is the par value of a stock the price at which the stock is bought and sold?



No-Par Stock

Stock that has no amount (par) assigned to it.

Stated Value Stock

No-par stock that has been assigned an amount similar to par value.

Stockholders' Equity

A corporation's equity that includes paid-in capital and retained earnings.

Paid-In Capital

Represents amounts received from the stockholders of a corporation in exchange for stock.

Retained Earnings

Equity earned by profitable operations of a corporation that is not distributed to stockholders.



TYING IT ALL TOGETHER

Facebook, Inc. is a mobile application and Web site that enables people to connect, share, discover, and communicate with each other. On average in December 2015, Facebook had 1.04 billion daily active users. Facebook also owns Instagram, messenger, WhatsApp, and Oculus. Facebook incorporated in Delaware in July 2004 and completed an initial public offering in May 2012. The company's Class A common stock is listed on the NASDAQ under the symbol "FB." (You can find Facebook's annual report at https://s21.q4cdn.com/399680738/files/doc_financials/annual_reports/2015-Annual-Report.pdf.)

What types of stock does Facebook have?

Facebook has Class A common stock that is listed on the NASDAQ. The company also has Class B common stock that is not listed nor traded on any stock exchange.

How many stockholders were of record as of December 31, 2015?

As of December 31, 2015, there were 5,086 stockholders of record of the Class A common stock. There were 46 stockholders of record of the company's Class B common stock. As of December 31, 2015, the closing price of Facebook's Class A common stock was \$104.66 per share.

Try It!

Match the key term to the definition.

- | | |
|----------------------|--|
| 1. Stock certificate | a. The maximum number of shares of stock that the corporate charter allows the corporation to issue. |
| 2. Preemptive right | b. Stock that gives its owners certain advantages over common stockholders. |
| 3. Authorized stock | c. Stockholders' right to maintain their proportionate ownership in the corporation. |
| 4. Preferred stock | d. Represents amounts received from stockholders of a corporation in exchange for stock. |
| 5. Paid-in capital | e. Paper evidence of ownership in a corporation. |

Check your answers online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercise S13-1. [Pearson MyLab Accounting](#)

HOW IS THE ISSUANCE OF STOCK ACCOUNTED FOR?

Learning Objective 2

Journalize the issuance of stock

Underwriter

A firm that handles the issuance of a company's stock to the public, usually assuming some of the risk by agreeing to buy the stock if the firm cannot sell all of the stock to its clients.

Issue Price

The amount that the corporation receives from issuing stock.

Large corporations such as Intel Corporation and Nike, Inc. need huge quantities of money. They cannot finance all their operations through borrowing, so they raise capital by issuing stock. A company can sell its stock directly to stockholders, or it can use the services of an **underwriter**, such as the brokerage firms of Merrill Lynch & Co., Inc., Morgan Stanley, and JPMorgan Chase & Co. An underwriter usually assumes some of the risk of issuing stock by agreeing to buy all the stock the firm cannot sell to its clients. Stocks of public companies are bought and sold on a stock exchange, such as the New York Stock Exchange (NYSE) or NASDAQ Stock Market.

The amount that the corporation receives from issuing stock is called the **issue price**. Usually, the issue price exceeds par value because par value is normally set quite low.



Issuing Common Stock at Par Value

In this chapter, we will continue using Smart Touch Learning; however, we will now assume that Smart Touch Learning's common stock carries a par value of \$1 per share and that the charter authorizes 20,000,000 shares of common stock. The journal entry for the issue of 15,000 shares at par value would be as follows:

Date	Accounts and Explanation	Debit	Credit
	Cash	15,000	
	Common Stock—\$1 Par Value (\$1 per share × 15,000 shares)		15,000
	<i>Issued common stock at par.</i>		

$$\frac{A \uparrow}{\text{Cash} \uparrow} = \left\{ \begin{array}{l} \frac{L}{\text{Common Stock} \uparrow} + \frac{E \uparrow}{\text{Common Stock} \uparrow} \end{array} \right.$$

Issuing Common Stock at a Premium

As stated previously, most corporations set par value low and issue common stock for a price above par. The amount above par is called a **premium**. Assume Smart Touch Learning issues an additional 3,000 shares for \$5 per share. The \$4 difference between the issue price (\$5) and par value (\$1) is a premium.

A premium on the issue of stock is not a gain, income, or profit for the corporation because the company is dealing with its own stock. This situation illustrates one of the fundamentals of accounting in that a company cannot report a profit or loss when buying or selling its own stock. So, the premium is another type of paid-in capital account known as **Paid-In Capital in Excess of Par**. It is also called *additional paid-in capital*. The Paid-In Capital in Excess of Par account is an equity account that is reported on the balance sheet.

With a par value of \$1, Smart Touch Learning's entry to record the issuance of 3,000 shares of its common stock at \$5 per share is as follows:

Date	Accounts and Explanation	Debit	Credit
	Cash (\$5 per share × 3,000 shares)	15,000	
	Common Stock—\$1 Par Value (\$1 per share × 3,000 shares)		3,000
	Paid-In Capital in Excess of Par—Common (\$4 per share × 3,000 shares)		12,000
	<i>Issued common stock at a premium.</i>		

$$\frac{A \uparrow}{\text{Cash} \uparrow} = \left\{ \begin{array}{l} \frac{L}{\text{Common Stock} \uparrow} + \frac{E \uparrow}{\text{Paid-In Capital in Excess of Par} \uparrow} \\ \text{Common Stock} \uparrow \\ \text{Paid-In Capital in Excess of Par} \uparrow \end{array} \right.$$

When stock is issued at a premium, common stock is always recorded at the par value. Any amount over par value is recorded to the Paid-In Capital in Excess of Par account.

Exhibit 13-4 (on the next page) shows how Smart Touch Learning would report stockholders' equity on its balance sheet after the stock issuances, assuming that the balance of Retained Earnings is \$3,550.

Premium

The amount above par at which a stock is issued.

Paid-In Capital in Excess of Par

Represents amounts received from stockholders in excess of par value.


Exhibit 13-4 | Stockholders' Equity

SMART TOUCH LEARNING, INC.		
Balance Sheet (Partial)		
December 31, 2018		
Stockholders' Equity		
Paid-In Capital:		
Common Stock—\$1 Par Value; 20,000,000 shares authorized, 18,000 shares issued and outstanding	\$ 18,000	
Paid-In Capital in Excess of Par—Common	12,000	
Total Paid-In Capital	30,000	
Retained Earnings	3,550	
Total Stockholders' Equity	\$ 33,550	

Issuing No-Par Common Stock

When a company issues no-par stock, it debits the asset received and credits the stock account. For no-par stock, there can be no Paid-In Capital in Excess of Par because there is no par to be in excess of.

Assume that, instead of \$1 par value, Smart Touch Learning's common stock is no-par. How would that change the recording of the issuance of 15,000 shares for \$1 and 3,000 shares for \$5? The stock-issuance entries would be as follows:

$$\begin{array}{l} \frac{\mathbf{A} \uparrow}{\mathbf{Cash} \uparrow} \\ \left\{ \begin{array}{l} \mathbf{L} + \mathbf{E} \uparrow \\ \text{Common Stock} \uparrow \end{array} \right. \end{array}$$

$$\begin{array}{l} \frac{\mathbf{A} \uparrow}{\mathbf{Cash} \uparrow} \\ \left\{ \begin{array}{l} \mathbf{L} + \mathbf{E} \uparrow \\ \text{Common Stock} \uparrow \end{array} \right. \end{array}$$

Date	Accounts and Explanation	Debit	Credit
	Cash (\$1 per share × 15,000 shares)	15,000	
	Common Stock—No-Par Value		15,000
	<i>Issued no-par common stock.</i>		
	Cash (\$5 per share × 3,000 shares)	15,000	
	Common Stock— No-Par Value		15,000
	<i>Issued no-par common stock.</i>		

Regardless of the stock's issue price, Cash is debited and Common Stock is credited for the cash received. So, although the total paid-in capital of \$30,000 remains the same, the Common Stock account differs from \$18,000 (par stock) to \$30,000 (no-par stock).

Exhibit 13-5 shows how the stockholders' equity section of the balance sheet would change.

Exhibit 13-5 | Stockholders' Equity—No-Par Stock

SMART TOUCH LEARNING, INC.		
Balance Sheet (Partial)		
December 31, 2018		
Stockholders' Equity		
Paid-In Capital:		
Common Stock—No-Par Value; 20,000,000 shares authorized, 18,000 shares issued and outstanding	\$ 30,000	
Retained Earnings	3,550	
Total Stockholders' Equity	\$ 33,550	

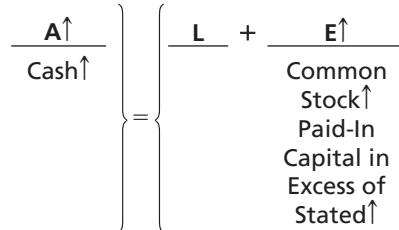


Issuing Stated Value Common Stock

Accounting for stated value common stock is almost identical to accounting for par value stock. The only difference is that stated value stock uses an account titled Paid-In Capital in Excess of Stated to record amounts received above the stated value.

For example, assume that instead of issuing 3,000 shares of \$1 par value stock for \$5 per share, Smart Touch Learning issues 3,000 shares of \$1 *stated* value stock for \$5 per share. Smart Touch Learning would record the following journal entry:

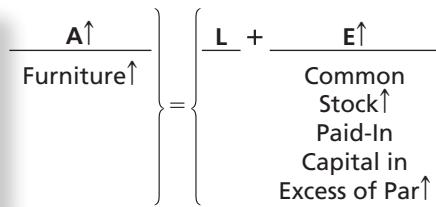
Date	Accounts and Explanation	Debit	Credit
	Cash (\$5 per share × 3,000 shares)	15,000	
	Common Stock—\$1 Stated Value (\$1 per share × 3,000 shares)		3,000
	Paid-In Capital in Excess of Stated—Common (\$4 per share × 3,000 shares)		12,000
<i>Issued common stock at a premium.</i>			



Issuing Common Stock for Assets Other Than Cash

A corporation may issue stock for assets other than cash. It records the transaction at the market value of the stock issued or the market value of the assets received, whichever is more clearly determinable. Now let's consider that Smart Touch Learning receives an additional contribution of furniture with a market value of \$18,000 in exchange for 5,000 shares of its \$1 par common stock. How would the entry be recorded?

Date	Accounts and Explanation	Debit	Credit
	Furniture	18,000	
	Common Stock—\$1 Par Value (\$1 par value × 5,000 shares)		5,000
	Paid-In Capital in Excess of Par—Common (\$18,000 – \$5,000)		13,000
<i>Issued common stock in exchange for furniture.</i>			



As you can see, the common stock is still recorded at its \$1 par value and the difference between the market value of the furniture and the par value is recorded to the Paid-In Capital in Excess of Par account. The contributed asset is recorded at its current market value.

ETHICS

What should the building be valued at?

Reed Hiller, the accountant for Snyder Corporation, is trying to decide how to record the company's most recent issuance of stock. Jack Chavez, a majority stockholder, has contributed a building in exchange for common stock. Jack believes that the building should be valued at \$4 million, his evaluation of the building's market value. Jack argues that by recording the asset at such a large amount, the business will look more prosperous to investors. Reed is concerned that Jack is overvaluing the asset. What should Reed do?

Solution

Issuance of stock for cash poses no ethical challenge because the value of the asset received (cash) is clearly understood.

Issuing stock for assets other than cash can pose a challenge, though. A company should record an asset received at its current market value or the market value of the stock issued, whichever is more clearly determinable. One person's evaluation of a building's market value can differ from another's. Reed should encourage the company to hire an independent appraiser to determine the current market value of the building and then record the building at that value. Alternatively, the company can use the market value of the stock issued to determine the value of the building. This would be appropriate if the stock is traded on an organized exchange.



Issuing Preferred Stock

Accounting for preferred stock follows the pattern illustrated for issuing common stock. Assume that Smart Touch Learning has authorization from the state to issue 2,000 shares of preferred stock. Smart Touch Learning decides to issue 1,000 shares of its \$50 par, 6% preferred stock on January 3, 2019, at \$55 per share. (The 6% in the description of the preferred stock refers to the stated dividend associated with the stock and is explained later in the chapter.) The issuance entry would be as follows:

A↑	L	E↑	
Cash↑			
	= {	Preferred Stock↑	
		Paid-In Capital in Excess of Par↑	

Date	Accounts and Explanation	Debit	Credit
Jan. 3	Cash (\$55 per share × 1,000 shares)	55,000	
	Preferred Stock—\$50 Par Value (\$50 per share × 1,000 shares)		50,000
	Paid-In Capital in Excess of Par—Preferred (\$5 per share × 1,000 shares)		5,000
	<i>Issued preferred stock at a premium.</i>		

Preferred Stock is included in the stockholders' equity section of the balance sheet and is often listed first. Any Paid-In Capital in Excess of Par—Preferred is listed next, followed by Common Stock and Paid-In Capital in Excess of Par—Common. Exhibit 13-6 shows the stockholders' equity section of Smart Touch Learning's balance sheet, assuming both stocks were par value stocks.

Exhibit 13-6 | Stockholders' Equity

SMART TOUCH LEARNING, INC.		
Balance Sheet (Partial)		
January 3, 2019		
Stockholders' Equity		
Paid-In Capital:		
Preferred Stock—\$50 Par Value; 2,000 shares authorized, 1,000 shares issued and outstanding	\$ 50,000	
Paid-In Capital in Excess of Par—Preferred	5,000	
Common Stock—\$1 Par Value; 20,000,000 shares authorized, 23,000 shares issued and outstanding	23,000	
Paid-In Capital in Excess of Par—Common	25,000	
Total Paid-In Capital	103,000	
Retained Earnings	3,550	
Total Stockholders' Equity	\$ 106,550	

Try It!

6. London Corporation has two classes of stock: Common, \$1 par value; and Preferred, \$4 par value. Journalize the issuance of 10,000 shares of common stock for \$8 per share.

Check your answer online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.



HOW IS TREASURY STOCK ACCOUNTED FOR?

A company's own stock that it has previously issued and later reacquired is called **treasury stock**. In effect, the corporation holds the stock in its treasury. A corporation, such as Smart Touch Learning, may purchase treasury stock for several reasons:

1. Management wants to increase net assets by buying low and selling high.
2. Management wants to support the company's stock price.
3. Management wants to avoid a takeover by an outside party by reducing the number of outstanding shares that have voting rights.
4. Management wants to reward valued employees with stock.

Learning Objective 3

Account for the purchase and sale of treasury stock

Treasury Stock

A corporation's own stock that it has previously issued and later reacquired.

Treasury Stock Basics

Here are the basics of accounting for treasury stock:

- The Treasury Stock account has a normal debit balance, which is the opposite of the other stockholders' equity accounts. Therefore, *Treasury Stock is a contra equity account*.
- Treasury stock is recorded at cost (what the company paid to reacquire the shares), without reference to par value. (We illustrate the *cost* method of accounting for treasury stock because it is used most widely. Intermediate accounting courses also cover an alternative method.)
- The Treasury Stock account is reported beneath Retained Earnings on the balance sheet as a reduction to total stockholders' equity.

Treasury stock decreases the company's stock that is outstanding—held by outsiders (the stockholders). Therefore, outstanding stock is issued stock less treasury stock. Only outstanding shares have voting rights and receive cash or stock dividends. Treasury stock does not carry a vote, and it receives no cash or stock dividends. Now we illustrate how to account for treasury stock, continuing with Smart Touch Learning.

Purchase of Treasury Stock

Review Smart Touch Learning's stockholders' equity before purchasing treasury stock as shown in Exhibit 13-6.

Assume that on March 31, Smart Touch Learning purchased 1,000 shares of previously issued common stock, paying \$5 per share. To record the purchase, the company debits Treasury Stock—Common and credits Cash:

Date	Accounts and Explanation	Debit	Credit
Mar. 31	Treasury Stock—Common (\$5 per share × 1,000 shares)	5,000	
	Cash		5,000
<i>Purchased treasury stock.</i>			

$$\left. \begin{array}{c} A \downarrow \\ \text{Cash} \downarrow \end{array} \right\} = \left\{ \begin{array}{c} L \\ \text{Treasury Stock} \uparrow \end{array} \right\} + \left. \begin{array}{c} E \downarrow \\ \text{Treasury Stock} \uparrow \end{array} \right\}$$

Sale of Treasury Stock

Companies buy their treasury stock and eventually sell or retire it. A company may sell treasury stock at, above, or below its cost (what the company paid for the shares).



Sale at Cost

If treasury stock is sold for cost—the same price the corporation paid for it—there is no difference between the cost per share and the sale price per share to journalize. Assume Smart Touch Learning sells 100 of the treasury shares on April 1 for \$5 each. The entry follows:

$$\begin{array}{c} A \uparrow \\ \text{Cash} \uparrow \end{array} = \left\{ \begin{array}{c} L + E \uparrow \\ \text{Treasury Stock} \downarrow \end{array} \right.$$

Date	Accounts and Explanation		Debit	Credit
Apr. 1	Cash		500	
	Treasury Stock—Common (\$5 per share × 100 shares)			500
	<i>Sold treasury stock at cost.</i>			

Treasury Stock—Common			
Mar. 31	5,000	500	Apr. 1
Bal.	4,500		

Sale Above Cost

If treasury stock is sold for more than cost, the difference is credited to a new stockholders' equity account, Paid-In Capital from Treasury Stock Transactions. This excess is additional paid-in capital because it came from the company's stockholders. It has no effect on net income. Suppose Smart Touch Learning sold 200 of its treasury shares for \$6 per share on April 2 (recall that cost was \$5 per share). The entry to sell treasury stock for an amount above cost is as follows:

$$\begin{array}{c} A \uparrow \\ \text{Cash} \uparrow \end{array} = \left\{ \begin{array}{c} L + E \uparrow \\ \text{Treasury Stock} \downarrow \\ \text{Paid-In Capital from Treasury Stock Transactions} \uparrow \end{array} \right.$$

Date	Accounts and Explanation		Debit	Credit
Apr. 2	Cash (\$6 per share × 200 shares)		1,200	
	Treasury Stock—Common (\$5 per share × 200 shares)			1,000
	Paid-In Capital from Treasury Stock Transactions (\$1 per share × 200 shares)			200
	<i>Sold treasury stock above cost.</i>			

Treasury Stock—Common			Paid-In Capital from Treasury Stock Transactions	
Mar. 31	5,000		200	Apr. 2
		500		Apr. 1
		1,000		Apr. 2
Bal.	3,500			

Paid-In Capital from Treasury Stock Transactions is reported with the other paid-in capital accounts on the balance sheet, beneath Common Stock and Paid-In Capital in Excess of Par.

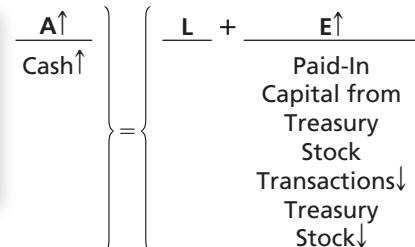
Sale Below Cost

The sales price of treasury stock can be less than cost. The shortfall is debited first to Paid-In Capital from Treasury Stock Transactions. However, this account can only be debited for an amount that brings it to \$0 (it cannot have a debit balance). If this account's balance is too small, Retained Earnings is debited for the remaining amount. To illustrate,



assume Smart Touch Learning had two additional treasury stock sales. First, on April 3, Smart Touch Learning sold 200 treasury shares for \$4.30 each. The entry to record the sale is as follows:

Date	Accounts and Explanation	Debit	Credit
Apr. 3	Cash (\$4.30 per share × 200 shares)	860	
	Paid-In Capital from Treasury Stock Transactions (\$0.70 per share × 200 shares)	140	
	Treasury Stock—Common (\$5 per share × 200 shares)		1,000
	<i>Sold treasury stock below cost.</i>		

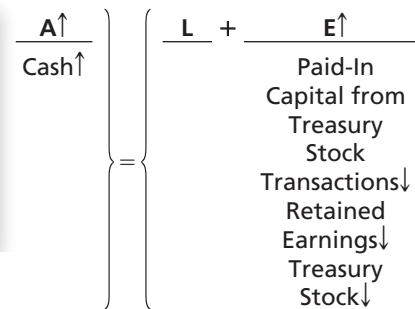


Treasury Stock—Common		Paid-In Capital from Treasury Stock Transactions		
Mar. 31	5,000	Apr. 3	140	200
	500	Apr. 1		
	1,000	Apr. 2	60	Bal.
	1,000	Apr. 3		
Bal.	2,500			

The treasury shares were sold for \$140 less than their cost. Smart Touch Learning had previously sold treasury shares for \$200 more than their cost, so the \$200 credit balance in Paid-In Capital from Treasury Stock Transactions is large enough to cover the \$140 debit.

Now, what happens if Smart Touch Learning sells an additional 200 treasury shares for \$4.50 each on April 4? Smart Touch Learning records the following entry:

Date	Accounts and Explanation	Debit	Credit
Apr. 4	Cash (\$4.50 per share × 200 shares)	900	
	Paid-In Capital from Treasury Stock Transactions	60	
	Retained Earnings (\$1,000 – \$900 – \$60)	40	
	Treasury Stock—Common (\$5 per share × 200 shares)		1,000
	<i>Sold treasury stock below cost.</i>		



Treasury Stock—Common		Paid-In Capital from Treasury Stock Transactions		
Mar. 31	5,000	Apr. 3	140	200
	500	Apr. 1		
	1,000	Apr. 2	60	
	1,000	Apr. 3		
	1,000	Apr. 4		
Bal.	1,500			

Retained Earnings		
	3,550	Bal.
Apr. 4	40	
	3,510	Bal.



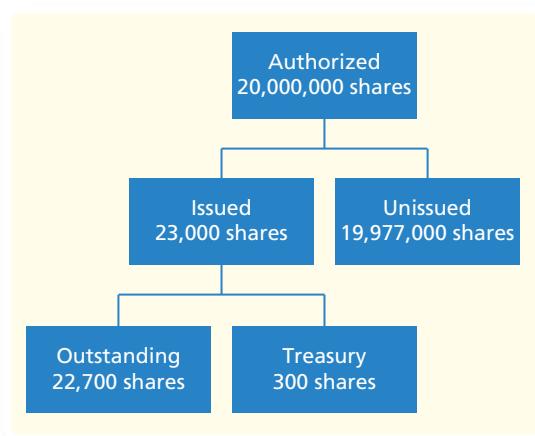
The 200 treasury shares are sold for \$100 less than their cost [(\$4.50 sales price per share – \$5 cost per share) × 200 shares]. However, only \$60 remains in Paid-In Capital from Treasury Stock Transactions. The difference of \$40 (\$100 – \$60) is debited to Retained Earnings because the paid-in capital accounts cannot have debit balances.

Now we can show the revised stockholders' equity for Smart Touch Learning as shown in Exhibit 13-7.

Exhibit 13-7 | Stockholders' Equity After Treasury Stock Transactions

SMART TOUCH LEARNING, INC. Balance Sheet (Partial) April 4, 2019		
Stockholders' Equity		
Paid-In Capital:		
Preferred Stock—\$50 Par Value; 2,000 shares authorized, 1,000 shares issued and outstanding		\$ 50,000
Paid-In Capital in Excess of Par—Preferred		5,000
Common Stock—\$1 Par Value; 20,000,000 shares authorized, 23,000 shares issued, 22,700 shares outstanding		23,000
Paid-In Capital in Excess of Par—Common		25,000
Total Paid-In Capital		103,000
Retained Earnings		3,510
Treasury Stock—Common; 300 shares at cost		(1,500)
Total Stockholders' Equity		\$ 105,010

So, how many common shares are outstanding on April 4? The 23,000 common shares previously issued minus 300 treasury shares equals 22,700 outstanding common shares.





Retirement of Stock

Not all companies repurchase their previously issued stock to hold it in the treasury. A corporation may retire its stock by canceling the stock certificates. Retired stock cannot be reissued.

Retirements of preferred stock are common as companies seek to avoid paying the preferred dividends. To repurchase previously issued stock for retirement, we debit the stock accounts—for example, Preferred Stock and Paid-In Capital in Excess of Par—Preferred—and credit Cash. That removes the retired stock from the company's books, which reduces total assets and total stockholders' equity.

Try It!

- On January 3, Halsall Corporation purchased 2,000 shares of the company's \$2 par value common stock as treasury stock, paying cash of \$8 per share. On January 30, Halsall sold 1,200 shares of the treasury stock for cash of \$10 per share. Journalize these transactions.

Check your answers online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercise S13-6.

[Pearson MyLab Accounting](#)

HOW ARE DIVIDENDS AND STOCK SPLITS ACCOUNTED FOR?

A profitable corporation may make distributions to stockholders in the form of *dividends*. Dividends can be paid in the form of cash, stock, or other property.

Cash Dividends

Cash dividends cause a decrease in both assets (Cash) and equity (Retained Earnings). Most states prohibit using paid-in capital for dividends. Accountants, therefore, use the term **legal capital** to refer to the portion of stockholders' equity that cannot be used for dividends.

A corporation declares a dividend before paying it. Three dividend dates are relevant:

- Declaration date.** On the declaration date—say, May 1—the board of directors announces the intention to pay the dividend. The declaration of a cash dividend creates an obligation (liability) for the corporation.
- Date of record (or record date).** Those stockholders holding the stock at the end of business on the date of record—a week or two after declaration, say, May 15—will receive the dividend check. Date of record is the date the corporation records the stockholders that receive dividend checks.
- Payment date.** Payment of the dividend usually follows the record date by a week or two—say, May 30.

Learning Objective 4

Account for cash dividends, stock dividends, and stock splits

Legal Capital

The portion of stockholders' equity that cannot be used for dividends.



Declaring and Paying Dividends—Common Stock

Suppose on May 1, Smart Touch Learning declares a \$0.05 per share cash dividend on 22,700 outstanding shares of common stock (23,000 shares issued less 300 shares of treasury stock). On the date of declaration, Smart Touch Learning records a debit to Cash Dividends and a credit to Dividends Payable—Common (a current liability) as follows:

A	$\left\{ \begin{array}{c} L \uparrow \\ + E \downarrow \\ \hline \text{Dividends Payable} \uparrow \\ \text{Cash Dividends} \uparrow \end{array} \right.$	Date	Accounts and Explanation	Debit	Credit
		May 1	Cash Dividends (\$0.05 per share \times 22,700 shares) Dividends Payable—Common	1,135	
			<i>Declared a cash dividend.</i>		1,135

Dividends are only paid on outstanding shares. Remember that outstanding stock is issued stock less treasury stock. A corporation will never pay dividends on treasury stock.

On May 15, the date of record, no journal entry is recorded. This is simply the cutoff point to determine who owns the stock and will, therefore, receive the cash payment.

To pay the dividend on the payment date, May 30, Smart Touch Learning debits Dividends Payable—Common and credits Cash:

A	$\left\{ \begin{array}{c} L \downarrow \\ + E \\ \hline \text{Dividends Payable} \downarrow \end{array} \right.$	Date	Accounts and Explanation	Debit	Credit
Cash		May 30	Dividends Payable—Common Cash	1,135	
			<i>Payment of cash dividend.</i>		1,135

At the end of the accounting period, Smart Touch Learning will close the Cash Dividends account to Retained Earnings as follows:

A	$\left\{ \begin{array}{c} L \\ + E \uparrow \\ \hline \text{Retained Earnings} \downarrow \\ \text{Cash Dividends} \downarrow \end{array} \right.$	Date	Accounts and Explanation	Debit	Credit
		Dec. 31	Retained Earnings Cash Dividends	1,135	
			<i>To close Cash Dividends.</i>		1,135

Declaring and Paying Dividends—Preferred Stock

The cash dividend rate on preferred stock is often expressed as a percentage of the preferred stock par value, such as 6%. Sometimes, however, cash dividends on preferred stock are expressed as a flat dollar amount per share, such as \$3 per share. Therefore, preferred dividends are computed two ways, depending on how the preferred stock cash dividend rate is stated on the preferred stock certificate. To illustrate, assume a fictitious company, Greg's



Games, Inc. has 1,000 outstanding shares of 6%, \$50 par value preferred stock. The dividend is computed as follows:

$$\begin{aligned}\text{Preferred dividend} &= \text{Outstanding shares} \times \text{Par value} \times \text{Preferred dividend rate} \\ &= 1,000 \text{ shares} \times \$50 \text{ par value per share} \times 6\% \\ &= \$3,000\end{aligned}$$

The journal entries to account for the declaration and payment of a cash dividend on preferred stock are similar to those of common stock. The only difference is that Dividends Payable—Preferred is used instead of Dividends Payable—Common.

Earlier in the chapter, we discussed the dividend preference that preferred stockholders receive. When a company has issued both preferred and common stock, the preferred stockholders receive their dividends first. The common stockholders receive dividends only if the total dividend is large enough to satisfy the preferred requirement. In other words, the common stockholders receive the residual—the amount remaining after the preferred dividends are paid.

For example, if Greg's Games has 1,000 shares of \$50 par, 6% preferred stock outstanding and 2,000,000 shares of \$1 par common stock outstanding, preferred stockholders will receive \$3,000 of any cash dividend declared. So, total declared dividends must exceed \$3,000 for the common stockholders to receive a dividend.

If the year's dividend is equal to or less than the annual preferred amount, the preferred stockholders will receive the entire dividend, and the common stockholders will not receive a dividend that year. But, if Greg's Games' dividend is large enough to cover the preferred dividend, the preferred stockholders get their regular dividend of \$3,000, and the common stockholders receive any amount remaining.

Remember that a dividend preference on preferred stock does not guarantee that a corporation will pay a dividend equal to the preferred amount. A corporation may fail to pay the preferred dividend if, for example, it does not have cash to fund the dividend. This is called *passing the dividend*, and the dividend is said to be a **dividend in arrears**. In other words, a preferred stock dividend is in arrears if the dividend has not been paid for the year.

Preferred stock can be either cumulative or noncumulative. Most preferred stock is cumulative. As a result, preferred stock is assumed to be cumulative unless it is specifically designated as noncumulative. **Cumulative preferred stock** shareholders must receive all dividends in arrears plus the current year dividends before the common stockholders receive a dividend. If the preferred stock is **noncumulative preferred stock**, the corporation will not have any dividends in arrears because the corporation is not required to pay passed dividends.

Suppose Greg's Games' preferred stock is cumulative and in 2018 the business did not pay any cash dividends. Before paying any common dividend in 2019, Greg's Games must first pay preferred dividends of \$3,000 for 2018 and \$3,000 for 2019, a total of \$6,000. Assume that on September 6, 2019, Greg's Games declares a \$50,000 total dividend. How much of this dividend goes to the preferred stockholders? How much goes to the common stockholders? The allocation of this \$50,000 dividend is as follows:

Total Dividend	\$ 50,000
Dividend to Preferred Stockholders:	
Dividend in Arrears (2018)	\$ 3,000
Current Year Dividend (2019)	<u>3,000</u>
Total Dividend to Preferred Stockholders	<u>(6,000)</u>
Dividend to Common Stockholders	<u><u>\$ 44,000</u></u>

Dividend in Arrears

A preferred stock dividend is in arrears if the dividend has not been paid for the year and the preferred stock is cumulative.

Cumulative Preferred Stock

Preferred stock whose owners must receive all dividends in arrears plus the current year dividend before the corporation pays dividends to the common stockholders.

Noncumulative Preferred Stock

Preferred stock whose owners do not receive passed dividends.



Greg's Games' entry to record the declaration of this dividend on September 6, 2019, is as follows:

A	$\left\{ \begin{array}{c} L \uparrow \\ \text{Dividends} \\ \text{Payable} \uparrow \end{array} \right. + \left. \begin{array}{c} E \downarrow \\ \text{Cash} \\ \text{Dividends} \uparrow \end{array} \right.$		
Date	Accounts and Explanation	Debit	Credit
2019			
Sep. 6	Cash Dividends	50,000	
	Dividends Payable—Common		44,000
	Dividends Payable—Preferred		6,000
	<i>Declared a cash dividend.</i>		

Dividends in arrears are *not* a liability. A liability for dividends arises only after the board of directors *declares* the dividend. But a corporation reports cumulative preferred dividends in arrears in notes to the financial statements. This shows the common stockholders how big the declared dividend will need to be for them to receive any dividends.

Remember that if the preferred stock is noncumulative preferred stock, the corporation is not required to pay any passed dividends. Keep in mind that this is a risk that the investor bears when investing in noncumulative preferred stock. Suppose Greg's Games' preferred stock is noncumulative and the company passed the 2018 dividend. The preferred stockholders would lose the 2018 dividend of \$3,000 forever. Then, before paying any common dividends in 2019, Greg's Games would have to pay only the 2019 preferred dividend of \$3,000, which would leave \$47,000 for the common stockholders as follows:

Total Dividend	\$ 50,000
Dividend to Preferred Stockholders:	
Current Year Dividend (2019)	<u>\$ 3,000</u>
Total Dividend to Preferred Stockholders	<u>(3,000)</u>
Dividend to Common Stockholders	<u><u>\$ 47,000</u></u>

Stock Dividends

Stock Dividend

A distribution by a corporation of its own stock to its stockholders.

A **stock dividend** is a distribution of a corporation's own stock to its stockholders. Unlike cash dividends, stock dividends do not give any of the corporation's assets, like cash, to the stockholders. Stock dividends have the following characteristics:

- They affect *only* stockholders' equity accounts (including Retained Earnings, Stock Dividends, Common Stock, and Paid-In Capital in Excess of Par).
- They have *no* effect on total stockholders' equity.
- They have *no* effect on assets or liabilities.

The corporation distributes stock dividends to stockholders in proportion to the number of shares the stockholders already own. Suppose a stockholder owns 1,000 shares of Greg's Games' common stock. If Greg's Games distributes a 10% stock dividend, the stockholder would receive 100 additional shares ($1,000 \text{ shares} \times 0.10$). The stockholder now owns 1,100 shares of the stock. All other Greg's Games' stockholders also receive additional shares equal to 10% of their stock holdings, so all stockholders are in the same relative position after the stock dividend as they were before. With a stock dividend, the total number of shares issued and outstanding increases, but the percentage of total ownership of individual stockholders stays the same.



Why Issue Stock Dividends?

A company issues stock dividends for several reasons:

- **To continue dividends but conserve cash.** A company may wish to continue the distribution of dividends to keep stockholders happy but may need to keep its cash for operations. A stock dividend is a way to do so without using corporate cash.
- **To reduce the market price per share of its stock.** Depending on its size, a stock dividend may cause the company's market price per share to fall because of the increased supply of the stock. Suppose that a share of Greg's Games' stock was traded at \$50 recently. Doubling the shares issued and outstanding by issuing a stock dividend would likely cause Greg's Games' stock market price per share to drop closer to \$25 per share. One objective behind a stock dividend might be to make the stock less expensive and, therefore, more available and attractive to investors.
- **To reward investors.** Investors often feel like they have received something of value when they get a stock dividend.

Recording Stock Dividends

As with a cash dividend, there are three dates for a stock dividend:

- Declaration date
- Record date
- Distribution date

The board of directors announces the stock dividend on the declaration date. The date of record and the distribution date then follow. The declaration of a stock dividend does *not* create a liability because the corporation is not obligated to pay assets. (Recall that a liability is a claim on *assets*.) With a stock dividend, the corporation has declared its intention to distribute its stock. The distribution date is similar to the payment date for a cash dividend. With stock dividends, however, there is no payment of cash—only a distribution of shares of stock.

The entry to record a stock dividend depends on the size of the dividend. Generally Accepted Accounting Principles (GAAP) distinguish between small and large stock dividends in the following manner:

- **Small stock dividend**—less than 20% to 25% of issued and outstanding stock
- **Large stock dividend**—greater than 20% to 25% of issued and outstanding stock

Small Stock Dividends—Less than 20% to 25% Small stock dividends are accounted for at the stock's market value. Here is how the various accounts are affected at the date of declaration:

- Stock Dividends is debited for the *market value* of the dividend shares.
- Common Stock Dividend Distributable is credited for the dividend stock's *par value*.
- Paid-In Capital in Excess of Par is credited for the excess.

Small Stock Dividend

A stock dividend of less than 20% to 25% of the issued and outstanding stock.

Large Stock Dividend

A stock dividend greater than 20% to 25% of the issued and outstanding stock.

Assume, for example, that Greg's Games distributes a 5% common stock dividend on 2,000,000 shares issued and outstanding when the market value of Greg's Games' common stock is \$50 per share and par value is \$1 per share. Greg's Games will issue 100,000 ($2,000,000 \text{ shares} \times 0.05$) shares to its stockholders. The entry on the next page illustrates the accounting for this 5% stock dividend on the declaration date of February 1.



A	L + E↑↓	Date	Accounts and Explanation	Debit	Credit	
	Stock Dividends↑ Common Stock Dividend Distributable↑ Paid-In Capital in Excess of Par↑	Feb. 1	Stock Dividends (\$50 per share × 2,000,000 shares × 0.05) Common Stock Dividend Distributable (\$1 per share × 2,000,000 shares × 0.05) Paid-In Capital in Excess of Par—Common (\$5,000,000 – \$100,000)	5,000,000 100,000 4,900,000		
			Declared a 5% stock dividend.			
			Similar to Cash Dividends, Stock Dividends is closed to Retained Earnings at the end of the accounting period.			

Notice that Common Stock Dividend Distributable is credited for the par value of the common stock. Common Stock Dividend Distributable is an *equity* account, not a liability. It is reported as an addition to paid-in capital in stockholders' equity until the stock is distributed. On February 25, when Greg's Games distributes the common stock, it would record the following entry:

A	L + E↑↓	Date	Accounts and Explanation	Debit	Credit
	Common Stock Dividend Distributable↓ Common Stock↑	Feb. 25	Common Stock Dividend Distributable Common Stock—\$1 Par Value	100,000	100,000
			Issued 5% stock dividend.		

After the journal entry for the declaration and issuance of the common stock dividend and the closing entry to close Stock Dividends to Retained Earnings, Greg's Games' accounts are as follows:

Common Stock—\$1 Par Value			Paid-In Capital in Excess of Par—Common		
	2,000,000	Bal.		19,000,000	Bal.
	100,000	Feb. 25		4,900,000	Feb. 1
	2,100,000	Bal.		23,900,000	Bal.

Common Stock Dividend Distributable			Retained Earnings		
	100,000	Feb. 1		9,000,000	Bal.
Feb. 25	100,000		Dec. 31	5,000,000	
	0	Bal.		4,000,000	Bal.

The stock Dividends account is closed with a credit and the corresponding debit to Retained Earnings decreases the equity account.

Remember that a stock dividend does not affect assets, liabilities, or *total* stockholders' equity. A stock dividend merely rearranges the balances in the stockholders' equity accounts, leaving total stockholders' equity unchanged. Exhibit 13-8 shows what Greg's Games' stockholders' equity looks like before and after the 5% common stock dividend.

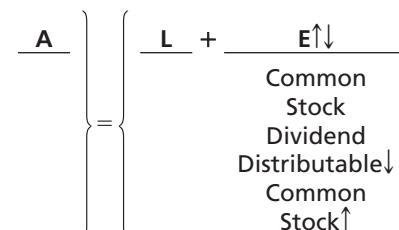
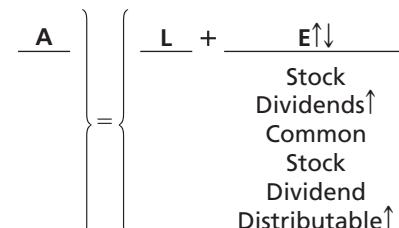

Exhibit 13-8 | Stockholders' Equity—Small Stock Dividend

GREG'S GAMES, INC. Balance Sheet (Partial) February 25, 2019			
Before Small Stock Dividend:		After Small Stock Dividend:	
Stockholders' Equity		Stockholders' Equity	
Paid-In Capital:		Paid-In Capital:	
Preferred Stock—\$50 Par Value; 2,000 shares authorized, 1,000 shares issued and outstanding	\$ 50,000	Preferred Stock—\$50 Par Value; 2,000 shares authorized, 1,000 shares issued and outstanding	\$ 50,000
Paid-In Capital in Excess of Par—Preferred	5,000	Paid-In Capital in Excess of Par—Preferred	5,000
Common Stock—\$1 Par Value; 20,000,000 shares authorized, 2,000,000 shares issued and outstanding	2,000,000	Common Stock—\$1 Par Value; 20,000,000 shares authorized, 2,100,000 shares issued and outstanding	2,100,000
Paid-In Capital in Excess of Par—Common	19,000,000	Paid-In Capital in Excess of Par—Common	23,900,000
Total Paid-In Capital	21,055,000	Total Paid-In Capital	26,055,000
Retained Earnings	9,000,000	Retained Earnings	4,000,000
Total Stockholders' Equity	<u>\$ 30,055,000</u>	Total Stockholders' Equity	<u>\$ 30,055,000</u>

Note that total stockholders' equity stays at \$30,055,000. Total paid-in capital increased \$5,000,000 and retained earnings decreased \$5,000,000.

Large Stock Dividends—Greater than 20% to 25% Large stock dividends are rare, but when they are declared, they are normally accounted for at the stock's par value instead of the stock's market value. Par value is used because the larger number of issued and outstanding shares will reduce market price per share, making market price per share an invalid measurement of the stock dividend value. Assume, for example, on March 2 that Greg's Games declares a second common stock dividend of 50% when the market value of Greg's Games' common stock is \$50 per share. The entries to record the large stock dividend on the declaration date (March 2) and distribution date (March 30) are as follows:

Date	Accounts and Explanation	Debit	Credit
Mar. 2	Stock Dividends (\$1 per share × 2,100,000 shares × 0.50)	1,050,000	
	Common Stock Dividend Distributable (\$1 per share × 2,100,000 shares × 0.50)		1,050,000
	<i>Declared a 50% stock dividend.</i>		
30	Common Stock Dividend Distributable	1,050,000	
	Common Stock—\$1 Par Value		1,050,000
	<i>Issued 50% stock dividend.</i>		



Cash dividends and stock dividends are always declared based on the number of shares issued and outstanding. It's important to keep a running balance of the amount of shares outstanding in order to determine the correct amount of dividends to record. In this case, Greg's Games started with 2,000,000 common shares outstanding and then issued a stock dividend of 100,000 common shares for a total of 2,100,000 common shares issued and outstanding.



Notice that the large stock dividend also does not change total stockholders' equity. Total paid-in capital increased \$1,050,000 and retained earnings decreased \$1,050,000 after closing Stock Dividends to Retained Earnings.

Stock Splits

Stock Split

An increase in the number of issued and outstanding shares of stock coupled with a proportionate reduction in the par value of the stock.

A stock split is fundamentally different from a stock dividend. A **stock split** increases the number of issued and outstanding shares of stock. A stock split also decreases par value per share, whereas stock dividends do not affect par value per share. For example, if Greg's Games splits its common stock 2-for-1, the number of issued and outstanding shares is doubled and par value per share is cut in half. A stock split also decreases the market price per share of the stock. A 2-for-1 stock split of a \$2 par stock with a \$20 market value per share will result in two shares of \$1 par value with approximately \$10 market value per share.

A stock split, just like any other stock issuance, cannot involve issuing more shares of stock than authorized in the corporate charter.

The market value of a share of Greg's Games' common stock has been approximately \$50 per share. Assume that Greg's Games wishes to decrease the market price to approximately \$25 per share. The company can make the market price drop to around \$25 by effecting a 2-for-1 split of its common stock. A 2-for-1 stock split means that Greg's Games will have twice as many shares of stock issued and outstanding after the split as it did before, and each share's par value is cut in half. Assume Greg's Games has 3,150,000 shares issued and outstanding of \$1 par common stock before the split. After the stock split, Greg's Games will have 6,300,000 shares (3,150,000 shares × 2) issued and outstanding of \$0.50 par value stock (\$1 par value / 2) as follows:

Common Stock Before Stock Split	Common Stock After Stock Split
Common Stock—\$1 Par Value; 3,150,000 shares issued and outstanding	Common Stock—\$0.50 Par Value; 6,300,000 shares issued and outstanding

Because the stock split does not affect any account balances, no formal journal entry is needed. Instead, the split is recorded in a **memorandum entry**, an entry in the journal that notes a significant event but has no debit or credit amount.

Cash Dividends, Stock Dividends, and Stock Splits Compared

Cash dividends, stock dividends, and stock splits have some similarities and some differences. Exhibit 13-9 summarizes their effects on the accounting equation.

Exhibit 13-9 | Effects of Dividends and Stock Splits on the Accounting Equation

Effect On	Cash Dividend	Small Stock Dividend	Large Stock Dividend	Stock Split
Total Assets	Decrease	No effect	No effect	No effect
Total Liabilities	No effect	No effect	No effect	No effect
Common Stock	No effect	Increase	Increase	No effect
Paid-In Capital in Excess of Par	No effect	Increase	No effect	No effect
Retained Earnings	Decrease	Decrease	Decrease	No effect
Total Stockholders' Equity	Decrease	No effect	No effect	No effect



Try It!

8. On August 1, Hagino Corporation declared a \$1.50 per share cash dividend on its common stock (20,000 shares) for stockholders on record as of August 15. Hagino paid the dividend on August 31. Journalize the entries declaring the cash dividend and paying the dividend.

Check your answers online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercises S13-7 through S13-11.

[Pearson MyLab Accounting](#)

HOW IS THE COMPLETE CORPORATE INCOME STATEMENT PREPARED?

A corporation's income statement includes some unique items that do not often apply to smaller businesses. These unique items are listed after determining the corporation's income from continuing operations. We will review the fictitious company Kevin's Vintage Guitars, Inc.'s income statement for year ended December 31, 2018, shown in Exhibit 13-10, to illustrate these items.

Learning Objective 5

Prepare a corporate income statement including earnings per share

Exhibit 13-10 | Kevin's Vintage Guitars, Inc.—Income Statement

KEVIN'S VINTAGE GUITARS, INC. Income Statement Year Ended December 31, 2018	
Net Sales	\$ 500,000
Cost of Goods Sold	240,000
Gross Profit	260,000
Operating Expenses	181,000
Operating Income	79,000
Other Income and (Expenses):	
Gain on Sale of Equipment	11,000
Income Before Income Taxes	90,000
Income Tax Expense	36,000
Income from Continuing Operations	54,000
Discontinued Operations (less applicable tax of \$14,000)	21,000
Net Income	\$ 75,000
 Earnings per Share of Common Stock (20,000 shares outstanding):	
Income from Continuing Operations	\$ 2.70
Income from Discontinued Operations	1.05
Net Income	\$ 3.75

Continuing Operations

Special Items

Earnings per Share

Continuing Operations

In Exhibit 13-10, the first section reports continuing operations. This part of the business should continue from period to period. Income from continuing operations, therefore, helps investors make predictions about future earnings. We may use this information to predict that Kevin's Vintage Guitars, Inc. may earn approximately \$54,000 next year.



The continuing operations of Kevin's Vintage Guitars, Inc. include two items that warrant explanation:

- Kevin's Vintage Guitars had a gain on the sale of equipment, which is outside the company's core business of selling vintage guitars. This is why the gain is reported in the "other" category—separately from Kevin's Vintage Guitars's operating income. Interest revenue and interest expense are examples of other items are included in this section.
- Income tax expense of \$36,000 is subtracted to arrive at income from continuing operations. Kevin's Vintage Guitars's income tax rate is 40% ($\$90,000 \times 0.40 = \$36,000$).

Discontinued Operations

After continuing operations, an income statement may include gains and losses from discontinued operations. These gains and losses occur when a company sells or disposes of an identifiable division (sometimes called a *segment of the business*). The gain or loss on discontinued operations is reported separately from continued operations because this type of disposal does not occur frequently. A company would report information on the segments that have been sold under the heading Discontinued Operations. In our example, income from discontinued operations of \$35,000 is taxed at 40% and is reported net of its income tax effect as shown below.

Income from discontinued operations	\$ 35,000
Less: Income tax expense (40%)	<u>(14,000)</u>
Discontinued operations	<u><u>\$ 21,000</u></u>

Trace this item to the income statement in Exhibit 13-10. A loss on discontinued operations is reported similarly, but with a subtraction for the income tax *savings* on the loss (the tax savings reduces the loss).

Gains and losses on the normal sale of plant assets are *not* reported as discontinued operations. Instead, they are reported as "Other Income and (Expenses)" among continuing operations because companies dispose of old plant assets and equipment more frequently than business segments.

Earnings per Share

Earnings per Share (EPS)

Amount of a company's net income (loss) for each share of its outstanding common stock. (Net income – Preferred dividends) / Weighted average number of common shares outstanding.

The final segment of a corporate income statement reports the company's **earnings per share (EPS)**. EPS is the most widely used of all business statistics. EPS reports the amount of net income (loss) for each share of the company's *outstanding common stock*. Earnings per share is calculated as net income minus preferred dividends divided by the weighted average number of common shares outstanding. Preferred dividends are subtracted from net income because the preferred stockholders have the first claim to dividends. Therefore, that portion of the company's earnings is not available to the common stockholders and is not included in the EPS calculation on common stock. The computation for the weighted average number of common shares outstanding is covered in advanced accounting courses. For simplicity, we will determine earnings per share on the average number of shares outstanding (beginning balance plus ending balance, divided by two).

A company that reports discontinued operations must report earnings per share for discontinued operations, either on the face of the income statement (as shown in Exhibit 13-10) or in the notes to the financial statements. Earnings per share for continuing operations must be reported on the face of the income statement.



Try It!

9. Rocky Corporation's accounting records include the following items, listed in no particular order, at December 31, 2018:

Other Income and (Expenses)	\$ (6,000)	Cost of Goods Sold	\$ 29,200
Net Sales Revenue	70,800	Operating Expenses	22,000
Gain on Discontinued Operations	4,800		

The income tax rate for Rocky Corporation is 30%. Prepare Rocky's income statement for the year ended December 31, 2018. Omit earnings per share. Use a multi-step format.

Check your answers online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercises S13-12 and S13-13.

[Pearson MyLab Accounting](#)

HOW IS EQUITY REPORTED FOR A CORPORATION?

Earlier, you learned that a corporation's equity contains two basic sources: paid-in capital and retained earnings. Let's explore how stockholders' equity is reported.

Learning Objective 6

Explain how equity is reported for a corporation

Statement of Retained Earnings

The statement of retained earnings reports how the company's retained earnings balance changed from the beginning of the period to the end of the period. Remember that retained earnings is the equity earned by profitable operations that is not distributed to stockholders. Exhibit 13-11 shows the statement of retained earnings of Smart Touch Learning for 2018.

Exhibit 13-11 | Statement of Retained Earnings

SMART TOUCH LEARNING, INC.	
Statement of Retained Earnings	
Two Months Ended December 31, 2018	
Retained Earnings, November 1, 2018	\$ 0
Net income for two months	8,550
	8,550
Dividends declared	(5,000)
Retained Earnings, December 31, 2018	\$ 3,550

Companies can report a negative amount in retained earnings. This is called a **deficit** and is reflected by a debit balance in the Retained Earnings account. A deficit occurs when a company has recurring losses and/or declares dividends in excess of retained earnings. Most states prohibit corporations from paying a dividend if a deficit will occur.

Deficit

Debit balance in the Retained Earnings account.



Appropriations of Retained Earnings

Cash dividends and treasury stock purchases require a cash payment. These cash outlays leave fewer resources to pay liabilities. For example, a bank may agree to loan \$500,000 to a company only if the company maintains a minimum level of stockholders' equity by limiting both its declaration of dividends and its purchases of treasury stock. The restriction often focuses on the balance of retained earnings. Companies usually report their retained earnings restrictions in notes to the financial statements.

Appropriation of Retained Earnings

Restriction of a portion of retained earnings that is recorded by a journal entry.

Appropriations of retained earnings are retained earnings restrictions recorded by journal entries. A corporation may *appropriate*—that is, segregate in a separate account—a portion of retained earnings for a specific use. For example, the board of directors may appropriate part of retained earnings for expansion or contingencies (such as a potential liability associated with a lawsuit).

Prior-Period Adjustments

Occasionally a company may make an accounting error as a result of mathematical mistakes, misapplying accounting principles, or oversight that is not discovered until the following period. Once discovered, these errors must be corrected because the Retained Earnings account balance is wrong. The error is corrected by adjusting the beginning balance in the Retained Earnings account in the period the error is discovered. Corrections to Retained Earnings for errors of an earlier period are called **prior-period adjustments**. The prior-period adjustment either increases or decreases the beginning balance of the Retained Earnings account and appears on the statement of retained earnings.

To illustrate, assume a fictitious company, Mountain Home, Inc., recorded \$30,000 of salaries expense for 2018. The correct amount of salaries expense was \$40,000. This error had the following effect:

- Understated Salaries Expense by \$10,000
- Overstated net income by \$10,000

In 2019, Mountain Home paid the extra \$10,000 in salaries owed for the prior year. Mountain Home's prior-period adjustment decreased Retained Earnings as shown in Exhibit 13-12.

Exhibit 13-12 | Statement of Retained Earnings—Prior Period Adjustment

MOUNTAIN HOME, INC.	
Statement of Retained Earnings	
Year Ended December 31, 2019	
Retained Earnings, January 1, 2019, as originally reported	\$ 140,000
Prior period adjustment	(10,000)
Retained Earnings, January 1, 2019, as adjusted	130,000
Net income for the year	63,000
	193,000
Dividends declared	(23,000)
Retained Earnings, December 31, 2019	\$ 170,000

Statement of Stockholders' Equity

The statement of stockholders' equity is another option for reporting the changes in stockholders' equity of a corporation. This statement has more information than the statement of retained earnings in that it reports the changes in all stockholders' equity accounts, not



just Retained Earnings. The statement of stockholders' equity shows the beginning balance, any additions or subtractions, and the ending balance for all equity accounts. In addition, the statement of stockholders' equity also reports the number of shares and any changes during the year in preferred, common, and treasury stock. Exhibit 13-13 shows a statement of stockholders' equity for Mountain Home, Inc.

Exhibit 13-13 | Statement of Stockholders' Equity

MOUNTAIN HOME, INC. Statement of Stockholders' Equity Year Ended December 31, 2019					
	Common Stock	Paid-In Capital in Excess of Par	Retained Earnings	Total Stockholders' Equity	
	Shares	Amount			
Balances, January 1, 2019, as originally reported	20,000	\$ 20,000	\$ 80,000	\$ 140,000	\$ 240,000
Prior period adjustment				(10,000)	(10,000)
Balances, January 1, 2019, as adjusted	20,000	\$ 20,000	\$ 80,000	\$ 130,000	\$ 230,000
Net income for the year				63,000	63,000
Dividends declared				(23,000)	(23,000)
Balances, December 31, 2019	20,000	\$ 20,000	\$ 80,000	\$ 170,000	\$ 270,000



IFRS requires a Statement of Stockholders' Equity, reporting the changes in all of the equity accounts.

Try It!

10. Sjostrom, Inc. had beginning retained earnings of \$300,000 on January 1, 2018. During the year, Sjostrom declared and paid \$140,000 of cash dividends and earned \$200,000 of net income. Prepare a statement of retained earnings for Sjostrom, Inc. for the year ended December 31, 2018.

Check your answer online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercises S13-14 and S13-15.

Pearson MyLab Accounting

HOW DO WE USE STOCKHOLDERS' EQUITY RATIOS TO EVALUATE BUSINESS PERFORMANCE?

Investors are constantly comparing companies' profits. To compare companies of different sizes, we need some standard profitability measures. Three important ratios to use for comparison are earnings per share, rate of return on common stockholders' equity, and price/earnings ratio.

Learning Objective 7

Use earnings per share, rate of return on common stockholders' equity, and the price/earnings ratio to evaluate business performance

Earnings per Share

As discussed earlier in the chapter, the final segment of a corporate income statement reports the company's earnings per share. Earnings per share (EPS) reports the amount of net income (loss) for each share of the company's *outstanding common stock*. Earnings per share is calculated as net income minus preferred dividends divided by the weighted



average number of common shares outstanding. The computation for the weighted average number of common shares outstanding is covered in advanced accounting courses. For simplicity, we will determine earnings per share on the average number of shares outstanding (beginning balance plus ending balance, divided by two).

For example, the **Kohl's Corporation** Fiscal 2015 Annual Report reports the following amounts:

(In millions)	January 30, 2016 (Fiscal year 2015)	January 31, 2015 (Fiscal year 2014)
Net Income (for the year ended)	\$ 673	\$ 867
Preferred Dividends	0	0
Total Stockholders' Equity	5,491	5,991
Stockholders' Equity attributable to Preferred Stock	0	0
Number of Common Shares Outstanding	186 shares	201 shares

Kohl's earnings per share for fiscal year 2015 is computed as follows:

$$\begin{aligned}\text{Earnings per share} &= (\text{Net income} - \text{Preferred dividends}) / \text{Average number of common shares outstanding} \\ &= (\$673 - \$0) / [(186 \text{ shares} + 201 \text{ shares}) / 2] \\ &= \$3.48 \text{ per share}\end{aligned}$$

FASB requires that earnings per share be reported on the income statement.

Price/Earnings Ratio

The **price/earnings ratio** is the ratio of the market price of a share of common stock to the company's earnings per share. The price/earnings ratio shows the market price of \$1 of earnings. Assuming Kohl's Corporation has a market price of \$37.00 per share of common stock, Kohl's price/earnings ratio for fiscal year 2015 is calculated as follows:

$$\begin{aligned}\text{Price/earnings ratio} &= \text{Market price per share of common stock} / \text{Earnings per share} \\ &= \$37.00 \text{ per share} / \$3.48 \text{ per share} \\ &= 10.63\end{aligned}$$

The price/earnings ratio implies that Kohl's stock is selling at 10.63 times one year's earnings per share. This ratio is commonly used by investors to evaluate their ability to earn a return on their investment. It tells investors how much they should be willing to pay for \$1 of a company's earnings. A higher price/earnings ratio signifies a higher return on investment. As with other ratios, the price/earnings ratio is most useful when comparing one company to another.

Rate of Return on Common Stockholders' Equity

Shows the relationship between net income available to common stockholders and their average common equity invested in the company. $(\text{Net income} - \text{Preferred dividends}) / \text{Average common stockholders' equity}$.

Rate of Return on Common Stockholders' Equity

Rate of return on common stockholders' equity, often shortened to *return on equity*, shows the relationship between net income available to common stockholders and their average common equity invested in the company. The numerator is net income minus preferred dividends. Preferred dividends are subtracted because the preferred stockholders have first claim to any dividends. The denominator is average common stockholders' equity—total equity minus preferred equity.



Returning to Kohl's Corporation, the rate of return on common stockholders' equity for fiscal year 2015 is calculated as follows:

$$\begin{aligned}\text{Rate of return on common stockholders' equity} &= (\text{Net income} - \text{Preferred dividends}) / \text{Average common stockholders' equity} \\ &= (\$673 - \$0) / [(\$5,491 + \$5,991) / 2] \\ &= 0.12 = 12\%\end{aligned}$$

Kohl's has returned \$0.12 for each \$1 of the average amount invested by common stockholders. A rate of return on common stockholders' equity of 15% to 20% is considered good in most industries. At 12%, Kohl's has a return on equity that is lower, but it should be compared with companies in the same industry.

Try It!

Vollmer, Inc. had reported the following balances:

	December 31, 2019	December 31, 2018
Net Income	\$ 80,000	\$ 60,000
Preferred Dividends	2,000	5,000
Total Stockholders' Equity	340,000	310,000
Stockholders' Equity attributable to Preferred Stock	20,000	20,000
Number of Common Shares Outstanding	10,000	14,000

11. Compute Vollmer's earnings per share for 2019.
12. Compute Vollmer's price/earnings ratio for 2019, assuming the market price is \$40 per share.
13. Compute Vollmer's rate of return on common stockholders' equity for 2019.

Check your answers online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercises S13-16 through S13-18.

Pearson MyLab Accounting

REVIEW

> Things You Should Know

1. What is a corporation?

- A business organized under state law that is a separate legal entity.
- Corporations have capital stock that represents shares of ownership.
 - Authorized stock is the maximum number of shares of stock that the corporate charter allows the corporation to issue.
 - Outstanding stock is stock that has been issued and is in the hands of stockholders.
- Corporations can have different classes of stock:
 - Common stock represents the basic ownership of a corporation.
 - Preferred stock gives its owners certain advantages, such as the right to receive preferential dividends.

- A corporation's equity is called stockholders' equity. Stockholders' equity consists of two basic sources:

- Paid-in capital—amounts received from stockholders in exchange for stock.
- Retained earnings—equity earned by profitable operations that is not distributed to stockholders.

2. How is the issuance of stock accounted for?

- Issuance of common stock (and preferred stock) at par value

Date	Accounts and Explanation	Debit	Credit
	Cash	Par Value	
	Common Stock—\$1 Par Value		Par Value
	<i>Issued common stock at par.</i>		

- Issuance of common stock (and preferred stock) at a premium

Date	Accounts and Explanation	Debit	Credit
	Cash	Issuance Price	
	Common Stock—\$1 Par Value		Par Value
	Paid-In Capital in Excess of Par—Common		Difference
	<i>Issued common stock at a premium.</i>		

- Issuing stated value stock is almost identical to accounting for par value stock. The only difference is the use of the Paid-In Capital in Excess of *Stated* account.
- Stock can be issued for assets other than cash. The transaction should be recorded at the market value of the stock issued or the market value of the assets received, whichever is more clearly determinable.

3. How is treasury stock accounted for?

- Treasury stock is a corporation's own stock that it has previously issued and later reacquired.
- When treasury stock is purchased, it is recorded at cost, not par value.

Date	Accounts and Explanation	Debit	Credit
	Treasury Stock—Common	Cost	
	Cash		Cost
	<i>Purchased treasury stock.</i>		

- Treasury Stock is a contra equity account, has a normal debit balance, and is a reduction to total stockholders' equity.
- Treasury stock can be sold at cost, below cost, or above cost.
- As an alternative to treasury stock, corporations can retire stock, which removes the stock from the company's books.

4. How are dividends and stock splits accounted for?

- Cash dividends cause a decrease in both assets (Cash) and equity (Retained Earnings).
- Preferred stockholders receive a dividend preference that ensures that the preferred stockholders will receive dividends first. There are two categories of preferred stock:
 - Cumulative preferred stock—owners must receive all dividends in arrears (passed dividends) and current year dividends before the corporation pays dividends to the common stockholders.
 - Noncumulative preferred stock—owners do not receive any passed dividends.
- Stock dividends are distributions of a corporation's stock and have no effect on total stockholders' equity, assets, or liabilities.
 - Small stock dividends (less than 20% to 25%) are recorded at the stock's market value.
 - Large stock dividends (greater than 20% to 25%) are recorded at the stock's par value.
- Stock splits increase the number of issued and outstanding shares of stock coupled with a proportionate reduction in the par value of the stock.
- Stock splits do not affect any account balances, and no journal entry is needed.

5. How is the complete corporate income statement prepared?

- A corporation's income statement includes the following unique items:
 - Income from Continuing Operations.
 - Discontinued Operations.
- Earnings per share for income from continuing operations must be reported on the face of the income statement.

6. How is equity reported for a corporation?

- The statement of retained earnings reports how the company's retained earnings balance changed from the beginning of the period to the end of the period.
- Retained earnings can be appropriated (set aside) for a specific use.
- Prior-period adjustments must be made to beginning retained earnings for mathematical mistakes, misapplied accounting principles, or oversight.
- The statement of stockholders' equity reports the changes in all stockholders' equity accounts.

7. How do we use stockholders' equity ratios to evaluate business performance?

- Earnings per share calculates the amount of a company's net income (loss) for each share of its outstanding common stock. $(\text{Net income} - \text{Preferred dividends}) / \text{Weighted average number of common shares outstanding}$
- The price/earnings ratio measures the value that the stock market places on \$1 of a company's earnings. $\text{Market price per share of common stock} / \text{Earnings per share}$
- Rate of return on common stockholders' equity shows the relationship between net income available to common stockholders and their average common equity invested in the company. $(\text{Net income} - \text{Preferred dividends}) / \text{Average common stockholders' equity}$

> Check Your Understanding

Check your understanding of the chapter by completing this problem and then looking at the solution. Use this practice to help identify which sections of the chapter you need to study more.

Delphian Corporation's balance sheet as of December 31, 2018, follows:

DELPHIAN CORPORATION		
Balance Sheet (Partial)		
December 31, 2018		
Stockholders' Equity		
Paid-In Capital:		
Common Stock—\$1 Par Value; 11,000,000 shares authorized, 8,000,000 shares issued and outstanding	\$ 8,000,000	
Paid-In Capital in Excess of Par—Common	200,000	
Total Paid-In Capital	8,200,000	
Retained Earnings	800,000,000	
Total Stockholders' Equity	\$ 808,200,000	

During 2019, Delphian Corporation had the following transactions:

-
- | | |
|---------|--|
| Jan. 1 | Issued 10,000 shares of common stock for \$10 per share. |
| Feb. 15 | Issued 2,000 shares of common stock for \$8 per share. |
| Mar. 1 | Declared a \$0.20 per share cash dividend on its common stock to be paid on March 30. Date of record: March 15. |
| 30 | Paid the cash dividend to stockholders. |
| Nov. 1 | Declared a 1% common stock dividend on all common stock outstanding. Current market price of the stock was \$8. Date of record: Nov. 15. |
| 30 | Distributed stock to stockholders. |
| Dec. 1 | Purchased 5,000 shares of treasury stock—common at \$12 per share. |
| 20 | Sold 3,000 shares of treasury stock—common at \$14 per share. |
-

Requirements

1. Journalize Delphian's transactions for 2019. (See Learning Objectives 2, 3, and 4)
2. Prepare the stockholders' equity section of the balance sheet as of December 31, 2019. Assume Delphian had net income of \$20,000,000 during 2019 and that Cash Dividends and Stock Dividends have been closed to the Retained Earnings account. (See Learning Objectives 2, 3, 4, and 6)
3. Determine Delphian's earnings per share for 2019. (See Learning Objectives 5 and 7)
4. Assuming Delphian's market value per common share as of December 31, 2019, was \$15, calculate Delphian's price/earnings ratio for 2019. (See Learning Objective 7)

> Solution

1.

Date	Accounts and Explanation	Debit	Credit
Jan. 1	Cash (\$10 per share × 10,000 shares) Common Stock—\$1 Par Value (\$1 per share × 10,000 shares) Paid-In Capital in Excess of Par—Common (\$9 per share × 10,000 shares) <i>Issued common stock at a premium.</i>	100,000	10,000 90,000
Feb. 15	Cash (\$8 per share × 2,000 shares) Common Stock—\$1 Par Value (\$1 per share × 2,000 shares) Paid-In Capital in Excess of Par—Common (\$7 per share × 2,000 shares) <i>Issued common stock at a premium.</i>	16,000	2,000 14,000
Mar. 1	Cash Dividends (\$0.20 per share × (8,000,000 shares + 10,000 shares + 2,000 shares)) Dividends Payable—Common <i>Declared a cash dividend.</i>	1,602,400	1,602,400
15	<i>No entry recorded.</i>		
30	Dividends Payable—Common Cash <i>Payment of cash dividend.</i>	1,602,400	1,602,400
Nov. 1	Stock Dividends (\$8 per share × 8,012,000 shares × 0.01) Common Stock Dividend Distributable (\$1 per share × 8,012,000 shares × 0.01) Paid-In Capital in Excess of Par—Common (\$640,960 – \$80,120) <i>Declared a 1% stock dividend.</i>	640,960	80,120 560,840
15	<i>No entry recorded.</i>		
30	Common Stock Dividend Distributable Common Stock—\$1 Par Value <i>Issued 1% stock dividend.</i>	80,120	80,120
Dec. 1	Treasury Stock—Common (\$12 per share × 5,000 shares) Cash <i>Purchased treasury stock.</i>	60,000	60,000
20	Cash (\$14 per share × 3,000 shares) Treasury Stock—Common (\$12 per share × 3,000 shares) Paid-In Capital from Treasury Stock Transactions (\$2 per share × 3,000 shares) <i>Sold treasury stock above cost.</i>	42,000	36,000 6,000

2.

DELPHIAN CORPORATION Balance Sheet (Partial) December 31, 2019	
Stockholders' Equity	
Paid-In Capital:	
Common Stock—\$1 Par Value; 11,000,000 shares authorized, 8,092,120 shares issued, 8,090,120 outstanding	\$ 8,092,120
Paid-In Capital in Excess of Par—Common	864,840
Paid-In Capital in from Treasury Stock Transactions	6,000
Total Paid-In Capital	8,962,960
Retained Earnings	817,756,640
Treasury Stock at Cost	(24,000)
Total Stockholders' Equity	\$ 826,695,600

Calculations:

Common stock—number of shares issued and outstanding:

Beginning balance, Jan. 1	8,000,000 shares
Stock issuance on Jan. 1	10,000
Stock issuance on Feb. 15	2,000
Shares outstanding before dividend	8,012,000
Stock dividend on Nov. 30 ($8,012,000 \times 0.01$)	80,120
Common stock issued	8,092,120
Purchase of treasury stock on Dec. 1	(5,000)
Sale of treasury stock on Dec. 20	3,000
Common stock outstanding	8,090,120 shares

Paid-In Capital in Excess of Par:

Beginning balance, Jan. 1	\$ 200,000
Stock issuance on Jan. 1	90,000
Stock issuance on Feb. 15	14,000
Stock dividend on Nov. 1	560,840
Total Paid-In Capital in Excess of Par	\$ 864,840

Retained Earnings:

Beginning balance, Jan. 1	\$ 800,000,000
Cash dividend on Mar. 1	(1,602,400)
Stock dividend on Nov. 1	(640,960)
Net income for the year	20,000,000
Ending balance, Dec. 31	\$ 817,756,640

3. Earnings per share = (Net income – Preferred dividends) / Average number of common shares outstanding = $(\$20,000,000 - \$0) / [8,000,000 \text{ shares} + 8,090,120 \text{ shares}] / 2] = \2.49 per share
4. Price/earnings ratio = Market price per share of common stock / Earnings per share = \$15 per share / \$2.49 per share = 6.02

> Key Terms

Appropriation of Retained Earnings (p. 722)	Large Stock Dividend (p. 715)	Price/Earnings Ratio (p. 724)
Authorized Stock (p. 699)	Legal Capital (p. 711)	Prior-Period Adjustment (p. 722)
Capital Stock (p. 699)	Memorandum Entry (p. 718)	Rate of Return on Common Stockholders' Equity (p. 724)
Common Stock (p. 700)	No-Par Stock (p. 701)	Retained Earnings (p. 701)
Corporation (p. 698)	Noncumulative Preferred Stock (p. 713)	Small Stock Dividend (p. 715)
Cumulative Preferred Stock (p. 713)	Outstanding Stock (p. 700)	Stated Value Stock (p. 701)
Deficit (p. 721)	Paid-In Capital (p. 701)	Stock Certificate (p. 699)
Dividend (p. 700)	Paid-In Capital in Excess of Par (p. 677)	Stock Dividend (p. 714)
Dividend in Arrears (p. 713)	Par Value (p. 701)	Stock Split (p. 718)
Earnings per Share (EPS) (p. 720)	Preemptive Right (p. 700)	Stockholders' Equity (p. 701)
Issue Price (p. 702)	Preferred Stock (p. 701)	Treasury Stock (p. 707)
Issued Stock (p. 699)	Premium (p. 703)	Underwriter (p. 702)

> Quick Check

- Which characteristic of a corporation is a disadvantage?
 - Mutual agency
 - Double taxation
 - Limited liability
 - None are disadvantages.
- The two basic sources of stockholders' equity are
 - assets and equity.
 - preferred and common.
 - retained earnings and dividends.
 - paid-in capital and retained earnings.
- Suppose Value Home and Garden Imports issued 400,000 shares of \$0.10 par common stock at \$4 per share. Which journal entry correctly records the issuance of this stock?

Date	Accounts and Explanation	Debit	Credit
a.	Common Stock—\$0.10 Par Value Cash Paid-In Capital in Excess of Par—Common	1,600,000 	40,000 1,560,000
b.	Common Stock—\$0.10 Par Value Cash	1,600,000 1,600,000	
c.	Cash Common Stock—\$0.10 Par Value Paid-In Capital in Excess of Par—Common	1,600,000 40,000 1,560,000	
d.	Cash Common Stock—\$0.10 Par Value	1,600,000 1,600,000	

- Suppose Yummy Treats Bakery issues common stock in exchange for a building. Yummy Treats Bakery should record the building at
 - the par value of the stock given.
 - its market value.
 - its book value.
 - a value assigned by the board of directors.

Learning Objective 1

Learning Objective 1

Learning Objective 2

Learning Objective 2

Learning Objective 3

5. A company's own stock that it has issued and repurchased is called
- a. outstanding stock.
 - b. dividend stock.
 - c. issued stock.
 - d. treasury stock.
6. Assume that a company paid \$6 per share to purchase 1,100 shares of its \$3 par common stock as treasury stock. The purchase of treasury stock
- a. increased total equity by \$3,300.
 - b. decreased total equity by \$3,300.
 - c. decreased total equity by \$6,600.
 - d. increased total equity by \$6,600.

Learning Objective 4

7. Harry Corporation has 10,000 shares of 5%, \$10 par cumulative preferred stock and 50,000 shares of common stock outstanding. Harry declared no dividends in 2017 and had no dividends in arrears prior to 2017. In 2018, Harry declares a total dividend of \$42,000. How much of the dividends go to the common stockholders?
- a. \$42,000
 - b. \$37,000
 - c. \$32,000
 - d. None; it all goes to preferred stockholders.
8. A small stock dividend
- a. decreases common stock.
 - b. has no effect on total equity.
 - c. increases Retained Earnings.
 - d. Items a, b, and c are correct.

Learning Objective 5

9. Which of the following is not included in continuing operations?
- a. Loss on the sale of equipment
 - b. Gain on the sale on a segment of a business that has been discontinued
 - c. Salaries expense
 - d. Interest revenue

Learning Objective 6

10. Jackson Health Foods has 8,000 shares of \$2 par common stock outstanding, which were issued at \$15 per share. Jackson also has a deficit balance in Retained Earnings of \$86,000. How much is Jackson's total stockholders' equity?
- a. \$16,000
 - b. \$120,000
 - c. \$206,000
 - d. \$34,000

Learning Objective 7

11. Dale Corporation has the following data:

Net income	\$ 24,000
Preferred dividends	12,000
Average common stockholders' equity	100,000

Dale's rate of return on common stockholders' equity is

- a. 24%
- b. 50%
- c. 12%
- d. 36%

Check your answers at the end of the chapter.

ASSESS YOUR PROGRESS

> Review Questions

1. What is a corporation?
2. List three characteristics of a corporation.
3. How does authorized stock differ from outstanding stock?
4. What are the four basic rights of stockholders?
5. How does preferred stock differ from common stock?
6. What is par value?
7. What are the two basic sources of stockholders' equity? Describe each source.
8. What account is used to record the premium when issuing common stock? What type of account is this?
9. If stock is issued for assets other than cash, describe the recording of this transaction.
10. What is treasury stock? What type of account is Treasury Stock, and what is the account's normal balance?
11. Where and how is treasury stock reported on the balance sheet?
12. What is the effect on the accounting equation when cash dividends are declared? What is the effect on the accounting equation when cash dividends are paid?
13. What are the three relevant dates involving cash dividends? Describe each.
14. How does cumulative preferred stock differ from noncumulative preferred stock?
15. What is a stock dividend?
16. What is the effect on the accounting equation when a stock dividend is declared? What is the effect on the accounting equation when a stock dividend is distributed?
17. What are some reasons corporations issue stock dividends?
18. What is a stock split?
19. What is reported in the discontinued operations section of the income statement?
20. What does the statement of retained earnings report?
21. What is a prior-period adjustment?
22. What does the statement of stockholders' equity report? How does the statement of stockholders' equity differ from the statement of retained earnings?
23. What does earnings per share report, and how is it calculated?
24. What is the price/earnings ratio, and how is it calculated?
25. What does the rate of return on common stock show, and how is it calculated?

> Short Exercises

S13-1 Describing corporation characteristics

Due to recent beef recalls, Southwest Steakhouse is considering incorporating. Bob, the owner, wants to protect his personal assets in the event the restaurant is sued.

Learning Objective 1

Requirements

1. Which advantage of incorporating is most applicable? What are other advantages of organizing as a corporate entity?
2. What are some disadvantages of organizing as a corporation?

Learning Objective 2**S13-2 Journalizing issuance of stock—at par and at a premium**

Krista Corporation has two classes of stock: common, \$5 par value; and preferred, \$45 par value.

Requirements

1. Journalize Krista's issuance of 5,000 shares of common stock for \$8 per share.
2. Journalize Krista's issuance of 5,000 shares of preferred stock for a total of \$225,000.

Learning Objective 2**S13-3 Journalizing issuance of stock—no-par**

Wolcott Corporation issued 5,000 shares of no-par common stock for \$2 per share on January 13. Record the stock issuance.

Learning Objective 2**S13-4 Journalizing issuance of stock—stated value**

Nelson Corporation issued 9,000 shares of \$3 stated value common stock for \$11 per share on July 7. Record the stock issuance.

Learning Objective 2**S13-5 Journalizing issuance of stock for assets other than cash**

Cedar Corporation issued 36,000 shares of \$1 par value common stock in exchange for a building with a market value of \$160,000. Record the stock issuance.

Learning Objective 3**S13-6 Accounting for the purchase and sale of treasury stock**

Precise Electronics completed the following treasury stock transactions in 2018:

-
- | | |
|--------|---|
| Mar. 1 | Purchased 2,000 shares of the company's \$1 par value common stock as treasury stock, paying cash of \$7 per share. |
| 12 | Sold 400 shares of the treasury stock for cash of \$9 per share. |
| 24 | Sold 1,500 shares of the treasury stock for cash of \$2 per share. (Assume the balance in Paid-In Capital from Treasury Stock Transactions on March 23 is \$5,000.) |
-

Requirements

1. Journalize these transactions. Explanations are not required.
2. How will Precise Electronics report treasury stock on its balance sheet as of March 31, 2018?

Learning Objective 4**S13-7 Accounting for cash dividends**

Java Company earned net income of \$85,000 during the year ended December 31, 2018. On December 15, Java declared the annual cash dividend on its 4% preferred stock (par value, \$120,000) and a \$0.25 per share cash dividend on its common stock (50,000 shares). Java then paid the dividends on January 4, 2019.

Requirements

1. Journalize for Java the entry declaring the cash dividends on December 15, 2018.
2. Journalize for Java the entry paying the cash dividends on January 4, 2019.

S13-8 Dividing cash dividends between preferred and common stock

Manchester Finance has the following classes of stock:

Preferred Stock—5%, \$20 par value; 9,000 shares authorized, 6,000 shares issued and outstanding

Common Stock—\$1 par value; 2,500,000 shares authorized, 1,500,000 shares issued and outstanding

Learning Objective 4

Requirements

1. Manchester declares cash dividends of \$30,000 for 2018. How much of the dividends goes to preferred stockholders? How much goes to common stockholders?
2. Assume the preferred stock is cumulative and Manchester passed the preferred dividend in 2016 and 2017. In 2018, the company declares cash dividends of \$60,000. How much of the dividend goes to preferred stockholders? How much goes to common stockholders?
3. Assume the preferred stock is noncumulative and Manchester passed the preferred dividend in 2016 and 2017. In 2018, the company declares cash dividends of \$60,000. How much of the dividend goes to preferred stockholders? How much goes to common stockholders?

S13-9 Journalizing a small stock dividend

Element Water Sports has 13,000 shares of \$1 par value common stock outstanding. Element distributes a 5% stock dividend when the market value of its stock is \$15 per share.

Learning Objective 4

Requirements

1. Journalize Element's declaration of the stock dividend on August 15 and distribution on August 31.
2. What is the overall effect of the stock dividend on Element's total assets?
3. What is the overall effect on total stockholders' equity?

S13-10 Journalizing a large stock dividend

Nelly, Inc. had 320,000 shares of \$2 par value common stock issued and outstanding as of December 15, 2018. The company is authorized to issue 1,300,000 common shares. On December 15, 2018, Nelly declared a 40% stock dividend when the market value for Nelly's common stock was \$7 per share. The stock was issued on Dec. 30.

Learning Objective 4

Requirements

1. Journalize the declaration and distribution of the stock dividend.
2. How many shares of common stock are outstanding after the dividend?

Learning Objective 4**S13-11 Accounting for a stock split**

Decor and More Imports recently reported the following stockholders' equity:

Stockholders' Equity		
Paid-In Capital:		
Common Stock—\$1 Par Value; 490,000,000 shares authorized, 119,000,000 shares issued and outstanding		\$ 119,000,000
Paid-In Capital in Excess of Par—Common		148,000,000
Total Paid-In Capital		267,000,000
Retained Earnings		654,000,000
Total Stockholders' Equity		\$ 921,000,000

Suppose Decor and More split its common stock 2-for-1 in order to decrease the market price per share of its stock. The company's stock was trading at \$17 per share immediately before the split.

Requirements

1. Prepare the stockholders' equity section of the Decor and More Imports balance sheet after the stock split.
2. Were the account balances changed or unchanged after the stock split?

Learning Objective 5**S13-12 Preparing a corporate income statement**

ABC Corporation's accounting records include the following items, listed in no particular order, at December 31, 2018:

Other Income and (Expenses)	\$ (7,200)	Cost of Goods Sold	\$ 30,000
Net Sales	81,000	Operating Expenses	25,000
Gain on Discontinued Operations	3,600		

The income tax rate for ABC Corporation is 39%.

Prepare ABC's income statement for the year ended December 31, 2018. Omit earnings per share. Use the multi-step format.

Learning Objective 5**S13-13 Reporting earnings per share**

Return to the ABC data in Short Exercise S13-12. ABC had 8,000 shares of common stock outstanding during 2018. ABC declared and paid preferred dividends of \$4,000 during 2018.

Show how ABC reports EPS data on its 2018 income statement.

Learning Objective 6**S13-14 Preparing a statement of retained earnings**

Kingston, Inc. had beginning retained earnings of \$135,000 on January 1, 2018. During the year, Kingston declared and paid \$85,000 of cash dividends and earned \$75,000 of net income. Prepare a statement of retained earnings for Kingston, Inc. for the year ending December 31, 2018.

Learning Objective 6**S13-15 Analyzing the effect of prior-period adjustments**

Taylor Corporation discovered in 2019 that it had incorrectly recorded in 2018 a cash payment of \$70,000 for utilities expense. The correct amount of the utilities expense was \$35,000.

Requirements

1. Determine the effect of the error on the accounting equation in 2018.
2. How should this error be reported in the 2019 financial statements?

S13-16 Computing earnings per share

HEB Corporation had net income for 2018 of \$60,450. HEB had 15,500 shares of common stock outstanding at the beginning of the year and 20,100 shares of common stock outstanding as of December 31, 2018. During the year, HEB declared and paid preferred dividends of \$2,600. Compute HEB's earnings per share.

Note: Short Exercise S13-16 must be completed before attempting Short Exercise S13-17.

S13-17 Computing price/earnings ratio

Refer to the HEB data in Short Exercise S13-17. Assume the market price of HEB's common stock is \$19.50 per share. Compute HEB's price/earnings ratio.

S13-18 Computing rate of return on common stockholders' equity

Wyler, Inc.'s 2018 balance sheet reported the following items—with 2017 figures given for comparison:

WYLER, INC. Balance Sheet As of December 31, 2018, and December 31, 2017		
	December 31, 2018	December 31, 2017
Total Assets	\$ 39,600	\$ 33,462
Total Liabilities	17,100	14,962
Total Stockholders' Equity (all common)	22,500	18,500
Total Liabilities and Stockholders' Equity	\$ 39,600	\$ 33,462

Net income for 2018 was \$3,690. Compute Wyler's rate of return on common stockholders' equity for 2018.

> Exercises

E13-19 Identifying advantages and disadvantages of a corporation

Following is a list of advantages and disadvantages of the corporate form of business. Identify each quality as either an advantage or a disadvantage.

- a. Higher cost of compliance with government regulation.
- b. Higher capital accumulation.
- c. Higher start-up costs than other business forms.
- d. Higher flexibility in transferring corporate ownership.
- e. Withdrawal or death of the owner does not cause termination of the business.
- f. No mutual agency among the stockholders and the corporation.
- g. Ownership and management are often separated.

Learning Objective 7

Learning Objective 7

Learning Objective 7

Learning Objective 2**E13-20 Determining paid-in capital for a corporation**

Aruba Corporation recently organized. The company issued common stock to an inventor in exchange for a patent with a market value of \$57,000. In addition, Aruba received cash for 6,000 shares of its \$10 par preferred stock at par value and 6,500 shares of its no-par common stock at \$20 per share. Without making journal entries, determine the total *paid-in capital* created by these transactions.

Learning Objective 2**E13-21 Journalizing issuance of stock**

Stanley Systems completed the following stock issuance transactions:

May 19	Issued 1,700 shares of \$3 par value common stock for cash of \$11.50 per share.
Jun. 3	Issued 340 shares of \$9, no-par preferred stock for \$17,000 cash.
11	Received equipment with a market value of \$74,000 in exchange for 11,000 shares of the \$3 par value common stock.

Requirements

1. Journalize the transactions. Explanations are not required.
2. How much paid-in capital did these transactions generate for Stanley Systems?

Learning Objective 2

1. a. Cash \$104,000

E13-22 Journalizing issuance of no-par stock

Eates Corp. issued 8,000 shares of no-par common stock for \$13 per share.

Requirements

1. Record issuance of the stock if the stock:
 - a. is true no-par stock.
 - b. has stated value of \$3 per share.
2. Which type of stock results in more total paid-in capital?

Learning Objective 2

2. Total Stockholders' Equity
\$94,500

E13-23 Journalizing issuance of stock and preparing the stockholders' equity section of the balance sheet

The charter for KXAS-TV, Inc. authorizes the company to issue 100,000 shares of \$2, no-par preferred stock and 500,000 shares of common stock with \$1 par value. During its start-up phase, KXAS-TV completed the following transactions:

Sep. 6	Issued 525 shares of common stock to the promoters who organized the corporation, receiving cash of \$15,750.
12	Issued 300 shares of preferred stock for cash of \$20,000.
14	Issued 1,800 shares of common stock in exchange for land with a market value of \$22,000.

Requirements

1. Record the transactions in the general journal.
2. Prepare the stockholders' equity section of the KXAS-TV balance sheet at September 30, 2018, assuming KXAS-TV, Inc. had net income of \$39,000 for the month.

E13-24 Journalizing issuance of stock and preparing the stockholders' equity section of the balance sheet

The charter of Evergreen Corporation authorizes the issuance of 900 shares of preferred stock and 1,400 shares of common stock. During a two-month period, Evergreen completed these stock-issuance transactions:

- | | |
|---------|--|
| Mar. 23 | Issued 230 shares of \$3 par value common stock for cash of \$15 per share. |
| Apr. 12 | Received inventory with a market value of \$27,000 and equipment with a market value of \$19,000 for 320 shares of the \$3 par value common stock. |
| 17 | Issued 900 shares of 5%, \$20 par value preferred stock for \$20 per share. |

Requirements

1. Record the transactions in the general journal.
2. Prepare the stockholders' equity section of the Evergreen balance sheet as of April 30, 2018, for the transactions given in this exercise. Retained Earnings has a balance of \$73,000 at April 30, 2018.

E13-25 Journalizing treasury stock transactions and reporting stockholders' equity

Frozen Brewery Corporation had the following stockholders' equity on September 30:

Stockholders' Equity	
Paid-In Capital:	
Common Stock—\$10 Par Value; 1,800 shares authorized, 700 shares issued and outstanding	\$ 7,000
Paid-In Capital in Excess of Par—Common	6,000
Total Paid-In Capital	13,000
Retained Earnings	40,000
Total Stockholders' Equity	\$ 53,000

On October 31, Frozen purchased 300 shares of treasury stock at \$20 per share.

Requirements

1. Journalize the purchase of the treasury stock.
2. Prepare the stockholders' equity section of the balance sheet at October 31, 2018. Assume the balance in retained earnings is unchanged from September 30.
3. How many shares of common stock are outstanding after the purchase of treasury stock?

E13-26 Journalizing issuance of stock and treasury stock transactions

Stock transactions for Careful Driving School, Inc. follow:

- | | |
|---------|---|
| Mar. 4 | Issued 27,000 shares of \$1 par value common stock at \$10 per share. |
| May 22 | Purchased 1,300 shares of treasury stock—common at \$13 per share. |
| Sep. 22 | Sold 500 shares of treasury stock—common at \$23 per share. |
| Oct. 14 | Sold 800 shares of treasury stock—common at \$9 per share. |

Journalize the transactions.

Learning Objective 2

March 23 Common Stock \$690

Learning Objective 3

2. Total Stockholders' Equity
\$52,000

Learning Objectives 2, 3

May 22 Treasury Stock \$16,900

Learning Objective 4

1. Preferred Dividend 2018
\$9,000

E13-27 Computing dividends on preferred and common stock and journalizing

Northern Communications has the following stockholders' equity on December 31, 2018:

Stockholders' Equity	
Paid-In Capital:	
Preferred Stock—5%, \$11 Par Value; 150,000 shares authorized, 20,000 shares issued and outstanding	\$ 220,000
Common Stock—\$2 Par Value; 575,000 shares authorized, 380,000 shares issued and outstanding	760,000
Paid-In Capital in Excess of Par—Common	680,000
Total Paid-In Capital	1,660,000
Retained Earnings	200,000
Total Stockholders' Equity	\$ 1,860,000

Requirements

- Assuming the preferred stock is cumulative, compute the amount of dividends to preferred stockholders and to common stockholders for 2018 and 2019 if total dividends are \$9,000 in 2018 and \$45,000 in 2019. Assume no changes in preferred stock and common stock in 2019.
- Record the journal entries for 2018, assuming that Northern Communications declared the dividend on December 1 for stockholders of record on December 10. Northern Communications paid the dividend on December 20.

Learning Objective 4

2. July 1 Cash Dividends
\$185,000

E13-28 Computing dividends on preferred and common stock and journalizing

The following elements of stockholders' equity are from the balance sheet of Sneed Marketing Corp. at December 31, 2017:

Stockholders' Equity	
Paid-In Capital:	
Preferred Stock—4%, \$2 Par Value; 80,000 shares authorized, 55,000 shares issued and outstanding	\$ 110,000
Common Stock—\$0.10 Par Value; 8,750,000 shares authorized, 8,000,000 shares issued and outstanding	800,000

Sneed paid no preferred dividends in 2017.

Requirements

- Compute the dividends to the preferred and common shareholders for 2018 if total dividends are \$185,000 and assuming the preferred stock is noncumulative. Assume no changes in preferred and common stock in 2018.
- Record the journal entries for 2018 assuming that Sneed Marketing Corp. declared the dividends on July 1 for stockholders of record on July 15. Sneed paid the dividends on July 31.

E13-29 Journalizing a stock dividend and reporting stockholders' equity

The stockholders' equity of Lakeside Occupational Therapy, Inc. on December 31, 2017, follows:

Stockholders' Equity	
Paid-In Capital:	
Common Stock—\$1 Par Value; 1,200 shares authorized, 400 shares issued and outstanding	\$ 400
Paid-In Capital in Excess of Par—Common	1,600
Total Paid-In Capital	2,000
Retained Earnings	120,000
Total Stockholders' Equity	\$ 122,000

On April 30, 2018, the market price of Lakeside's common stock was \$16 per share and the company declared a 13% stock dividend. The stock was distributed on May 15.

Requirements

1. Journalize the declaration and distribution of the stock dividend.
2. Prepare the stockholders' equity section of the balance sheet as of May 31, 2018. Assume Retained Earnings are \$120,000 on April 30, 2018, before the stock dividend, and the only change made to Retained Earnings before preparing the balance sheet was closing the Stock Dividends account.

E13-30 Journalizing cash and stock dividends

Self-Defense Schools, Inc. is authorized to issue 200,000 shares of \$2 par common stock. The company issued 73,000 shares at \$5 per share. When the market price of common stock was \$7 per share, Self-Defense Schools declared and distributed a 14% stock dividend. Later, Self-Defense Schools declared and paid a \$0.70 per share cash dividend.

Requirements

1. Journalize the declaration and the distribution of the stock dividend.
2. Journalize the declaration and the payment of the cash dividend.

E13-31 Reporting stockholders' equity after a stock split

Wood Golf Club Corp. had the following stockholders' equity at December 31, 2017:

Stockholders' Equity	
Paid-In Capital:	
Common Stock—\$1 Par Value; 650 shares authorized, 270 shares issued and outstanding	\$ 270
Paid-In Capital in Excess of Par—Common	540
Total Paid-In Capital	810
Retained Earnings	2,600
Total Stockholders' Equity	\$ 3,410

On June 30, 2018, Wood Golf Club split its common stock 2-for-1. Prepare the stockholders' equity section of the balance sheet immediately after the split. Assume the balance in retained earnings is unchanged from December 31, 2017.

Learning Objective 4

2. Total Stockholders' Equity
\$122,000

Learning Objective 4

1. Common Stock \$20,440

Learning Objective 4

Total Stockholders' Equity \$3,410

Learning Objective 4**E13-32 Determining the effects of cash dividends, stock dividends, and stock splits**

Complete the following chart by inserting a check mark (✓) for each statement that is true.

	Cash dividend	Stock dividend	Stock split
Decreases retained earnings			
Has no effect on a liability			
Increases paid-in capital by the same amount that it decreases retained earnings			
Decreases both total assets and total stockholders' equity			
Has no effect on total stockholders' equity			

Learning Objectives 3, 4**E13-33 Determining the effect of stock dividends, stock splits, and treasury stock transactions**

Many types of transactions may affect stockholders' equity. Identify the effects of the following transactions on total stockholders' equity. Each transaction is independent.

- A 10% stock dividend. Before the dividend, 540,000 shares of \$1 par value common stock were outstanding; market value was \$9 per share at the time of the dividend.
- A 2-for-1 stock split. Prior to the split, 66,000 shares of \$5 par value common stock were outstanding.
- Purchase of 1,100 shares of \$0.50 par treasury stock at \$6 per share.
- Sale of 600 shares of \$0.50 par treasury stock for \$9 per share. Cost of the treasury stock was \$7 per share.

Learning Objective 5

Net Income \$167,000

E13-34 Preparing a multi-step income statement

Clix Photographic Supplies, Inc.'s accounting records include the following for 2018:

Income Tax Savings—Loss on Discontinued Operations	\$ 12,000	Net Sales	\$ 525,000
Loss on Discontinued Operations	30,000	Operating Expenses (Including Income Tax)	100,000
		Cost of Goods Sold	240,000

Prepare Clix's multi-step income statement for the year ending December 31, 2018. Omit earnings per share.

Learning Objective 5

Net Income \$10.80

E13-35 Computing earnings per share

Faccone Academy Surplus had 60,000 shares of common stock and 9,000 shares of 20%, \$15 par value preferred stock outstanding through December 31, 2018. Income from continuing operations for 2018 was \$711,000, and loss on discontinued operations (net of income tax saving) was \$36,000.

Compute Faccone's earnings per share for 2018, starting with income from continuing operations. Round to the nearest cent.

E13-36 Preparing a statement of retained earnings

Kelly May Bakery, Inc. reported a prior-period adjustment in 2018. An accounting error caused net income of prior years to be overstated by \$1,000. Retained Earnings at December 31, 2017, as previously reported, was \$48,000. Net income for 2018 was \$74,000, and dividends declared were \$28,000. Prepare the company's statement of retained earnings for the year ended December 31, 2018.

E13-37 Computing earnings per share and price/earnings ratio

Rocket Corp. earned net income of \$153,040 and paid the minimum dividend to preferred stockholders for 2018. Assume that there are no changes in common shares outstanding during 2018. Rocket's books include the following figures:

Preferred Stock—6%, \$60 par value; 2,000 shares authorized, 1,000 shares issued and outstanding	\$ 60,000
Common Stock—\$5 par value; 80,000 shares authorized, 48,000 shares issued, 46,700 shares outstanding	240,000
Paid-In Capital in Excess of Par—Common	470,000
Treasury Stock—Common; 1,300 shares at cost	(26,000)

Requirements

1. Compute Rocket's EPS for the year.
2. Assume Rocket's market price of a share of common stock is \$12 per share. Compute Rocket's price/earnings ratio.

E13-38 Computing rate of return on common stockholders' equity

LaSalle Exploration Company reported these figures for 2018 and 2017:

	2018	2017
Income Statement—partial:		
Net Income	<u><u>\$ 14,800</u></u>	<u><u>\$ 19,200</u></u>
	Dec. 31, 2018	Dec. 31, 2017
Balance Sheet—partial:		
Total Assets	<u><u>\$ 323,000</u></u>	<u><u>\$ 314,000</u></u>
Preferred Stock	<u><u>\$ 2,100</u></u>	<u><u>\$ 2,100</u></u>
Common Stock	<u><u>178,000</u></u>	<u><u>168,000</u></u>
Retained Earnings	<u><u>11,000</u></u>	<u><u>7,000</u></u>
Total Stockholders' Equity	<u><u>\$ 191,100</u></u>	<u><u>\$ 177,100</u></u>

Compute rate of return on common stockholders' equity for 2018 assuming no dividends were declared or paid to preferred stockholders.

Learning Objective 6

Retained Earnings Dec. 31, 2018
\$93,000

Learning Objective 7

> Problems Group A

Learning Objectives 1, 2

P13-39A Organizing a corporation and issuing stock

Montel and Joe are opening a video store. There are no competing video stores in the area. They must decide how to organize the business. They anticipate profits of \$200,000 in the first year, with the ability to sell franchises in the future. Although they have enough to start the business now as a partnership, cash flow will be an issue as they grow. They feel the corporate form of operation will be best for the long term. They seek your advice.

Requirements

1. What is the main advantage they gain by selecting a corporate form of business now?
2. Would you recommend they initially issue preferred or common stock? Why?
3. If they decide to issue \$5 par common stock and anticipate an initial market price of \$45 per share, how many shares will they need to issue to raise \$2,025,000?

Learning Objectives 1, 2, 4

4. Common stock dividends
\$402,000

P13-40A Identifying sources of equity, stock issuance, and dividends

Voyage Comfort Specialists, Inc. reported the following stockholders' equity on its balance sheet at June 30, 2018:

Stockholders' Equity		
Paid-In Capital:		
Preferred Stock—7%, ? Par Value; 625,000 shares authorized, 280,000 shares issued and outstanding		\$ 1,400,000
Common Stock—\$1 Par Value; 3,000,000 shares authorized, 1,340,000 shares issued and outstanding		1,340,000
Paid-In Capital in Excess of Par—Common		2,900,000
Total Paid-In Capital		5,640,000
Retained Earnings		12,000,000
Total Stockholders' Equity		\$ 17,640,000

Requirements

1. Identify the different classes of stock that Voyage Comfort Specialists has outstanding.
2. What is the par value per share of Voyage Comfort Specialists' preferred stock?
3. Make two summary journal entries to record issuance of all the Voyage Comfort Specialists' stock for cash. Explanations are not required.
4. No preferred dividends are in arrears. Journalize the declaration of a \$500,000 dividend at June 30, 2018, and the payment of the dividend on July 20, 2018. Use separate Dividends Payable accounts for preferred and common stock. An explanation is not required.

P13-41A Journalizing stock issuance and cash dividends and preparing the stockholders' equity section of the balance sheet

D-Mobile Wireless needed additional capital to expand, so the business incorporated. The charter from the state of Georgia authorizes D-Mobile to issue 50,000 shares of 8%, \$50 par value cumulative preferred stock and 160,000 shares of \$4 par value common stock. During the first month, D-Mobile completed the following transactions:

-
- | | |
|--------|---|
| Oct. 2 | Issued 19,000 shares of common stock for a building with a market value of \$240,000. |
| 6 | Issued 600 shares of preferred stock for \$140 per share. |
| 9 | Issued 11,000 shares of common stock for cash of \$55,000. |
| 10 | Declared a \$19,000 cash dividend for stockholders of record on Oct. 20. Use a separate Dividends Payable account for preferred and common stock. |
| 25 | Paid the cash dividend. |
-

Requirements

1. Record the transactions in the general journal.
2. Prepare the stockholders' equity section of D-Mobile's balance sheet at October 31, 2018. Assume D-Mobile's net income for the month was \$94,000.

P13-42A Journalizing dividends and treasury stock transactions and preparing the stockholders' equity section of the balance sheet

Starborn Manufacturing Co. completed the following transactions during 2018:

-
- | | |
|---------|---|
| Jan. 16 | Declared a cash dividend on the 4%, \$96 par noncumulative preferred stock (1,200 shares outstanding). Declared a \$0.30 per share dividend on the 105,000 shares of \$4 par value common stock outstanding. The date of record is January 31, and the payment date is February 15. |
| Feb. 15 | Paid the cash dividends. |
| Jun. 10 | Split common stock 2-for-1. |
| Jul. 30 | Declared a 30% stock dividend on the common stock. The market value of the common stock was \$9 per share. |
| Aug. 15 | Distributed the stock dividend. |
| Oct. 26 | Purchased 5,400 shares of treasury stock at \$11 per share. |
| Nov. 8 | Sold 2,700 shares of treasury stock for \$13 per share. |
| 30 | Sold 1,600 shares of treasury stock for \$7 per share. |
-

Requirements

1. Record the transactions in Starborn's general journal.
2. Prepare the Starborn's stockholders' equity section of the balance sheet as of December 31, 2018. Assume that Starborn was authorized to issue 1,800 shares of preferred stock and 400,000 shares of common stock. Both preferred stock and common stock were issued at par. The ending balance of retained earnings as of December 31, 2018, is \$1,080,000.

Learning Objectives 2, 4

-
- | | |
|----|---|
| 2. | Total Stockholders' Equity
\$454,000 |
|----|---|
-

Learning Objective 5

Net Income \$65,500

P13-43A Preparing an income statement

The following information was taken from the records of Chua Motorsports, Inc. at November 30, 2018:

Selling Expenses	\$ 110,000	Common Stock, \$12 Par Value, 10,000 shares authorized and issued	\$ 120,000
Administrative Expenses	115,000	Preferred Stock, \$7 No-Par Value, 7,000 shares issued	490,000
Income from Discontinued Operations	2,500	Income Tax Expense: Continuing Operations	20,000
Cost of Goods Sold	510,000	Income Tax Expense: Income from Discontinued Operations	1,000
Treasury Stock—Common (5,000 shares)	75,000		
Net Sales Revenue	819,000		

Prepare a multi-step income statement for Chua Motorsports for the fiscal year ended November 30, 2018. Include earnings per share.

Learning Objectives 3, 4, 62. Retained Earnings Dec. 31,
2018 \$126,550**P13-44A Journalizing dividend and treasury stock transactions, preparing a statement of retained earnings, and preparing stockholders' equity**

The balance sheet of Goldstein Management Consulting, Inc. at December 31, 2017, reported the following stockholders' equity:

Stockholders' Equity		
Paid-In Capital:		
Common Stock—\$10 Par Value; 350,000 shares authorized, 32,000 shares issued and outstanding		\$ 320,000
Paid-In Capital in Excess of Par—Common		330,000
Total Paid-In Capital		650,000
Retained Earnings		160,000
Total Stockholders' Equity		\$ 810,000

During 2018, Goldstein completed the following selected transactions:

- Feb. 6 Declared a 15% stock dividend on common stock. The market value of Goldstein's stock was \$25 per share.
- 15 Distributed the stock dividend.
- Jul. 29 Purchased 2,300 shares of treasury stock at \$25 per share.
- Nov. 27 Declared a \$0.10 per share cash dividend on the common stock outstanding.

Requirements

1. Record the transactions in the general journal.
2. Prepare a retained earnings statement for the year ended December 31, 2018. Assume Goldstein's net income for the year was \$90,000.
3. Prepare the stockholders' equity section of the balance sheet at December 31, 2018.

P13-45A Computing earnings per share, price/earnings ratio, and rate of return on common stockholders' equity

Bianchi Company reported these figures for 2018 and 2017:

	2018	2017
	Dec. 31, 2018	Dec. 31, 2017
Income Statement—partial:		
Net Income	<u>\$ 34,380</u>	<u>\$ 18,000</u>
Balance Sheet—partial:		
Total Assets	<u>\$ 285,000</u>	<u>\$ 280,000</u>
Paid-In Capital:		
Preferred Stock—11%, \$9 Par Value; 60,000 shares authorized, 12,000 shares issued and outstanding	\$ 108,000	\$ 108,000
Common Stock—\$2 Par Value; 60,000 shares authorized, 50,000 shares issued and outstanding	100,000	100,000
Paid-In Capital in Excess of Par—Common	14,000	14,000
Retained Earnings	<u>60,500</u>	<u>38,000</u>
Total Stockholders' Equity	<u>\$ 282,500</u>	<u>\$ 260,000</u>

Requirements

1. Compute Bianchi Company's earnings per share for 2018. Assume the company paid the minimum preferred dividend during 2018. Round to the nearest cent.
2. Compute Bianchi Company's price/earnings ratio for 2018. Assume the company's market price per share of common stock is \$9. Round to two decimals.
3. Compute Bianchi Company's rate of return on common stockholders' equity for 2018. Assume the company paid the minimum preferred dividend during 2018. Round to the nearest whole percent.

> Problems Group B

P13-46B Organizing a corporation and issuing stock

Jimmy and Randy are opening a comic store. There are no competing comic stores in the area. They must decide how to organize the business. They anticipate profits of \$550,000 the first year, with the ability to sell franchises in the future. Although they have enough to start the business now as a partnership, cash flow will be an issue as they grow. They feel the corporate form of operation will be best for the long term. They seek your advice.

Requirements

1. What is the main advantage they gain by selecting a corporate form of business now?
2. Would you recommend they initially issue preferred or common stock? Why?
3. If they decide to issue \$3 par common stock and anticipate an initial market price of \$75 per share, how many shares will they need to issue to raise \$3,000,000?

Learning Objective 7

Learning Objectives 1, 2

Learning Objectives 1, 2, 4

4. Common stock dividends
\$135,000

P13-47B Identifying sources of equity, stock issuance, and dividends

Team Comfort Specialists, Inc. reported the following stockholders' equity on its balance sheet at June 30, 2018:

Stockholders' Equity		
Paid-In Capital:		
Preferred Stock—5%, ? Par Value; 750,000 shares authorized, 400,000 shares issued and outstanding		\$ 1,600,000
Common Stock—\$1 Par Value; 7,000,000 shares authorized, 1,320,000 shares issued and outstanding		1,320,000
Paid-In Capital in Excess of Par—Common		2,500,000
Total Paid-In Capital		5,420,000
Retained Earnings		12,300,000
Total Stockholders' Equity		\$ 17,720,000

Requirements

- Identify the different classes of stock that Team Comfort Specialists has outstanding.
- What is the par value per share of Team Comfort Specialists' preferred stock?
- Make two summary journal entries to record issuance of all the Team Comfort Specialists stock for cash. Explanations are not required.
- No preferred dividends are in arrears. Journalize the declaration of a \$700,000 dividend at June 30, 2018, and the payment of the dividend on July 20, 2018. Use separate Dividends Payable accounts for preferred and common stock. An explanation is not required.

Learning Objectives 2, 4

2. Total Stockholders' Equity
\$530,000

P13-48B Journalizing stock issuance and cash dividends and preparing the stockholders' equity section of the balance sheet

C-Mobile Wireless needed additional capital to expand, so the business incorporated. The charter from the state of Georgia authorizes C-Mobile to issue 120,000 shares of 9%, \$150 par value cumulative preferred stock, and 140,000 shares of \$3 par value common stock. During the first month, C-Mobile completed the following transactions:

- Oct. 2 Issued 18,000 shares of common stock for a building with a market value of \$260,000.
- 6 Issued 650 shares of preferred stock for \$160 per share.
- 9 Issued 14,000 shares of common stock for cash of \$84,000.
- 10 Declared a \$13,000 cash dividend for stockholders of record on Oct. 20. Use a separate Dividends Payable account for preferred and common stock.
- 25 Paid the cash dividend.

Requirements

- Record the transactions in the general journal.
- Prepare the stockholders' equity section of C-Mobile's balance sheet at October 31, 2018. Assume C-Mobile's net income for the month was \$95,000.

P13-49B Journalizing dividends and treasury stock transactions and preparing the stockholders' equity section of the balance sheet

Halborn Manufacturing Co. completed the following transactions during 2018:

Jan. 16	Declared a cash dividend on the 6%, \$97 par noncumulative preferred stock (1,150 shares outstanding). Declared a \$0.20 per share dividend on the 80,000 shares of \$8 par value common stock outstanding. The date of record is January 31, and the payment date is February 15.
Feb. 15	Paid the cash dividends.
Jun. 10	Split common stock 2-for-1.
Jul. 30	Declared a 40% stock dividend on the common stock. The market value of the common stock was \$8 per share.
Aug. 15	Distributed the stock dividend.
Oct. 26	Purchased 8,000 shares of treasury stock at \$9 per share.
Nov. 8	Sold 4,000 shares of treasury stock for \$10 per share.
30	Sold 1,400 shares of treasury stock for \$5 per share.

Requirements

1. Record the transactions in Halborn's general journal.
2. Prepare the Halborn's stockholders' equity section of the balance sheet as of December 31, 2018. Assume that Halborn was authorized to issue 2,200 shares of preferred stock and 500,000 shares of common stock. Both preferred stock and common stock were issued at par. The ending balance of retained earnings as of December 31, 2018, is \$2,030,000.

P13-50B Preparing an income statement

The following information was taken from the records of Arizona Motorsports, Inc. at November 30, 2018:

Selling Expenses	\$ 95,000	Common Stock, \$11 Par Value, 13,500 shares authorized and issued	\$ 148,500
Administrative Expenses	150,000	Preferred Stock, \$2 No-Par Value, 2,000 shares issued	60,000
Income from Discontinued Operations	2,400	Income Tax Expense: Continuing Operations	50,000
Cost of Goods Sold	470,000	Income Tax Expense: Income from Discontinued Operations	960
Treasury Stock—Common (1,500 shares)	19,500		
Net Sales Revenue	801,400		

Prepare a multi-step income statement for Arizona Motorsports for the fiscal year ended November 30, 2018. Include earnings per share.

Learning Objectives 3, 4

1. Nov. 8 Treasury Stock \$36,000

Learning Objectives 3, 4, 6

2. Retained Earnings Dec. 31,
2018 \$218,280

P13-51B Journalizing dividend and treasury stock transactions, preparing a statement of retained earnings, and preparing stockholders' equity

The balance sheet of MacMillan Management Consulting, Inc. at December 31, 2017, reported the following stockholders' equity:

Stockholders' Equity	
Paid-In Capital:	
Common Stock—\$10 Par Value; 300,000 shares authorized, 27,000 shares issued and outstanding	\$ 270,000
Paid-In Capital in Excess of Par—Common	310,000
Total Paid-In Capital	580,000
Retained Earnings	161,000
Total Stockholders' Equity	\$ 741,000

During 2018, MacMillan completed the following selected transactions:

- | | |
|---------|--|
| Feb. 6 | Declared a 10% stock dividend on common stock. The market value of MacMillan's stock was \$27 per share. |
| 15 | Distributed the stock dividend. |
| Jul. 29 | Purchased 1,700 shares of treasury stock at \$27 per share. |
| Nov. 27 | Declared a \$0.15 per share cash dividend on the common stock outstanding. |

Requirements

1. Record the transactions in the general journal.
2. Prepare a retained earnings statement for the year ended December 31, 2018. Assume MacMillan's net income for the year was \$82,000.
3. Prepare the stockholders' equity section of the balance sheet at December 31, 2018.

Learning Objective 7**P13-52B Computing earnings per share, price/earnings ratio, and rate of return on common stockholders' equity**

Gullo Company reported these figures for 2018 and 2017:

	2018	2017
	Dec. 31, 2018	Dec. 31, 2017
Income Statement—partial:		
Net Income	<u>\$ 18,900</u>	<u>\$ 24,000</u>
Balance Sheet—partial:		
Total Assets	<u>\$ 285,000</u>	<u>\$ 200,000</u>
Paid-In Capital:		
Preferred Stock—11%, \$9 Par Value; 60,000 shares authorized, 10,000 shares issued and outstanding	\$ 90,000	\$ 90,000
Common Stock—\$1 Par Value; 45,000 shares authorized, 30,000 shares issued and outstanding	30,000	30,000
Paid-In Capital in Excess of Par—Common	14,000	14,000
Retained Earnings	51,000	42,000
Total Stockholders' Equity	<u>\$ 185,000</u>	<u>\$ 176,000</u>

Requirements

1. Compute Gullo Company's earnings per share for 2018. Assume the company paid the minimum preferred dividend during 2018. Round to the nearest cent.
2. Compute Gullo Company's price/earnings ratio for 2018. Assume the company's market price per share of common stock is \$9. Round to two decimals.
3. Compute Gullo Company's rate of return on common stockholders' equity for 2018. Assume the company paid the minimum preferred dividend during 2018. Round to the nearest whole percent.

CRITICAL THINKING

> Using Excel

P13-53 Using Excel for stockholders' equity transactions and preparing financial statements

Download an Excel template for this problem online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Hornrgren/>.

Naxion Corporation began operations on January 2, 2018, and had the following transactions during the year:

-
- | | |
|---------|--|
| Jan. 2 | Issued 250,000 shares of \$1 par value common stock at \$45 per share. Total shares authorized: 1,000,000. |
| Feb. 5 | Issued 10,000 shares of \$50 par, 5% cumulative preferred stock at \$65 per share. Total shares authorized: 25,000. |
| Mar. 15 | Issued 150,000 shares of \$1 par value common stock at \$35 per share. |
| Apr. 2 | Declared a \$2.50 per share cash dividend on its preferred stock to be paid on April 25. Date of record is April 10. |
| 3 | Declared a \$0.10 per share cash dividend on its common stock to be paid on April 26. Date of record is April 10. |
| Jun. 1 | Declared a 2% stock dividend on all common stock outstanding. Current market price of the stock was \$48 per share. Date of record is June 15. |
| 30 | Distributed common stock dividend to shareholders. |
| Oct. 10 | Purchased 2,500 shares of treasury stock—common at \$52 per share. |
| Nov. 15 | Sold 2,000 shares of treasury stock—common at \$54 per share. |
-

Requirements

1. Journalize Naxion's transactions for 2018.
2. Prepare the stockholders' equity section of the balance sheet as of December 31, 2018, including the heading. Assume Naxion had net income of \$15,000,000 during 2018. This is the first year of operations.
3. Determine Naxion's earnings per share for 2018, rounded to two decimal places. For the average number of common shares outstanding, average the number of shares outstanding on January 2 and December 31.
4. Assuming Naxion's market value per common share as of December 31, 2018, was \$55, calculate Naxion's price/earnings ratio for 2018, rounded to two decimal places.

> Continuing Problem

P13-54 Journalizing stock issuances, cash dividends, and stock dividends; preparing stockholders' equity section of balance sheet

This problem continues the Let's Bike Company situation from Chapter 12. After looking into debt financing through notes, mortgage, and bonds payable, Let's Bike Company decides to raise additional capital for the planned business expansion. The company will be able to acquire cash as well as land adjacent to its current business location. Before the following transactions, the balance in Common Stock on January 1, 2021, was \$157,000 and included 157,000 shares of common stock issued and outstanding. (There was no Paid-In Capital in Excess of Par—Common.)

Let's Bike Company had the following transactions in 2021:

-
- | | |
|---------|---|
| Jan. 1 | Issued 10,000 shares of 5%, \$5 par value preferred stock in exchange for land with a market value of \$80,000. |
| 28 | Issued 65,000 shares of \$1 par value common stock for a total of \$320,000. |
| Dec. 19 | Declared total cash dividends of \$32,000. |
| 22 | Declared an 5% common stock dividend when the market value of the stock was \$5.50 per share. |
| 31 | Paid the cash dividends. |
| 31 | Distributed the stock dividend. |
-

Requirements

1. Journalize the transactions.
2. Calculate the balance in Retained Earnings on December 31, 2021. Assume the balance on January 1, 2021 was \$30,020 and net income for the year was \$360,000.
3. Prepare the stockholders' equity section of the balance sheet as of December 31, 2021. There was no preferred stock issued prior to the 2021 transactions.

COMPREHENSIVE PROBLEM

> Comprehensive Problem for Chapters 11, 12, and 13.

The Tusquittee Company is a retail company that began operations on October 1, 2018, when it incorporated in the state of North Carolina. The Tusquittee Company is authorized to issue 100,000 shares of \$1 par value common stock and 50,000 shares of 5%, \$50 par value preferred stock. The company sells a product that includes a one-year warranty and records estimated warranty payable each month. Customers are charged a 6% state sales tax. The company uses a perpetual inventory system. There are three employees that are paid a monthly salary on the last day of the month.

Following is the chart of accounts for The Tusquittee Company. As a new business, all beginning balances are \$0.

The Tusquittee Company
Chart of Accounts

Cash	Dividends Payable—Common
Merchandise Inventory	Notes Payable
Land	Mortgages Payable
Building	Common Stock—\$1 Par Value
Store Fixtures	Paid-In Capital in Excess of Par—Common
Accumulated Depreciation	Paid-In Capital from Treasury Stock Transactions
Accounts Payable	Retained Earnings
Employee Income Taxes Payable	Treasury Stock—Common
FICA—OASDI Taxes Payable	Cash Dividends
FICA—Medicare Taxes Payable	Sales Revenue
Employee Health Insurance Payable	Cost of Goods Sold
Federal Unemployment Taxes Payable	Salaries Expense
State Unemployment Taxes Payable	Payroll Tax Expense
Income Tax Payable	Utilities Expense
Sales Tax Payable	Depreciation Expense
Estimated Warranty Payable	Warranty Expense
Interest Payable	Income Tax Expense
	Interest Expense

The Tusquittee Company completed the following transactions during the last quarter of 2018, its first year of operations:

- Oct. 1 Issued 25,000 shares of \$1 par value common stock for cash of \$10 per share.
- 1 Issued a \$200,000, 10-year, 8% mortgage payable for land with an existing store building. Mortgage payments of \$2,425 are due on the first day of each month, beginning November 1. The assets had the following market values: Land, \$40,000; Building, \$160,000.
- 1 Issued a one-year, 10% note payable for \$10,000 for store fixtures. The principal and interest are due October 1, 2019.
- 3 Purchased merchandise inventory on account from Top Rate for \$125,000, terms n/30.
- 15 Paid \$160 for utilities.
- 31 Recorded cash sales for the month of \$185,000 plus sales tax of 6%. The cost of the goods sold was \$110,000 and estimated warranty payable was 8%.
- 31 Recorded October payroll and paid employees.
- 31 Accrued employer payroll taxes for October.
- Nov. 1 Paid the first mortgage payment.
- 3 Paid Top Rate for the merchandise inventory purchased on October 3.
- 10 Purchased merchandise inventory on account from Top Rate for \$150,000, terms n/30.
- 12 Purchased 500 shares of treasury stock for \$15 per share.
- 15 Paid all liabilities associated with the October 31 payroll.
- 15 Remitted (paid) sales tax from October sales to the state of North Carolina.

- 16 Paid \$6,000 to satisfy warranty claims.
- 17 Declared cash dividends of \$1 per outstanding share of common stock.
- 18 Paid \$245 for utilities.
- 27 Paid the cash dividends.
- 30 Recorded cash sales for the month of \$140,000 plus sales tax of 6%. The cost of the goods sold was \$84,000 and estimated warranty payable was 8%.
- 30 Recorded November payroll and paid employees.
- 30 Accrued employer payroll taxes for November.
- Dec. 1 Paid the second mortgage payment.
- 10 Paid Top Rate for the merchandise inventory purchased on November 10.
- 12 Paid \$7,500 to satisfy warranty claims.
- 15 Sold 300 shares of treasury stock for \$20 per share.
- 15 Paid all liabilities associated with the November 30 payroll.
- 15 Remitted (paid) sales tax from November sales to the state of North Carolina.
- 18 Paid \$220 for utilities.
- 19 Purchased merchandise inventory on account from Top Rate for \$90,000, terms n/30.
- 31 Recorded cash sales for the month of \$210,000 plus sales tax of 6%. The cost of the goods sold was \$126,000 and estimated warranty payable was 8%.
- 31 Recorded December payroll and paid employees.
- 31 Accrued employer payroll taxes for December.
-

Requirements

1. In preparation for recording the transactions, prepare:
 - a. An amortization schedule for the first 3 months of the mortgage payable issued on October 1. Round interest calculations to the nearest dollar.
 - b. Payroll registers for October, November, and December. All employees worked October 1 through December 31 and are subject to the following FICA taxes: OASDI: 6.2% on first \$118,500 earned; Medicare: 1.45% up to \$200,000, 2.35% on earnings above \$200,000. Additional payroll information includes:

Employee	Monthly Salary	Federal Income Tax	Health Insurance
Kate Jones	\$ 6,000	\$ 1,800	\$ 300
Mary Smith	5,000	1,000	300
Sherry Martin	3,000	450	300

- c. Calculations for employer payroll taxes liabilities for October, November, and December: OASDI: 6.2% on first \$118,500 earned; Medicare: 1.45%; SUTA: 5.4% on first \$7,000 earned; FUTA: 0.6% on first \$7,000 earned.
2. Record the transactions in the general journal. Omit explanations.
3. Post to the general ledger.
4. Record adjusting entries for the three month period ended December 31, 2018:
 - a. Depreciation on the Building, straight-line, 40 years, no residual value.
 - b. Store Fixtures, straight-line, 20 years, no residual value.
 - c. Accrued interest expense on the note payable for the store fixtures.

- d. Accrued interest expense on the mortgage payable.
 - e. Accrued income tax expense of \$36,000.
5. Post adjusting entries and prepare an adjusted trial balance.
6. Prepare a multi-step income statement and statement of retained earnings for the quarter ended December 31, 2018. Prepare a classified balance sheet as of December 31, 2018. Assume that \$13,840 of the mortgage payable is due within the next year.
7. Evaluate the company's success for the first quarter of operations by calculating the following ratios. The market price of the common stock is \$25 on December 31, 2018. Round to two decimal places.
- a. Times interest earned
 - b. Debt to equity
 - c. Earnings per share
 - d. Price/earnings ratio
 - e. Rate of return on common stock
8. The Tusquittee Company wants to expand and is considering options for raising additional cash. The company estimates net income before the expansion of \$250,000 in 2019 and that the expansion will provide additional operating income of \$75,000 in 2019. The company intends to sell the shares of treasury stock, so use issued shares for the analysis rather than current shares outstanding. Compare these options, assuming a 30% income tax rate:

Plan 1: Issue 10,000 additional shares of common stock for \$20 per share

Plan 2: Issue \$200,000 in 20-year, 12% bonds payable.

Which option will contribute more net income in 2019? Which option provides the highest EPS?

> Tying It All Together Case 13-1

Before you begin this assignment, review the Tying It All Together feature in the chapter. It will also be helpful if you review Facebook's 2015 annual report (https://s21.q4cdn.com/399680738/files/doc_financials/annual_reports/2015-Annual-Report.pdf).

Facebook, Inc. is a mobile application and Web site that enables people to connect, share, discover, and communicate with each other. The company also owns Instagram, messenger, WhatsApp, and Oculus.

Requirements

1. Review Item 5 (Dividend Policy) of the 2015 annual report. Has Facebook ever paid a dividend? Provide the company's reasoning.
2. Review the balance sheet for Facebook. What is the par value of its Class A common shares.
3. Does Facebook have any treasury stock? How do you know?

> Decision Case 13-1

Lena Kay and Kathy Lauder have a patent on a new line of cosmetics. They need additional capital to market the products, and they plan to incorporate the business. They are considering the capital structure for the corporation. Their primary goal is to raise as much capital as possible without giving up control of the business. Kay and Lauder plan to invest the patent (an intangible asset, which will be transferred

to the company's ownership in lieu of cash) in the company and receive 100,000 shares of the corporation's common stock. They have been offered \$100,000 for the patent, which provides an indication of the fair market value of the patent.

The corporation's plans for a charter include an authorization to issue 5,000 shares of preferred stock and 500,000 shares of \$1 par common stock. Kay and Lauder are uncertain about the most desirable features for the preferred stock. Prior to incorporating, they are discussing their plans with two investment groups. The corporation can obtain capital from outside investors under either of the following plans:

- **Plan 1.** Group 1 will invest \$150,000 to acquire 1,500 shares of 6%, \$100 par nonvoting, noncumulative preferred stock.
- **Plan 2.** Group 2 will invest \$100,000 to acquire 1,000 shares of \$5, no-par preferred stock and \$70,000 to acquire 70,000 shares of common stock. Each preferred share receives 50 votes on matters that come before the common stockholders.

Requirements

Assume that the corporation has been chartered (approved) by the state.

1. Journalize the issuance of common stock to Kay and Lauder. Explanations are not required.
2. Journalize the issuance of stock to the outsiders under both plans. Explanations are not required.
3. Net income for the first year is \$180,000, and total dividends are \$30,000. Prepare the stockholders' equity section of the corporation's balance sheet under both plans at the end of the first year.
4. Recommend one of the plans to Kay and Lauder. Give your reasons.

> Financial Statement Case 13-1

Use **Target Corporation's** financial statements to answer the following questions. Visit <http://www.pearsonglobaleditions.com/Sitemap/Horngren/> to view a link to Target Corporation's Fiscal 2015 Annual Report.

Requirements

1. Review the stockholders' equity section of the balance sheet. Did Target have any preferred stock at January 30, 2016?
2. Now examine the notes at the bottom of the balance sheet. Is Target authorized to issue preferred stock? If so, how much?
3. How much of Target Corporation's common stock was outstanding at January 30, 2016? How can you tell?
4. Examine Target Corporation's consolidated statements of cash flows. Did Target pay any cash dividends during the year ending January 30, 2016? If so, how much?
5. Show how Target Corporation computed basic earnings per share of \$5.35 for fiscal year 2015. (Ignore diluted earnings per share.)

> Team Project 13-1

Obtain the annual reports (or annual report data) of five well-known companies. You can get the reports either from the companies' Web sites, from your college library, or by mailing a request directly to the company (allow two weeks for delivery). Or you can go online and search the SEC EDGAR database (<http://www.sec.gov/edgar.shtml>), which includes the financial reports of most well-known companies.

Requirements

1. After selecting five companies, examine their income statements to search for the following items:
 - a. Net income or net loss
 - b. Earnings per share data
2. Study the companies' balance sheets to answer the following questions:
 - a. What classes of stock has each company issued?
 - b. Which item carries a larger balance—the Common Stock account or Paid-In Capital in Excess of Par (also labeled Additional Paid-In Capital)?
 - c. What percentage of each company's total stockholders' equity is made up of retained earnings?
 - d. Do any of the companies have treasury stock? If so, how many shares and how much is the cost?
3. Examine each company's statement of stockholders' equity for evidence of the following:
 - a. Cash dividends
 - b. Stock dividends
 - c. Treasury stock purchases and sales
4. As directed by your instructor, either write a report or present your findings to your class. You may not be able to understand *everything* you find, but neither can the Wall Street analysts! You will be amazed at how much you have learned.

> Communication Activity 13-1

In 75 words or fewer, explain the difference between stock dividends and stock splits. Include the effect on stock values.

Pearson MyLab Accounting

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> Quick Check Answers

1. b 2. d 3. c 4. c 5. d 6. c 7. c 8. b 9. b 10. d 11. c

14

The Statement of Cash Flows



Why Doesn't the Business Have Any Cash?

David National reviewed his company's income statement with a confused look on his face. The statement reported a net profit of \$20,000 for the past quarter. David knew that sales had been increasing in his small sporting equipment retail shop, and he expected this trend to continue through the end of the year. But David didn't understand why the income statement showed a profit. The company's payroll clerk had called him earlier in the day and told him that there wasn't enough cash in the bank to pay the employees' monthly salaries.

It didn't make sense to David that the company could report a \$20,000 profit on the income statement but not have enough cash to pay the payroll. He figured that the newly

hired accountant, Mark Maloney, must have made a mistake.

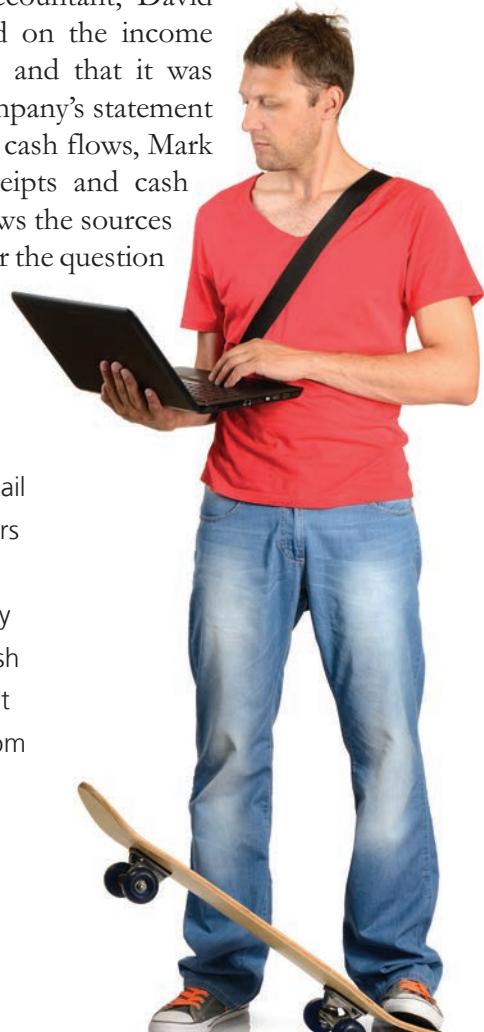
David picked up the phone to call Mark. He had several questions to ask him. Why didn't the company have any cash in the bank? How was the company using its cash? How could the company report a \$20,000 profit but not have that much cash in the bank? Where did the cash received from customers go?

After speaking with his accountant, David learned that the profit reported on the income statement didn't represent cash and that it was important that he review the company's statement of cash flows. The statement of cash flows, Mark told him, reports the cash receipts and cash payments of the business. It shows the sources and uses of cash and helps answer the question "Where did the cash go?"



Why Is Cash So Important?

You can probably answer that question from your own experience. It takes cash to pay bills and to generate future income for a business. Businesses, such as **Amazon.com, Inc.**, a retail Web site that sells everything from sporting equipment to household goods, closely monitors cash. Amazon.com is interested in where its cash came from (receipts) and how its cash is spent (payments). One way for Amazon.com to monitor its cash receipts and payments is by preparing a statement of cash flows. For example, on Amazon.com's 2015 statement of cash flows, the corporation reported that it paid \$4.5 million purchasing property and equipment and that it paid \$273 million cash for income taxes (net of refunds). It also reported that from 2014 to 2015 the corporation had an increase in cash of \$1,333 million, even though net income was only \$596 million. In this chapter, you learn what a statement of cash flows is and why it is useful to a business. In addition, you learn how to prepare the statement and understand why companies and investors carefully monitor the statement of cash flows.





Chapter 14 Learning Objectives



- | | |
|--|---|
| <ol style="list-style-type: none">1 Identify the purposes of the statement of cash flows and distinguish among operating, investing, and financing cash flows2 Prepare the statement of cash flows by the indirect method3 Use free cash flow to evaluate business performance | <ol style="list-style-type: none">4 Prepare the statement of cash flows by the direct method (Appendix 14A)5 Prepare the statement of cash flows by the indirect method using a spreadsheet (Appendix 14B) |
|--|---|

WHAT IS THE STATEMENT OF CASH FLOWS?

Up to this point, you have learned about three financial statements—the income statement, the statement of retained earnings, and the balance sheet. Each of these financial statements reports specific items about a company. The income statement reports net income or net loss for the time period. The statement of retained earnings reports the changes in retained earnings during the time period, and the balance sheet reports a company's financial position. None of these statements reports specifically on the changes in cash.

When a comparative balance sheet for two periods is presented, it shows whether cash increased or decreased. But the balance sheet does not show *why* cash increased or decreased. We need the statement of cash flows for that. The **statement of cash flows** reports on a business's cash receipts and cash payments for a specific period. This statement does the following:

- Reports on the **cash flows** of a business—where cash came from (receipts) and how cash was spent (payments).
- Reports why cash increased or decreased during the period.
- Covers a span of time and is dated the same as the income statement—“Year Ended December 31, 2018,” for example.

Purpose of the Statement of Cash Flows

The statement of cash flows explains why net income as reported on the income statement does not equal the change in the cash balance. In essence, the statement of cash flows is the link between the accrual-based income statement and the cash reported on the balance sheet.

How do people use cash flow information? The statement of cash flows helps do the following:

- **Predict future cash flows.** Past cash receipts and payments help predict future cash flows.
- **Evaluate management.** Wise investment decisions help the business prosper, while unwise decisions cause the business to have problems. Investors and creditors use cash flow information to evaluate managers' decisions.
- **Predict ability to pay debts and dividends.** Lenders want to know whether they will collect on their loans. Stockholders want dividends on their investments. The statement of cash flows helps make these predictions.

Learning Objective 1

Identify the purposes of the statement of cash flows and distinguish among operating, investing, and financing cash flows

Statement of Cash Flows

Reports on a business's cash receipts and cash payments for a specific period.

Cash Flows

Cash receipts and cash payments of a business.



Classification of Cash Flows

There are three basic types of cash flow activities, and the statement of cash flows has a section for each:

- Operating activities
- Investing activities
- Financing activities

Each section reports cash inflows (cash receipts coming into the company) and cash outflows (cash payments going out of the company) based on these three divisions.

Operating Activities

Operating Activities

Activities that create revenue or expense in the entity's business; a section of the statement of cash flows.

Operating activities is the first section on the statement of cash flows and is often the most important category. The **operating activities** section reports on activities that create revenue or expense in the entity's business. It reflects the day-to-day operations of the business such as cash receipts (cash inflows) from customers for the sales of merchandise inventory and services and the cash payments (cash outflows) for purchases of merchandise inventory or payment of operating expenses. The operating activities section also includes cash receipts (cash inflows) for interest revenue and dividend income and cash payments (cash outflows) for interest expense and income tax expense.

Investing Activities

Investing Activities

Activities that increase or decrease long-term assets; a section of the statement of cash flows.

Investing activities is the second category listed on the statement of cash flows. This section reports cash receipts and cash payments that increase or decrease long-term assets such as property, plant, equipment, notes receivable, and investments. It includes the cash inflow from selling and the cash outflow for the purchase of these long-term assets. In addition, it includes the lending (cash outflow) and collection (cash inflow) of long-term notes receivable.

Financing Activities

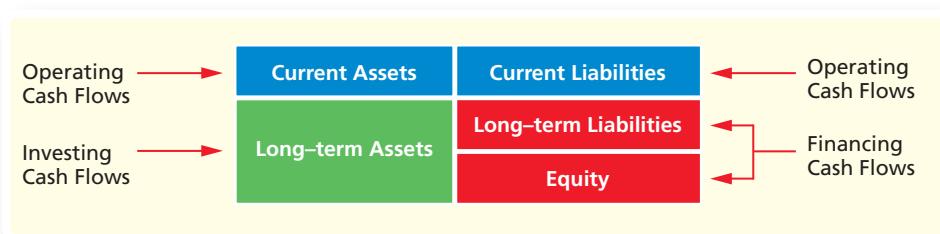
Financing Activities

Activities that increase or decrease long-term liabilities and equity; a section of the statement of cash flows.

The last category on the statement of cash flows is **financing activities**. Financing activities include cash inflows and outflows involved in long-term liabilities and equity. This includes issuing stock, paying dividends, and buying and selling treasury stock. It also includes borrowing money and paying off long-term liabilities such as notes payable, bonds payable, and mortgages payable.

Each section of the statement of cash flows affects a different part of the balance sheet. The operating activities section reports on how cash flows affect the current accounts—current assets and current liabilities. Investing activities affect the long-term assets. And the financing activities affect long-term liabilities and equity. Exhibit 14-1 shows the relationship between operating, investing, and financing cash flows and the various parts of the balance sheet.

Exhibit 14-1 | Operating, Investing, and Financing Cash Flows and the Balance Sheet Accounts





Non-cash Investing and Financing Activities

The three sections of the statement of cash flows report only activities that involve cash. Companies do make investments that do not require cash. They also obtain financing that does not involve cash. Such transactions are called **non-cash investing and financing activities**. Examples of these activities include the purchase of equipment financed by a long-term note payable or the contribution of equipment by a stockholder in exchange for common stock. These activities are not included in the statement of cash flows. Instead, they appear either as a separate schedule at the bottom of the statement or in the notes to the financial statements.

Exhibit 14-2 summarizes the different sections on the statement of cash flows.

Exhibit 14-2 | Sections of the Statement of Cash Flows

Operating Activities	Cash Inflows: <ul style="list-style-type: none"> From customers for the sales of merchandise inventory and services For interest revenue and dividend income Cash Outflows: <ul style="list-style-type: none"> For the purchase of merchandise inventory and payment of operating expenses For interest expense and income tax expense
Investing Activities	Cash Inflows: <ul style="list-style-type: none"> From the sale of property, plant, equipment, and investments From the collection of long-term notes receivable Cash Outflows: <ul style="list-style-type: none"> To purchase property, plant, equipment, and investments For loans made to borrowers
Financing Activities	Cash Inflows: <ul style="list-style-type: none"> From issuance of stock and selling treasury stock From receipt of borrowing money Cash Outflows: <ul style="list-style-type: none"> For payment of dividends and buying treasury stock For repayments of loans
Non-cash Investing and Financing Activities	A separate schedule that includes investing and financing activities that <i>do not</i> include cash

Non-cash Investing and Financing Activities

Investing and financing activities that do not involve cash.



Under IFRS, interest revenue and dividend income may be reported either as an operating activity or as an investing activity. Interest expense and dividends paid may be reported either as an operating activity or as a financing activity.

The statement of cash flows reports only activities that involve either the receipt of cash or the payment of cash. If a transaction does not involve cash, it will not be included in the operating, investing, or financing sections of the statement of cash flows.



Two Formats for Operating Activities

There are two ways to format the operating activities section of the statement of cash flows:

- The **indirect method** starts with net income and adjusts it to net cash provided by operating activities.
- The **direct method** restates the income statement in terms of cash. The direct method shows all the cash receipts and all the cash payments from operating activities.

The indirect and direct methods use different computations but produce the same amount of net cash flow from operating activities. Both methods present investing activities and financing activities in exactly the same format. Only the *operating activities* section is presented differently between the two methods.

We begin with the indirect method because most companies use it. To focus on the direct method, review Appendix 14A, located at the end of this chapter.



IFRS permits the use of either the direct or indirect method.

Try It!

Identify each item as operating (O), investing (I), financing (F), or non-cash (N).

1. Cash receipt from the sale of equipment
2. Cash payment for salaries
3. Cash receipt from the collection of long-term notes receivable
4. Purchase of equipment in exchange for notes payable
5. Cash receipt from the issuance of common stock

Check your answers online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercises S14-1 and S14-2. [Pearson MyLab Accounting](#)

HOW IS THE STATEMENT OF CASH FLOWS PREPARED USING THE INDIRECT METHOD?

Learning Objective 2

Prepare the statement of cash flows by the indirect method

To prepare the statement of cash flows, you need the income statement for the current year, as well as the balance sheets from the current and prior years. In addition, you need to review the transactions for some additional information. For illustrative purposes, we will use ShopMart, Inc., a fictitious retail store that sells electronics, home furnishings, home supplies, and more. ShopMart's comparative balance sheet is shown in Exhibit 14-3, and



its income statement is shown in Exhibit 14-4 (on the next page). Additional information provided by ShopMart includes the following:

- Purchased \$310,000 in plant assets by paying cash.
- Sold plant assets with a cost of \$55,000 and accumulated depreciation of \$15,000, yielding a gain of \$10,000.
- Received \$90,000 cash from issuance of notes payable.
- Paid \$10,000 cash to retire notes payable.
- Received \$120,000 cash from issuing shares of common stock.
- Paid \$20,000 cash for purchase of shares of treasury stock.

Exhibit 14-3 | Comparative Balance Sheet

SHOPMART, INC. Comparative Balance Sheet December 31, 2018 and 2017			
	2018	2017	Increase (Decrease)
Assets			
Current Assets:			
Cash	\$ 22,000	\$ 42,000	\$ (20,000)
Accounts Receivable	90,000	73,000	17,000
Merchandise Inventory	143,000	145,000	(2,000)
Long-term Assets:			
Plant Assets	507,000	252,000	255,000
Accumulated Depreciation—Plant Assets	(47,000)	(42,000)	(5,000)
Total Assets	\$ 715,000	\$ 470,000	\$ 245,000
Liabilities			
Current Liabilities:			
Accounts Payable	\$ 90,000	\$ 50,000	\$ 40,000
Accrued Liabilities	5,000	10,000	(5,000)
Long-term Liabilities:			
Notes Payable	160,000	80,000	80,000
Total Liabilities	255,000	140,000	115,000
Stockholders' Equity			
Common Stock, no par	370,000	250,000	120,000
Retained Earnings	110,000	80,000	30,000
Treasury Stock	(20,000)	0	(20,000)
Total Stockholders' Equity	460,000	330,000	130,000
Total Liabilities and Stockholders' Equity	\$ 715,000	\$ 470,000	\$ 245,000


Exhibit 14-4 | Income Statement

SHOPMART, INC.	
Income Statement	
Year Ended December 31, 2018	
Net Sales Revenue	\$ 286,000
Cost of Goods Sold	156,000
Gross Profit	130,000
Operating Expenses:	
Salaries and Wages Expense	\$ 56,000
Depreciation Expense—Plant Assets	20,000
Other Operating Expense	16,000
Total Operating Expenses	92,000
Operating Income	38,000
Other Income and (Expenses):	
Interest Revenue	12,000
Dividend Revenue	9,000
Gain on Disposal of Plant Assets	10,000
Interest Expense	(15,000)
Total Other Income and (Expenses)	16,000
Income Before Income Taxes	54,000
Income Tax Expense	14,000
Net Income	\$ 40,000

To prepare the statement of cash flows by the indirect method, we follow Steps 1–5:

Step 1: Complete the cash flows from operating activities section using net income and adjusting for increases or decreases in current assets (other than cash) and current liabilities. Also adjust for gains or losses from long-term assets and non-cash expenses such as depreciation expense.

Step 2: Complete the cash flows from investing activities section by reviewing the long-term assets section of the balance sheet.

Step 3: Complete the cash flows from financing activities section by reviewing the long-term liabilities and equity sections of the balance sheet.

Step 4: Compute the net increase or decrease in cash during the year. The change in cash is the key reconciling figure for the statement of cash flows and must match the change in cash reported on the comparative balance sheet.

Step 5: Prepare a separate schedule reporting any non-cash investing and financing activities.



Let's apply these steps to show the operating activities of ShopMart. Exhibit 14-5 presents the completed statement of cash flows.

Exhibit 14-5 | Statement of Cash Flows—Indirect Method

SHOPMART, INC.		
Statement of Cash Flows		
Year Ended December 31, 2018		
Cash Flows from Operating Activities:		
Net Income	\$ 40,000	
Adjustments to Reconcile Net Income to Net Cash Provided by Operating Activities:		
Depreciation Expense—Plant Assets	\$ 20,000	
Gain on Disposal of Plant Assets	(10,000)	
Increase in Accounts Receivable	(17,000)	
Decrease in Merchandise Inventory	2,000	
Increase in Accounts Payable	40,000	
Decrease in Accrued Liabilities	(5,000)	30,000
Net Cash Provided by Operating Activities		70,000
Cash Flows from Investing Activities:		
Cash Payment for Acquisition of Plant Assets	(310,000)	
Cash Receipt from Disposal of Plant Assets	50,000	
Net Cash Used for Investing Activities		(260,000)
Cash Flows from Financing Activities:		
Cash Receipt from Issuance of Notes Payable	90,000	
Cash Payment of Notes Payable	(10,000)	
Cash Receipt from Issuance of Common Stock	120,000	
Cash Payment for Purchase of Treasury Stock	(20,000)	
Cash Payment of Dividends	(10,000)	
Net Cash Provided by Financing Activities		170,000
Net Increase (Decrease) in Cash		(20,000)
Cash Balance, December 31, 2017		42,000
Cash Balance, December 31, 2018		\$ 22,000

Step 1:
Operating
Activities

Step 2:
Investing
Activities

Step 3:
Financing
Activities

Step 4:
Net Increase
(Decrease)
in Cash

Cash Flows from Operating Activities

When using the indirect method, the statement of cash flows operating activities section begins with net income (or net loss) because revenues and expenses, which affect net income, produce cash receipts and cash payments. Revenues bring in cash receipts, and expenses must be paid. But net income as shown on the income statement is accrual-based, and the cash flows (cash basis net income) do not always equal the accrual basis revenues and expenses. For example, sales *on account* generate revenues that increase net income, but the company has not yet collected cash from those sales. Accrued expenses decrease net income, but the company has not paid cash *if the expenses are accrued*.

To go from net income to net cash flow from operating activities, we must make some adjustments to net income on the statement of cash flows. These additions and subtractions follow net income and are labeled *Adjustments to Reconcile Net Income to Net Cash Provided by Operating Activities*.



Depreciation, Depletion, and Amortization Expenses

These adjustments include adding back non-cash expenses such as depreciation, depletion, and amortization expenses. These expenses are added back to net income to reconcile net income to net cash flow from operating activities. Let's see why this occurs. Depreciation is recorded as follows:

$A \downarrow$	$L + E \downarrow$	Date	Accounts and Explanation	Debit	Credit
Accumulated Depreciation↑	Depreciation Expense↑		Depreciation Expense—Plant Assets	20,000	
			Accumulated Depreciation—Plant Assets		20,000

You can see that depreciation does not affect cash as there is no Cash account in the journal entry. Depreciation is a non-cash expense. The cash outflow related to depreciation occurred when the asset was purchased, not as it is depreciated. However, depreciation, like all the other expenses, decreases net income. Therefore, to go from net income to net cash flows, we must remove depreciation by adding it back to net income.

SHOPMART, INC. Statement of Cash Flows (Partial) Year Ended December 31, 2018		
Cash Flows from Operating Activities:		
Net Income		\$ 40,000
Adjustments to Reconcile Net Income to Net Cash Provided by Operating Activities:		
Depreciation Expense—Plant Assets		\$ 20,000

Suppose you had only two transactions during the period:

- Cash sale of \$60,000
- Depreciation expense of \$20,000

Accrual basis net income is \$40,000 (\$60,000 – \$20,000), but net cash flow from operations is \$60,000. To reconcile from net income, depreciation of \$20,000 must be added to net income, \$40,000, to determine net cash flow from operations, \$60,000. We would also add back any depletion and amortization expenses because they are non-cash expenses, similar to depreciation.

Gains and Losses on the Disposal of Long-term Assets

Disposals of long-term assets such as land and buildings are investing activities, and these disposals usually create a gain or a loss. The gain or loss is included in net income, which is already in the operating activities section of the statement of cash flows. The gain or loss must be removed from net income on the statement of cash flows so the total cash receipts from the sale of the asset can be shown in the investing activities section.

Exhibit 14-4, ShopMart's income statement, includes a gain on disposal of plant assets. During 2018, ShopMart sold equipment, and there was a gain of \$10,000 on the sale. The gain was included in the calculation of net income on the income statement, so the gain must be removed from operating cash flows. The gain increased net income, so it is subtracted in the operating activities section.



SHOPMART, INC.	
Statement of Cash Flows (Partial)	
Year Ended December 31, 2018	
Cash Flows from Operating Activities:	
Net Income	\$ 40,000
Adjustments to Reconcile Net Income to Net Cash Provided by Operating Activities:	
Depreciation Expense—Plant Assets	\$ 20,000
Gain on Disposal of Plant Assets	(10,000)

On the other hand, a loss on the disposal of plant assets would decrease net income on the income statement, so the amount of the loss would be reversed to determine the net cash provided by operating activities on the statement of cash flows. For example, a \$5,000 loss on disposal of plant assets would be a \$5,000 addition to net income on the statement of cash flows to determine net cash provided by operating activities.

Changes in Current Assets and Current Liabilities

Most current assets and current liabilities result from operating activities. For example:

- Accounts receivable result from sales.
- Merchandise inventory relates to cost of goods sold, and so on.

Changes in the current asset and current liability accounts create adjustments to net income on the statement of cash flows, as follows:

- **An increase in a current asset other than cash causes a decrease adjustment to net income.** If Accounts Receivable, Merchandise Inventory, or Prepaid Expenses increases, then the adjustment to net income is a decrease. For example, ShopMart's balance sheet in Exhibit 14-3 shows that Accounts Receivable increased by \$17,000. Accounts Receivable is increased when the company makes sales on account and decreases when the company collects cash from customers. Therefore, there were more sales on account (revenue earned and reported on the income statement) than cash collections, the amount we want to reflect on the statement of cash flows. Because the indirect method of accounting for operating activities begins with net income, subtract the \$17,000 increase in the current asset Accounts Receivable to adjust accrual-based net income to net cash flows provided by operating activities.
- **A decrease in a current asset other than cash causes an increase adjustment to net income.** Decreases in current assets will have the opposite effect as illustrated above. ShopMart's Merchandise Inventory decreased by \$2,000. What caused the decrease? ShopMart must have sold more merchandise inventory than it purchased. Therefore, we add the decrease in Merchandise Inventory of \$2,000 to net income on the statement of cash flows.
- **An increase in a current liability causes an increase adjustment to net income.** ShopMart's Accounts Payable increased by \$40,000. This means there were more purchases on account than cash paid for the purchases, resulting in an increase to the liability. Accordingly, even though net income was reduced by the expense, cash was not reduced as much. Therefore, an increase in a current liability is *added* to net income in the statement of cash flows.

What if there is a loss on disposal of plant assets?





- **A decrease in a current liability causes a decrease adjustment to net income.** Decreases in current liabilities have the opposite effect of increases. The payments of the current liabilities were more than the accrual of the expenses. Therefore, we subtract decreases in current liabilities from net income to get net cash flow from operating activities. ShopMart's Accrued Liabilities decreased by \$5,000. That change shows up as a \$5,000 decrease adjustment to net income.

SHOPMART, INC.		
Statement of Cash Flows (Partial)		
Year Ended December 31, 2018		
Cash Flows from Operating Activities:		
Net Income		\$ 40,000
Adjustments to Reconcile Net Income to Net Cash Provided by Operating Activities:		
Depreciation Expense—Plant Assets	\$ 20,000	
Gain on Disposal of Plant Assets	(10,000)	
Increase in Accounts Receivable	(17,000)	
Decrease in Merchandise Inventory	2,000	
Increase in Accounts Payable	40,000	
Decrease in Accrued Liabilities	(5,000)	30,000

DECISIONS

What can be done to create a positive cash flow?

Meggie Mohamed, CEO, knew that the bank would carefully review her company's most recent statement of cash flows before determining if it would approve the loan needed for expansion. The bank loan officer had told her that it is important that the business show strong operating cash flows. Meggie knows that her company's operating cash flow for this past quarter will most likely be negative. Although the company recorded significant revenue, most of the revenue was recorded as receivables. Meggie expects that the cash will come in soon, but not in time to report a positive operating cash flow. What should Meggie do? What would you do?

Solution

Meggie could explain to the bank officer that her company is expecting to collect a significant amount of cash in the near future on outstanding receivables. She could provide detailed collection information including the estimated time frame of collection and the amount expected. Meggie also has another option. She could look into selling the receivables to another business, often called a factor. By selling the receivables, the company will be able to decrease its accounts receivable balance, increase its cash balance, and report a positive balance in operating cash flows.

Evaluating Cash Flows from Operating Activities

During 2018, ShopMart's operating activities provided a net cash inflow of \$70,000 ($\$40,000 + \$30,000$), so the amount is labeled Net Cash *Provided by* Operating Activities. If this amount were a net cash outflow, ShopMart would report Net Cash *Used for* Operating Activities.



SHOPMART, INC.		
Statement of Cash Flows (Partial)		
Year Ended December 31, 2018		
Cash Flows from Operating Activities:		
Net Income		\$ 40,000
Adjustments to Reconcile Net Income to Net Cash Provided by Operating Activities:		
Depreciation Expense—Plant Assets		\$ 20,000
Gain on Disposal of Plant Assets		(10,000)
Increase in Accounts Receivable		(17,000)
Decrease in Merchandise Inventory		2,000
Increase in Accounts Payable		40,000
Decrease in Accrued Liabilities	(5,000)	30,000
Net Cash Provided by Operating Activities		70,000

The operating activities section (indirect method) always starts with accrual basis net income. Adjustments are then made to determine the cash basis net income. Exhibit 14-6 summarizes the adjustments made to reconcile net income to net cash provided by operating activities.

Exhibit 14-6 | Adjustments Made to Reconcile Net Income to Net Cash Provided by Operating Activities

Item	Adjustment to Net Income on Statement of Cash Flows
Depreciation, Depletion, and Amortization Expense	Increase
Gains on Disposal of Long-term Assets	Decrease
Losses on Disposal of Long-term Assets	Increase
Increases in Current Assets other than Cash	Decrease
Decreases in Current Assets other than Cash	Increase
Increases in Current Liabilities	Increase
Decreases in Current Liabilities	Decrease

Cash Flows from Investing Activities

Investing activities affect long-term assets, such as Plant Assets, Investments, and Notes Receivable. These are shown on ShopMart's balance sheet (Exhibit 14-3). Now, let's see how to compute the investing cash flows.

When computing investing cash flows, it is helpful to evaluate the T-accounts for each long-term asset. The T-account will show if there was an acquisition or disposal that



happened during the year. Let's look at the Plant Assets and Accumulated Depreciation accounts for ShopMart.

Plant Assets			
12/31/2017	252,000		
Acquisitions	310,000	55,000	Disposals
12/31/2018	507,000		
Accumulated Depreciation—Plant Assets			
	42,000	12/31/2017	
Disposals	15,000	20,000	Depr. Exp. ←
	47,000	12/31/2018	

Depreciation Expense is from the income statement.

The beginning and ending balances for each account are taken directly from the comparative balance sheet. Depreciation expense has been included in the Accumulated Depreciation account, and this was taken from the income statement. The acquisition and disposal information came from the additional information provided when we introduced the example:

- Purchased \$310,000 in plant assets by paying cash.
- Sold plant assets with a cost of \$55,000 and accumulated depreciation of \$15,000, yielding a gain of \$10,000.

We now know that ShopMart paid \$310,000 cash to purchase plant assets. This item is listed first in the investing activities section and shown as an outflow of cash, as indicated by the parentheses.

Next we need to determine the amount of cash received for the disposal of plant assets. Using the information provided, we can recreate the journal entry for the disposal and solve for the missing cash amount.

$$\begin{array}{c} A \uparrow \\ \text{Cash} \uparrow \\ \text{Accumulated} \\ \text{Depreciation} \downarrow \\ \text{Plant Assets} \downarrow \end{array} = \left\{ \begin{array}{c} L \\ + \\ E \uparrow \\ \text{Gain on} \\ \text{Disposal} \uparrow \end{array} \right\}$$

Date	Accounts and Explanation	Debit	Credit
	Cash	?	
	Accumulated Depreciation—Plant Assets	15,000	
	Gain on Disposal of Plant Assets		10,000
	Plant Assets		55,000

We compute the cash receipt from the disposal as follows:

$$\begin{aligned}
 \text{Cash received} &= \text{Cost} - \text{Accumulated Depreciation} + \text{Gain} - \text{Loss} \\
 &= \$55,000 - \$15,000 + \$10,000 \\
 &= \$50,000
 \end{aligned}$$

The cash receipt from the sale of plant assets of \$50,000 is shown next in the investing activities section. As there are no other changes to long-term assets, the net cash from investing activities is determined. Notice that this is a net cash outflow, as indicated by the parentheses, and is reported as Net Cash Used for Investing Activities.



In this partial statement, we are showing only the investing activities section of the statement of cash flows. Remember that the investing activities section is reported after the operating activities section.

SHOPMART, INC.	
Statement of Cash Flows (Partial)	
Year Ended December 31, 2018	
Cash Flows from Investing Activities:	
Cash Payment for Acquisition of Plant Assets	(310,000)
Cash Receipt from Disposal of Plant Assets	50,000
Net Cash Used for Investing Activities	(260,000)

Cash Flows from Financing Activities

Financing activities affect the long-term liability and equity accounts, such as Long-term Notes Payable, Bonds Payable, Common Stock, and Retained Earnings. To determine the cash flows from financing activities, we need to review each of these account types.

Long-term Liabilities

The T-account for ShopMart's Notes Payable is shown below. Additional information concerning notes payable is also provided by the company as follows:

- Received \$90,000 cash from issuance of notes payable.
- Paid \$10,000 cash to retire notes payable.

Notes Payable			
	80,000	12/31/2017	
Payment	10,000	90,000	Issuance
		160,000	12/31/2018

The beginning and ending balances of Notes Payable are taken from the comparative balance sheet. For ShopMart, a new issuance of notes payable is known to be a \$90,000 cash receipt and is shown by the following journal entry:

Date	Accounts and Explanation	Debit	Credit
	Cash	90,000	
	Notes Payable		90,000

$$\left. \begin{array}{l} A \uparrow \\ \text{Cash} \uparrow \end{array} \right\} = \left\{ \begin{array}{l} L \uparrow \\ \text{Notes} \\ \text{Payable} \uparrow \end{array} \right\} + E$$

In addition, ShopMart paid \$10,000 cash to retire notes payable.

Date	Accounts and Explanation	Debit	Credit
	Notes Payable	10,000	
	Cash		10,000

$$\left. \begin{array}{l} A \downarrow \\ \text{Cash} \downarrow \end{array} \right\} = \left\{ \begin{array}{l} L \downarrow \\ \text{Notes} \\ \text{Payable} \downarrow \end{array} \right\} + E$$



The cash inflow and cash outflow associated with these notes payable are listed first in the cash flows from financing activities section.

SHOPMART, INC.		
Statement of Cash Flows (Partial)		
Year Ended December 31, 2018		
Cash Flows from Financing Activities:		
Cash Receipt from Issuance of Notes Payable	90,000	
Cash Payment of Notes Payable	(10,000)	

Common Stock and Treasury Stock

Cash flows for financing activities are also determined by analyzing the stock accounts. For example, the amount of new issuances of stock is determined by analyzing the stock accounts and reviewing the additional information provided:

- Received \$120,000 cash from issuing shares of common stock.
- Paid \$20,000 cash for purchase of shares of treasury stock.

ShopMart's stock T-accounts are as follows:

Common Stock		
	250,000	12/31/2017
Retirement	0	120,000 Issuance
	370,000	12/31/2018

Treasury Stock		
12/31/2017	0	
Purchase	20,000	0 Disposal
12/31/2018	20,000	

The common stock account shows a new stock issuance of \$120,000 and would be recorded by the following journal entry:

$$\frac{A\uparrow}{\text{Cash}\uparrow} = \left\{ \frac{L}{\text{Common Stock}\uparrow} + \frac{E\uparrow}{\text{Common Stock}\uparrow} \right\}$$

Date	Accounts and Explanation	Debit	Credit
	Cash	120,000	
	Common Stock		120,000

This is shown as \$120,000 cash inflow in the financing activities section of the statement.

Treasury stock also changed on ShopMart's balance sheet. The T-account is showing an acquisition of treasury stock that would be recorded as follows:

$$\frac{A\downarrow}{\text{Cash}\downarrow} = \left\{ \frac{L}{\text{Treasury Stock}\uparrow} + \frac{E\downarrow}{\text{Treasury Stock}\uparrow} \right\}$$

Date	Accounts and Explanation	Debit	Credit
	Treasury Stock	20,000	
	Cash		20,000



The \$20,000 is shown as a cash outflow in the financing section of the statement of cash flows for the purchase of treasury stock.

SHOPMART, INC.		
Statement of Cash Flows (Partial)		
Year Ended December 31, 2018		
Cash Flows from Financing Activities:		
Cash Receipt from Issuance of Notes Payable	90,000	
Cash Payment of Notes Payable	(10,000)	
Cash Receipt from Issuance of Common Stock	120,000	
Cash Payment for Purchase of Treasury Stock	(20,000)	

Computing Dividend Payments

The amount of dividend payments can be computed by analyzing the Retained Earnings account. First, we input the balances from the balance sheet:

Retained Earnings		
	80,000	12/31/2017
Net Loss	?	? Net Income
Dividends	?	
	110,000	12/31/2018

Retained Earnings increases when companies earn net income. Retained Earnings decreases when companies have a net loss and when they declare dividends. We know that ShopMart earned net income of \$40,000 from the income statement in Exhibit 14-4.

Retained Earnings		
	80,000	12/31/2017
Net Loss	?	40,000 Net Income
Dividends	?	
	110,000	12/31/2018

Net Income is from the income statement.

ShopMart can't have both net income and net loss for the same period; therefore, the missing value must be the amount of dividends ShopMart declared. Solving for the dividends follows:

$$\begin{aligned} \text{Ending Retained Earnings} &= \text{Beginning Retained Earnings} + \text{Net income} - \text{Net loss} - \text{Dividends} \\ \$110,000 &= \$80,000 + \$40,000 - \$0 - \text{Dividends} \\ \text{Dividends} &= \$80,000 + \$40,000 - \$0 - \$110,000 \\ \text{Dividends} &= \$10,000 \end{aligned}$$

So our final Retained Earnings T-account shows the following:

Retained Earnings		
	80,000	12/31/2017
	40,000	Net Income
Dividends	10,000	
	110,000	12/31/2018



In order for the cash dividends to be reported on the statement of cash flows, the company must have paid the dividends. In this case, we know the cash dividends are paid because there are no dividends payable reported on ShopMart's balance sheet. Companies can also distribute stock dividends. A stock dividend has *no* effect on Cash and is *not* reported in the financing activities section of the statement of cash flows. ShopMart had no stock dividends, only cash dividends, which will be shown as an outflow in the financing activities section of the statement of cash flows.

SHOPMART, INC.	
Statement of Cash Flows (Partial)	
Year Ended December 31, 2018	
Cash Flows from Financing Activities:	
Cash Receipt from Issuance of Notes Payable	\$ 90,000
Cash Payment of Notes Payable	(10,000)
Cash Receipt from Issuance of Common Stock	120,000
Cash Payment for Purchase of Treasury Stock	(20,000)
Cash Payment of Dividends	(10,000)
Net Cash Provided by Financing Activities	170,000

TYING IT ALL TOGETHER

Amazon.com, Inc. opened its virtual doors on the internet in July 1995 and completed an initial public offering in May 1997. The company serves customers through its retail Web sites selling millions of unique products. In addition, the company manufactures and sells electronic devices including Kindle e-readers and Fire tablets. Amazon.com also offers Amazon Prime, a membership program that includes unlimited free shipping on items and access to unlimited streaming of movies and TV episodes. (You can find Amazon.com, Inc.'s annual report at <http://phx.corporate-ir.net/phoenix.zhtml?c=97664&p=irol-reportsAnnual>)

What format does Amazon.com, Inc. use for its statement of cash flows?

Amazon.com, Inc. uses an indirect method statement of cash flows. This method starts with net income and adjusts net income to net cash provided by operating activities.

On Amazon.com, Inc.'s statement of cash flows, the company reports cash provided by operating activities

for the year ended December 31, 2015, of \$11,920 million.

What were the operating cash flows a result of?

Cash flows from operating activities reports on activities that create revenue or expense in the company's business. This section reflects the day-to-day operations. Amazon.com reports that the company's operating cash flows result primarily from cash received from customers, advertising agreements, and co-branded credit card agreements. The cash inflows are offset by cash payments for products and services, employee compensation, and interest payments on long-term obligations.

Did Amazon.com, Inc. pay a cash dividend in 2015? How would an investor know?

Amazon.com did not pay a cash dividend in 2015. An investor could easily tell if a company paid a cash dividend by reviewing the financing activities section of the statement of cash flows. This section reports cash inflows and outflows associated with long-term liabilities and equity, including the payment of cash dividends.



Net Change in Cash and Cash Balances

To complete the statement of cash flows, the net change in cash and its effect on the beginning cash balance must be shown. This represents the total change in cash for the period and reconciles the statement of cash flows. First, the net increase or decrease in cash is computed by combining the cash provided by or used for operating, investing, and financing activities. In the case of ShopMart, there is a net decrease in the cash balance of \$20,000 for the year and is calculated as follows:

$$\begin{aligned}\text{Net increase (decrease) in cash} &= \text{Net cash provided by operating activities} - \text{Net cash used for} \\ &\quad \text{investing activities} + \text{Net cash provided by financing activities} \\ &= \$70,000 - \$260,000 + \$170,000 \\ &= \$(20,000)\end{aligned}$$

Next, the beginning cash from December 31, 2017, is listed at \$42,000, as shown on the comparative balance sheet. The net decrease of \$20,000 is subtracted from beginning cash of \$42,000, which equals the ending cash balance on December 31, 2018, of \$22,000. This is the key to the statement of cash flows—it explains why the cash balance for ShopMart decreased by \$20,000, even though the company reported net income for the year.

SHOPMART, INC.	
Statement of Cash Flows (Partial)	
Year Ended December 31, 2018	
Net Cash Provided by Operating Activities	\$ 70,000
Net Cash Used for Investing Activities	(260,000)
Net Cash Provided by Financing Activities	170,000
Net Increase (Decrease) in Cash	(20,000)
Cash Balance, December 31, 2017	42,000
Cash Balance, December 31, 2018	\$ 22,000

Before moving on, take a moment to review the completed Statement of Cash Flows shown earlier in Exhibit 14-5.

Non-cash Investing and Financing Activities

The last step in preparing the statement of cash flows is to prepare the non-cash investing and financing activities section. This section appears as a separate schedule of the statement of cash flows or in the notes to the financial statements. Our ShopMart example did not include transactions of this type because the company did not have any non-cash transactions during the year. So, to illustrate them, let's consider three non-cash transactions for another fictitious company, The Outdoors, Inc. How would they be reported? First, we gather the non-cash activities for the company:

1. Acquired \$300,000 building by issuing common stock.
2. Acquired \$70,000 land by issuing notes payable.
3. Retired \$100,000 notes payable by issuing common stock.



Now, we consider each transaction individually.

- The Outdoors issued common stock of \$300,000 to acquire a building. The journal entry to record the purchase would be as follows:

$$\begin{array}{c} A \uparrow \\ \hline \text{Building} \uparrow \end{array} \left\{ = \right\} \begin{array}{c} L \\ \hline \end{array} + \begin{array}{c} E \uparrow \\ \hline \text{Common Stock} \uparrow \end{array}$$

Date	Accounts and Explanation	Debit	Credit
	Building	300,000	
	Common Stock		300,000

This transaction would not be reported on the statement of cash flows because no cash was paid or received. But the building and the common stock are important. The purchase of the building is an investing activity. The issuance of common stock is a financing activity. Taken together, this transaction is a *non-cash investing and financing activity*.

- The second transaction listed indicates that The Outdoors acquired \$70,000 of land by issuing a note. The journal entry to record the purchase would be as follows:

$$\begin{array}{c} A \uparrow \\ \hline \text{Land} \uparrow \end{array} \left\{ = \right\} \begin{array}{c} L \uparrow \\ \hline \text{Notes Payable} \uparrow \end{array} + \begin{array}{c} E \\ \hline \end{array}$$

Date	Accounts and Explanation	Debit	Credit
	Land	70,000	
	Notes Payable		70,000

This transaction would not be reported on the statement of cash flows because no cash was paid or received. But the land and the notes payable are important. The purchase of the land is an investing activity. The issuance of the note is a financing activity. Taken together, this transaction is a *non-cash investing and financing activity*.

- The third transaction listed indicates that The Outdoors retired \$100,000 of debt by issuing common stock. The journal entry to record the transaction would be as follows:

$$\begin{array}{c} A \\ \hline \end{array} \left\{ = \right\} \begin{array}{c} L \downarrow \\ \hline \text{Notes Payable} \downarrow \end{array} + \begin{array}{c} E \uparrow \\ \hline \text{Common Stock} \uparrow \end{array}$$

Date	Accounts and Explanation	Debit	Credit
	Notes Payable	100,000	
	Common Stock		100,000

This transaction would not be reported on the statement of cash flows because no cash was paid or received. But the notes payable and the stock issuance are important. The retirement of the note and the issuance of the common stock are both financing activities. Taken together, this transaction, even though it is two financing transactions, is reported in the *non-cash investing and financing activities*.

Non-cash investing and financing activities are reported in a separate part of the statement of cash flows. Exhibit 14-7 illustrates non-cash investing and financing activities for The Outdoors. This information is either reported as a separate schedule following the statement of cash flows or can be disclosed in a note.


Exhibit 14-7 | Non-cash Investing and Financing Activities

THE OUTDOORS, INC.	
Statement of Cash Flows (Partial)	
Year Ended December 31, 2018	
Non-cash Investing and Financing Activities:	
Acquisition of building by issuing common stock	\$ 300,000
Acquisition of land by issuing notes payable	70,000
Retirement of notes payable by issuing common stock	100,000
Total Non-cash Investing and Financing Activities	\$ 470,000

Try It!

6. Owl, Inc.'s accountants have assembled the following data for the year ended December 31, 2018:

Cash receipt from sale of equipment	\$ 20,000
Depreciation expense	12,000
Cash payment of dividends	4,000
Cash receipt from issuance of common stock	12,000
Net income	30,000
Cash purchase of land	25,000
Increase in current liabilities	10,000
Decrease in current assets other than cash	8,000

Prepare Owl's statement of cash flows using the indirect method for the year ended December 31, 2018. Assume beginning and ending Cash are \$12,000 and \$75,000 respectively.

Check your answer online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercises S14-3 through S14-9.

Pearson MyLab Accounting

HOW DO WE USE FREE CASH FLOW TO EVALUATE BUSINESS PERFORMANCE?

Throughout this chapter, we have focused on cash flows from operating, investing, and financing activities. Some investors want to know how much cash a company can “free up” for new opportunities. **Free cash flow** is the amount of cash available from operating activities after paying for planned investments in long-term assets and after paying cash dividends to shareholders. Free cash flow can be computed as follows:

$$\text{Free cash flow} = \text{Net cash provided by operating activities} - \text{Cash payments planned for investments in long-term assets} - \text{Cash dividends}$$

Learning Objective 3

Use free cash flow to evaluate business performance

Free Cash Flow

The amount of cash available from operating activities after paying for planned investments in long-term assets and after paying dividends to shareholders. Net cash provided by operating activities – Cash payments planned for investments in long-term assets – Cash dividends.

Many companies use free cash flow to estimate the amount of cash that would be available for unexpected opportunities. Suppose ShopMart expects net cash provided by operations of \$200,000. Assume the company plans to spend \$160,000 to modernize its retail facilities and pays \$15,000 in cash dividends. In this case, ShopMart's free cash flow would be \$25,000 ($\$200,000 - \$160,000 - \$15,000$). If a good investment opportunity comes along, the company should have \$25,000 cash available to invest.

Try It!

7. Kalapono Company expects the following for 2018:

- Net cash provided by operating activities of \$100,000.
- Net cash provided by financing activities of \$10,000.
- Net cash used for investing activities of \$20,000 (no sales of long-term assets).
- Cash dividends paid to stockholders was \$2,000.

How much free cash flow does Kalapono expect for 2018?

Check your answer online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercises S14-10. [Pearson MyLab Accounting](#)

APPENDIX 14A: Preparing the Statement of Cash Flows by the Direct Method

HOW IS THE STATEMENT OF CASH FLOWS PREPARED USING THE DIRECT METHOD?

Learning Objective 4

Prepare the statement of cash flows by the direct method

The Financial Accounting Standards Board (FASB) prefers the direct method of reporting cash flows from operating activities. The direct method provides clearer information about the sources and uses of cash than does the indirect method. However, very few non-public companies use the direct method because it takes more computations than the indirect method. Investing and financing cash flows are exactly the same presentation under both direct and indirect methods. Because only the preparation of the operating activities section differs, it is all we discuss in this appendix.

To illustrate how the operating activities section of the statement of cash flows differs for the direct method, we use the ShopMart data we used within the main chapter.

Cash Flows from Operating Activities

In the indirect method, we start with accrual basis net income and then adjust it to cash basis through a series of adjusting items. When using the direct method, we take each line item of the income statement and convert it from accrual to cash basis. So, in essence, the operating activities section of the direct-method cash flows statement is really just a cash-basis income statement. Now let's apply this information to ShopMart.

Cash Collections from Customers

The first item on the income statement shown in Exhibit 14-4 is Net Sales Revenue. Net Sales Revenue represents the total of all sales, whether for cash or on account. The balance sheet account related to Net Sales Revenue is Accounts Receivable. Accounts Receivable

went from \$73,000 at December 31, 2017, to \$90,000 at December 31, 2018, an increase of \$17,000. Net Sales Revenue can be converted to cash receipts from customers as follows:

$$\begin{aligned}\text{Cash receipts from customers} &= \text{Net Sales Revenue} + \text{Beginning Accounts Receivable} - \text{Ending Accounts Receivable} \\ &= \$286,000 + \$73,000 - \$90,000 \\ &= \$269,000\end{aligned}$$

Accounts Receivable		
	12/31/2017	73,000
Increase		17,000
	12/31/2018	90,000

Sales Revenue	
	286,000

So, the cash ShopMart received from customers is \$269,000. This is the first item in the operating activities section of the direct-method statement of cash flows.

SHOPMART, INC.	
Statement of Cash Flows (Partial)	
Year Ended December 31, 2018	
Cash Flows from Operating Activities:	
Receipts:	
Collections from Customers	\$ 269,000

Had ShopMart had a decrease in Accounts Receivable, the amount of cash collections from customers would be higher than Net Sales Revenue.

Cash Receipts of Interest Revenue

The income statement reports interest revenue of \$12,000. The balance sheet account related to Interest Revenue is Interest Receivable. Because there is no Interest Receivable account on the balance sheet, the interest revenue must have all been received in cash. So, the statement of cash flows shows interest received of \$12,000.

SHOPMART, INC.	
Statement of Cash Flows (Partial)	
Year Ended December 31, 2018	
Cash Flows from Operating Activities:	
Receipts:	
Collections from Customers	\$ 269,000
Interest Revenue Received	12,000

Cash Receipts of Dividend Revenue

The income statement reports dividend revenue of \$9,000. The balance sheet account related to Dividend Revenue is Dividends Receivable. As with the interest, there is no Dividends Receivable account on the balance sheet. Therefore, the dividend revenue must have all been received in cash. So, the statement of cash flows shows cash received from dividends of \$9,000.

SHOPMART, INC.	
Statement of Cash Flows (Partial)	
Year Ended December 31, 2018	
Cash Flows from Operating Activities:	
Receipts:	
Collections from Customers	\$ 269,000
Interest Revenue Received	12,000
Dividends Received on Investments	9,000
Total Cash Receipts	\$ 290,000

Payments to Suppliers

Payments to suppliers include all payments for the following:

- Merchandise inventory
- Operating expenses except employee compensation, interest, and income taxes

Suppliers, also called *vendors*, are those entities that provide the business with its merchandise inventory and essential services. The accounts related to supplier payments for merchandise inventory are Cost of Goods Sold, Merchandise Inventory, and Accounts Payable. Cost of Goods Sold on the income statement was \$156,000. Merchandise Inventory decreased from \$145,000 at December 31, 2017, to \$143,000 at December 31, 2018. Accounts Payable increased from \$50,000 at December 31, 2017, to \$90,000 at December 31, 2018. We can calculate the cash paid for inventory as follows:

$$\begin{aligned} \text{Cash paid for merchandise inventory} &= \text{Cost of Goods Sold} - \text{Beginning Merchandise Inventory} + \text{Ending Merchandise Inventory} \\ &\quad + \text{Beginning Accounts Payable} - \text{Ending Accounts Payable} \\ &= \$156,000 - \$145,000 + \$143,000 + \$50,000 - \$90,000 \\ &= \$114,000 \end{aligned}$$

Merchandise Inventory				
12/31/2017	145,000			
Purchased	154,000	156,000	Sold	
12/31/2018	143,000			

Accounts Payable				
	50,000	12/31/2017		
	40,000	Increase		
	90,000	12/31/2018		
Cost of Goods Sold				
Sold	156,000			

The accounts related to supplier payments for operating expenses are Other Operating Expense and Accrued Liabilities. Other operating expenses on the income statement were \$16,000. Accrued Liabilities decreased from \$10,000 at December 31, 2017, to \$5,000 at December 31, 2018. Cash paid for operating expenses can be calculated as follows:

$$\begin{aligned}\text{Cash paid for other operating expenses} &= \text{Other Operating Expense} + \text{Beginning Accrued Liabilities} - \text{Ending Accrued Liabilities} \\ &= \$16,000 + \$10,000 - \$5,000 \\ &= \$21,000\end{aligned}$$

Accrued Liabilities		
	10,000	12/31/2017
The net decrease in Accrued Liabilities represents the payment of Cash.	5,000	
	5,000	12/31/2018

Other Operating Expense		
	16,000	
When a company records a debit to Other Operating Expense, it either credits Cash or credits Accrued Liabilities.	16,000	

Adding the cash paid for merchandise inventory and the cash paid for other operating expenses together, we get total cash paid to suppliers of \$135,000 (\$114,000 + \$21,000).

SHOPMART, INC.	
Statement of Cash Flows (Partial)	
Year Ended December 31, 2018	
Cash Flows from Operating Activities:	
Receipts:	
Collections from Customers	\$ 269,000
Interest Revenue Received	12,000
Dividends Received on Investments	9,000
Total Cash Receipts	<u>\$ 290,000</u>
Payments:	
To Suppliers	(135,000)

Payments to Employees

This category includes payments for salaries, wages, and other forms of employee compensation. Accrued amounts are not cash flows because they have not yet been paid. The accounts related to employee payments are Salaries and Wages Expense from the income statement and Salaries and Wages Payable from the balance sheet. Because there is not a Salaries and Wages Payable account on the balance sheet, the Salaries and Wages Expense account must represent all amounts paid in cash to employees. So, the statement of cash flows shows cash payments to employees of \$56,000.

SHOPMART, INC.	
Statement of Cash Flows (Partial)	
Year Ended December 31, 2018	
Cash Flows from Operating Activities:	
Receipts:	
Collections from Customers	\$ 269,000
Interest Revenue Received	12,000
Dividends Received on Investments	9,000
Total Cash Receipts	<u>\$ 290,000</u>
Payments:	
To Suppliers	(135,000)
To Employees	(56,000)

Payments for Interest Expense and Income Tax Expense

These cash payments are reported separately from the other expenses. The accounts related to interest payments are Interest Expense from the income statement and Interest Payable from the balance sheet. Because there is no Interest Payable account on the balance sheet, the Interest Expense account from the income statement must represent all amounts paid in cash for interest. So, the statement of cash flows shows cash payments for interest of \$15,000.

The accounts related to income tax payments are Income Tax Expense from the income statement and Income Tax Payable from the balance sheet. Because there is no Income Tax Payable account on the balance sheet, the Income Tax Expense account from the income statement must represent all amounts paid in cash for income tax. So, the statement of cash flows shows cash payments for income tax of \$14,000.

SHOPMART, INC.	
Statement of Cash Flows (Partial)	
Year Ended December 31, 2018	
Cash Flows from Operating Activities:	
Receipts:	
Collections from Customers	\$ 269,000
Interest Revenue Received	12,000
Dividends Received on Investments	9,000
Total Cash Receipts	<u>\$ 290,000</u>
Payments:	
To Suppliers	(135,000)
To Employees	(56,000)
For Interest	(15,000)
For Income Tax	(14,000)
Total Cash Payments	<u>(220,000)</u>

Are depreciation expense and gain or loss on disposal of plant assets included in the operating activities section when using the direct method?

Non-cash Expenses and Gains or Losses on Disposal of Long-term Assets

Non-cash expenses and gains or losses on disposal of long-term assets are reported on the income statement but are not included in the operating activities when using the direct method. Non-cash expenses are not reported because these items do not affect

cash. The cash received from the disposal of long-term assets is reported in the investing activities section, not the operating activities section.

Net Cash Provided by Operating Activities

To calculate net cash provided by operating activities using the direct method, we add all the cash receipts and cash payments described previously and find the difference. For ShopMart, total cash receipts were \$290,000. Total cash payments were \$220,000. So, net cash provided by operating activities is \$70,000. If you refer back to the indirect method statement of cash flows shown in Exhibit 14-5, you will find that it showed the same \$70,000 for net cash provided by operating activities. The amount is the same, only the method by which it was calculated was different.

The remainder of ShopMart's statement of cash flows is exactly the same as what we calculated using the indirect method. Exhibit 14A-1 shows the completed statement of cash flows using the direct method for operating activities.

Exhibit 14A-1 | Statement of Cash Flows—Direct Method

SHOPMART, INC.	
Statement of Cash Flows	
Year Ended December 31, 2018	
Cash Flows from Operating Activities:	
Receipts:	
Collections from Customers	\$ 269,000
Interest Revenue Received	12,000
Dividends Received on Investments	9,000
Total Cash Receipts	<u>\$ 290,000</u>
Payments:	
To Suppliers	(135,000)
To Employees	(56,000)
For Interest	(15,000)
For Income Tax	<u>(14,000)</u>
Total Cash Payments	(220,000)
Net Cash Provided by Operating Activities	<u>70,000</u>
Cash Flows from Investing Activities:	
Cash Payment for Acquisition of Plant Assets	(310,000)
Cash Receipt from Disposal of Plant Assets	<u>50,000</u>
Net Cash Used for Investing Activities	(260,000)
Cash Flows from Financing Activities:	
Cash Receipt from Issuance of Notes Payable	90,000
Cash Payment of Notes Payable	(10,000)
Cash Receipt from Issuance of Common Stock	120,000
Cash Payment for Purchase of Treasury Stock	(20,000)
Cash Payment of Dividends	<u>(10,000)</u>
Net Cash Provided by Financing Activities	170,000
Net Increase (Decrease) in Cash	(20,000)
Cash Balance, December 31, 2017	42,000
Cash Balance, December 31, 2018	<u>\$ 22,000</u>

Try It!

- 8A. Big Island, Inc. began 2018 with cash of \$40,000. During the year, Big Island earned revenue of \$200,000 and collected \$120,000 from customers. Expenses for the year totaled \$160,000, of which Big Island paid \$65,000 in cash to suppliers and \$80,000 in cash to employees. The company received \$2,000 cash for interest revenue and paid \$10,000 for income taxes. Big Island also paid \$35,000 to purchase equipment and a cash dividend of \$15,000 to its stockholders during 2018. Prepare the company's operating activities section of the statement of cash flows for the year ended December 31, 2018. Use the direct method.

Check your answer online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercises Short Exercises S14A-11 through
Short Exercises S14A-14.

Pearson MyLab Accounting

APPENDIX 14B: Preparing the Indirect Statement of Cash Flows Using a Spreadsheet

HOW IS THE STATEMENT OF CASH FLOWS PREPARED USING THE INDIRECT METHOD AND A SPREADSHEET?

Learning Objective 5

Prepare the statement of cash flows by the indirect method using a spreadsheet

This chapter discussed the uses of the statement of cash flows in decision making and showed how to prepare the statement using T-accounts. The T-account approach works well as a learning device. In practice, however, most companies face complex situations. In these cases, a spreadsheet can help in preparing the statement of cash flows.

The spreadsheet starts with the beginning balance sheet and concludes with the ending balance sheet. Two middle columns—one for debit amounts and the other for credit amounts—complete the spreadsheet. These columns, labeled “Transaction Analysis,” hold the data for the statement of cash flows. Accountants can prepare the statement directly from the lower part of the spreadsheet. This appendix is based on the ShopMart data used in this chapter. We illustrate this approach only with the indirect method for operating activities. This method could be used for the direct method as well.

The *indirect* method reconciles accrual basis net income to net cash provided by operating activities. Exhibit 14B-1 is the spreadsheet for preparing the statement of cash flows by the *indirect* method. Panel A shows the transaction analysis, and Panel B gives the information to prepare the statement of cash flows.

Exhibit 14B-1 | Spreadsheet for Statement of Cash Flows—Indirect Method

	A	B	C	D	E	F	G
1	SHOPMART, INC.						
2	Spreadsheet for Statement of Cash Flows						
3	Year Ended December 31, 2018						
4							
5	Panel A—Balance Sheet:	Balance 12/31/2017	Transaction Analysis		Balance 12/31/2018		
6			DEBIT	CREDIT			
7	Cash	\$ 42,000			20,000	(n)	\$ 22,000
8	Accounts Receivable	73,000	(d)	17,000			90,000
9	Merchandise Inventory	145,000			2,000	(e)	143,000
10	Plant Assets	252,000	(h)	310,000	55,000	(c)	507,000
11	Accumulated Depreciation—Plant Assets	(42,000)	(c)	15,000	20,000	(b)	(47,000)
12	Total Assets	\$ 470,000					\$ 715,000
13							
14	Accounts Payable	50,000			40,000	(f)	90,000
15	Accrued Liabilities	10,000	(g)	5,000			5,000
16	Notes Payable	80,000	(j)	10,000	90,000	(i)	160,000
17	Total Liabilities	140,000					255,000
18							
19	Common Stock, no par	250,000			120,000	(k)	370,000
20	Retained Earnings	80,000	(m)	10,000	40,000	(a)	110,000
21	Treasury Stock	0	(l)	20,000			(20,000)
22	Total Liabilities and Stockholders' Equity	\$ 470,000			\$ 387,000		\$ 715,000
23							
24	Panel B—Statement of Cash Flows:						
25	Cash Flows from Operating Activities:						
26	Net Income		(a)	40,000			
27	Adjustments to Reconcile Net Income to Net Cash Provided by Operating Activities:						
28	Depreciation Expense—Plant Assets		(b)	20,000			
29	Gain on Disposal of Plant Assets				10,000	(c)	
30	Increase in Accounts Receivable				17,000	(d)	
31	Decrease in Merchandise Inventory		(e)	2,000			
32	Increase in Accounts Payable		(f)	40,000			
33	Decrease in Accrued Liabilities				5,000	(g)	
34	Net Cash Provided by Operating Activities						
35	Cash Flows from Investing Activities:						
36	Cash Payment for Acquisition of Plant Assets				310,000	(h)	
37	Cash Receipt from Disposal of Plant Assets		(c)	50,000			
38	Net Cash Used for Investing Activities						
39	Cash Flows from Financing Activities:						
40	Cash Receipt from Issuance of Notes Payable		(i)	90,000			
41	Cash Payment of Notes Payable				10,000	(j)	
42	Cash Receipt from Issuance of Common Stock		(k)	120,000			
43	Cash Payment for Purchase of Treasury Stock				20,000	(l)	
44	Cash Payment of Dividends				10,000	(m)	
45	Net Cash Provided by Financing Activities						
46	Net Increase (Decrease) in Cash		(n)	20,000			
47	Total				\$ 382,000		\$ 382,000
48							

The following is a listing of the transaction analysis provided on the spreadsheet using the indirect method:

- Net income of \$40,000 is the first operating cash inflow. Net income is entered on the spreadsheet (Panel B) as a debit to Net Income under Cash Flows from Operating Activities and as a credit to Retained Earnings on the balance sheet (Panel A).
- Next come the adjustments to net income, starting with depreciation of \$20,000—transaction (b)—which is debited to Depreciation Expense—Plant Assets and credited to Accumulated Depreciation—Plant Assets.

- c. This transaction is the sale of plant assets. The \$10,000 gain on the sale is entered as a credit to Gain on Disposal of Plant Assets—a subtraction from net income—under operating cash flows. This credit removes the \$10,000 gain from operating activities because the cash proceeds from the sale were \$50,000, not \$10,000. The \$50,000 sale amount is then entered on the spreadsheet under investing activities. Entry (c) is completed by crediting the plant assets' cost of \$55,000 to the Plant Assets account and debiting Accumulated Depreciation—Plant Assets for \$15,000.
- d. Entry (d) debits Accounts Receivable for its \$17,000 increase during the year. This amount is credited to Increase in Accounts Receivable under operating cash flows.
- e. This entry credits Merchandise Inventory for its \$2,000 decrease during the year. This amount is debited to Decrease in Merchandise Inventory under operating cash flows.
- f. This entry credits Accounts Payable for its \$40,000 increase during the year. Then it is debited to show as Increase in Accounts Payable under operating cash flows.
- g. This entry debits Accrued Liabilities for its \$5,000 decrease during the year. Then it is credited to show as Decrease in Accrued Liabilities under operating cash flows.
- h. This entry debits Plant Assets for the purchase of \$310,000 and credits Cash Payment for Acquisition of Plant Assets under investing cash flows.
- i. This entry is represented by a credit to Notes Payable and a debit under cash flows from financing activities of \$90,000 (Cash Receipt from Issuance of Notes Payable).
- j. This entry is the opposite of (i). It is represented by a debit (reduction) of \$10,000 to Notes Payable and a credit under Cash Flows from Financing Activities for Cash Payment of Notes Payable.
- k. This entry debits Cash Receipts from Issuance of Common Stock of \$120,000 under financing cash flows. The offsetting credit is to Common Stock.
- l. The purchase of treasury stock debited the Treasury Stock account on the balance sheet \$20,000. The corresponding cash flow entry Cash Payment for Purchase of Treasury Stock credits \$20,000 to reduce cash flow.
- m. The \$10,000 reduction (debit) to the Retained Earnings account is the result of dividends declared and paid by the company. So, we show Cash Payment of Dividends as a credit in the financing section.
- n. The final item in Exhibit 14B-1 is the Net Increase (Decrease) in Cash. It is shown as a credit to Cash and a debit to Net Increase (Decrease) in Cash of \$20,000.

In Panel B of Exhibit 14B-1, the debits represent increases (or inflows) of cash and the credits represent decreases (or outflows). This is because debits increase Cash and credits decrease Cash.

Try It!

- 9B.** Muench, Inc.'s accountant has partially completed the spreadsheet for the statement of cash flows. Fill in the remaining missing information.

	A	B	C	D	E	F	G
1	MUENCH, INC.						
2	Spreadsheet for Statement of Cash Flows						
3	Year Ended December 31, 2018						
4							
5	Panel A—Balance Sheet:	Balance 12/31/2017		Transaction Analysis			Balance 12/31/2018
6			DEBIT	CREDIT			
7	Cash	\$ 16,000					\$ 20,000
8	Accounts Receivable	3,250					5,000
9	Plant Assets	14,000	1,000				15,000
10	Accumulated Depreciation	(100)			100		(200)
11	Total Assets	\$ 33,150					\$ 39,800
12							
13	Accounts Payable	5,000					3,500
14							
15	Common Stock, no par	24,150			5,850		30,000
16	Retained Earnings	4,000	5,700				6,300
17	Total Liabilities and Stockholders' Equity	\$ 33,150					\$ 39,800
18							
19	Panel B—Statement of Cash Flows:						
20	Cash Flows from Operating Activities:						
21	Net Income						
22	Adjustments to Reconcile Net Income to Net Cash Provided by Operating Activities:						
23	Depreciation Expense—Plant Assets				100		
24	Increase in Accounts Receivable						
25	Decrease in Accounts Payable						
26	Net Cash Provided by Operating Activities						
27	Cash Flows from Investing Activities:						
28	Cash Payment for Acquisition of Plant Assets					1,000	
29	Net Cash Used for Investing Activities						
30	Cash Flows from Financing Activities:						
31	Cash Receipt from Issuance of Common Stock				5,850		
32	Cash Payment of Dividends					5,700	
33	Net Cash Provided by Financing Activities						
34	Net Increase (Decrease) in Cash						
35							

Check your answer online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercise S14B-15. [Pearson MyLab Accounting](#)

REVIEW

> Things You Should Know

1. What is the statement of cash flows?

- The statement of cash flows reports on a business's cash receipts and cash payments for a specific period.
- There are three basic types of cash flow activities:
 - Operating activities—Reports on activities that create revenue or expense in the entity's business.
 - Investing activities—Reports cash receipts and cash payments that increase or decrease long-term assets.
 - Financing activities—Includes cash receipts and cash payments involved in long-term liabilities and equity.
- Non-cash investing and financing activities are not included in the statement of cash flows but appear either as a separate schedule at the bottom of the statement or in the notes to the financial statements.
- There are two ways to format operating activities on the statement of cash flows:
 - Indirect method—Starts with net income and adjusts it to net cash provided by operating activities.
 - Direct method—Restates the income statement in terms of cash.

2. How is the statement of cash flows prepared using the indirect method?

- **Step 1:** Complete the cash flows from operating activities section using net income and adjusting for increases or decreases in current assets (other than cash) and current liabilities. Also adjust for gains or losses on long-term assets and non-cash expenses.
- **Step 2:** Complete the cash flows from investing activities section by reviewing the long-term assets section of the balance sheet.
- **Step 3:** Complete the cash flows from financing activities section by reviewing the long-term liabilities and equity sections of the balance sheet.
- **Step 4:** Compute the net increase or decrease in cash during the year.
- **Step 5:** Prepare a separate schedule reporting any non-cash investing and financing activities.

3. How do we use free cash flow to evaluate business performance?

- Free cash flow is the amount of cash available from operating activities after paying for planned investments in long-term assets and after paying cash dividends to shareholders.
- $\text{Free cash flow} = \text{Net cash provided by operating activities} - \text{Cash payments planned for investments in long-term assets} - \text{Cash dividends}$.

4. How is the statement of cash flows prepared using the direct method? (Appendix 14A)

- The operating activities section is the only section that differs between the direct and indirect methods.
- When using the direct method, each line item on the income statement is converted from accrual basis to cash basis.

5. How is the statement of cash flows prepared using the indirect method and a spreadsheet? (Appendix 14B)

- A spreadsheet can be used to help in preparing the statement of cash flows.
- The spreadsheet helps accountants analyze the changes in balance sheet accounts.

> Check Your Understanding

Check your understanding of the chapter by completing this problem and then looking at the solution. Use this practice to help identify which sections of the chapter you need to study more.

The Adams Corporation reported the following income statement for 2018 and comparative balance sheet for 2018 and 2017, along with transaction data for 2018:

ADAMS CORPORATION Comparative Balance Sheet December 31, 2018 and 2017			
	2018	2017	Increase (Decrease)
Assets			
Current Assets:			
Cash	\$ 22,000	\$ 3,000	\$ 19,000
Accounts Receivable	22,000	23,000	(1,000)
Merchandise Inventory	35,000	34,000	1,000
Long-term Assets:			
Plants Assets	153,200	97,200	56,000
Accumulated Depreciation—Plant Assets	(27,200)	(25,200)	(2,000)
Total Assets	\$ 205,000	\$ 132,000	\$ 73,000
Liabilities			
Current Liabilities:			
Accounts Payable	\$ 35,000	\$ 26,000	\$ 9,000
Accrued Liabilities	7,000	9,000	(2,000)
Income Tax Payable	10,000	10,000	0
Long-term Liabilities:			
Bonds Payable	84,000	53,000	31,000
Total Liabilities	136,000	98,000	38,000
Stockholders' Equity			
Common Stock, no par	52,000	20,000	32,000
Retained Earnings	27,000	19,000	8,000
Treasury Stock	(10,000)	(5,000)	(5,000)
Total Stockholders' Equity	69,000	34,000	35,000
Total Liabilities and Stockholders' Equity	\$ 205,000	\$ 132,000	\$ 73,000

ADAMS CORPORATION Income Statement Year Ended December 31, 2018	
Net Sales Revenue	\$ 662,000
Cost of Goods Sold	560,000
Gross Profit	102,000
Operating Expenses:	
Salaries and Wages Expense	\$ 46,000
Depreciation Expense—Plant Assets	10,000
Rent Expense	2,000
Total Operating Expenses	58,000
Operating Income	44,000
Other Income and (Expenses):	
Loss on Disposal of Plant Assets	(2,000)
Total Other Income and (Expenses)	(2,000)
Net Income Before Income Taxes	42,000
Income Tax Expense	16,000
Net Income	\$ 26,000

Transaction data for 2018

Cash paid for purchase of equipment	\$140,000
Cash payment of dividends	18,000
Issuance of common stock to retire bonds payable	13,000
Issuance of bonds payable to borrow cash	44,000
Cash receipt from issuance of common stock	19,000
Cash receipt from sale of equipment (Cost, \$84,000; Accumulated Depreciation, \$8,000)	74,000
Cash paid for purchase of treasury stock	5,000

Prepare Adams Corporation's statement of cash flows for the year ended December 31, 2018. Format cash flows from operating activities by the indirect method. (See Learning Objective 2)

> Solution

ADAMS CORPORATION Statement of Cash Flows Year Ended December 31, 2018		
Cash Flows from Operating Activities:		
Net Income		\$ 26,000
Adjustments to Reconcile Net Income to Net Cash Provided by Operating Activities:		
Depreciation Expense—Plant Assets	\$ 10,000	
Loss on Disposal of Plant Assets	2,000	
Decrease in Accounts Receivable	1,000	
Increase in Merchandise Inventory	(1,000)	
Increase in Accounts Payable	9,000	
Decrease in Accrued Liabilities	(2,000)	19,000
Net Cash Provided by Operating Activities		45,000
Cash Flows from Investing Activities:		
Cash Payment for Acquisition of Plant Assets	(140,000)	
Cash Receipt from Disposal of Plant Assets	74,000	
Net Cash Used for Investing Activities		(66,000)
Cash Flows from Financing Activities:		
Cash Receipt from Issuance of Bonds Payable	44,000	
Cash Receipt from Issuance of Common Stock	19,000	
Cash Payment for Purchase of Treasury Stock	(5,000)	
Cash Payment of Dividends	(18,000)	
Net Cash Provided by Financing Activities		40,000
Net Increase (Decrease) in Cash		19,000
Cash Balance, December 31, 2017		3,000
Cash Balance, December 31, 2018		\$ 22,000
Non-cash Investing and Financing Activities:		
Issuance of Common Stock to Retire Bonds Payable	\$ 13,000	
Total Non-cash Investing and Financing Activities		\$ 13,000

Relevant T-accounts:

Plant Assets			
12/31/2017	97,200		
Acquisitions	140,000	84,000	Disposals
12/31/2018	153,200		
Accumulated Depreciation—Plant Assets			
		25,200	12/31/2017
Disposals	8,000	10,000	Depr. Exp.
		27,200	12/31/2018
Bonds Payable			
		53,000	12/31/2017
Retirement	13,000	44,000	Issuance
		84,000	12/31/2018
Common Stock			
		20,000	12/31/2017
Retirement	0	13,000	Issuance
		19,000	Issuance
		52,000	12/31/2018
Treasury Stock			
12/31/2017	5,000		
Purchase	5,000	0	Disposal
12/31/2018	10,000		
Retained Earnings			
		19,000	12/31/2017
		26,000	Net Income
Dividends	18,000		
		27,000	12/31/2018

> Key Terms

Cash Flows (p. 759)
 Direct Method (p. 762)
 Financing Activities (p. 760)
 Free Cash Flow (p. 777)

Indirect Method (p. 762)
 Investing Activities (p. 760)
 Non-cash Investing and Financing Activities (p. 761)

Operating Activities (p. 760)
 Statement of Cash Flows (p. 759)

> Quick Check

1. The purposes of the statement of cash flows are to
 - a. evaluate management decisions.
 - b. determine ability to pay debts and dividends.
 - c. predict future cash flows.
 - d. All of the above

2. The main categories of cash flow activities on the statement of cash flows are
 - a. direct and indirect.
 - b. current and long-term.
 - c. non-cash investing and financing.
 - d. operating, investing, and financing.

3. Operating activities are most closely related to
 - a. long-term assets.
 - b. current assets and current liabilities.
 - c. long-term liabilities and stockholders' equity.
 - d. dividends and treasury stock.

4. Which item does *not* appear on a statement of cash flows prepared by the indirect method?

a. Collections from customers	c. Net income
b. Depreciation expense	d. Gain on sale of land

5. Leather Shop earned net income of \$57,000 after deducting depreciation of \$5,000 and all other expenses. Current assets decreased by \$4,000, and current liabilities increased by \$8,000. How much was Leather Shop's net cash provided by operating activities (indirect method)?

a. \$40,000	b. \$66,000	c. \$48,000	d. \$74,000
-------------	-------------	-------------	-------------

6. The Plant Assets account and Accumulated Depreciation—Plant Assets account of Jupiter Entertainment show the following:

Plant Assets			
12/31/2017	242,300		
Acquisitions	384,200	94,200	Disposals
12/31/2018	532,300		

Accumulated Depreciation—Plant Assets			
		148,200	12/31/2017
Disposals	78,200	48,700	Depr. Exp.
		118,700	12/31/2018

Jupiter Entertainment sold plant assets at a \$23,000 gain. Where on the statement of cash flows should Jupiter Entertainment report the sale of plant assets? How much should the business report for the sale?

- a. Financing cash flows—cash receipt of \$16,000
- b. Investing cash flows—cash receipt of \$117,200
- c. Investing cash flows—cash receipt of \$39,000
- d. Investing cash flows—cash receipt of \$16,000

Learning Objective 1

Learning Objective 1

Learning Objective 1

Learning Objective 2

Learning Objective 2

Learning Objective 2

Learning Objective 2

7. Mountain Water Corp. issued common stock of \$28,000 to pay off long-term notes payable of \$28,000. In what section(s) would these transactions be recorded?
- Financing activities payment of note, \$(28,000)
 - Financing activities cash receipt, \$28,000
 - Non-cash investing and financing activities, \$28,000
 - Both a and b are correct.

Learning Objective 3

8. Holmes, Inc. expects net cash flow from operating activities to be \$150,000, and the company plans purchases of equipment of \$86,000 and repurchases of stock of \$15,000. What is Holmes's free cash flow?
- \$86,000
 - \$64,000
 - \$49,000
 - \$150,000

Learning Objective 4
Appendix 14A

- 9A. Maxwell Furniture Center had accounts receivable of \$20,000 at the beginning of the year and \$54,000 at year-end. Revenue for the year totaled \$116,000. How much cash did the business collect from customers?

- \$150,000
- \$62,000
- \$116,000
- \$82,000

- 10B. Kangaroo Ltd. purchased \$15,200 treasury stock during the year. Which of the following is correct when using a spreadsheet to complete the statement of cash flows (indirect method)?

- Cash Payment for Purchase of Treasury Stock would be debited by \$15,200
- Common Stock would be debited by \$15,200
- Treasury Stock would be credited by \$15,200
- Cash Payment for Purchase of Treasury Stock would be credited by \$15,200.

Check your answers at the end of the chapter.

ASSESS YOUR PROGRESS

> Review Questions

- What does the statement of cash flows report?
- How does the statement of cash flows help users of financial statements?
- Describe the three basic types of cash flow activities.
- What types of transactions are reported in the non-cash investing and financing activities section of the statement of cash flows?
- Describe the two formats for reporting operating activities on the statement of cash flows.
- Describe the five steps used to prepare the statement of cash flows by the indirect method.
- Explain why depreciation expense, depletion expense, and amortization expense are added to net income in the operating activities section of the statement of cash flows when using the indirect method.
- If a company experienced a loss on disposal of long-term assets, how would this be reported in the operating activities section of the statement of cash flows when using the indirect method? Why?

9. If current assets other than cash increase, what is the effect on cash? What about a decrease in current assets other than cash?
10. If current liabilities increase, what is the effect on cash? What about a decrease in current liabilities?
11. What accounts on the balance sheet must be evaluated when completing the investing activities section of the statement of cash flows?
12. What accounts on the balance sheet must be evaluated when completing the financing activities section of the statement of cash flows?
13. What should the net change in cash section of the statement of cash flows always reconcile with?
14. What is free cash flow, and how is it calculated?
- 15A. How does the direct method differ from the indirect method when preparing the operating activities section of the statement of cash flows?
- 16B. Why might a spreadsheet be helpful when completing the statement of cash flows?

> Short Exercises

S14-1 Describing the purposes of the statement of cash flows

During the board of directors' meeting, one of the directors made the following comment:

"We can know whether our cash balance increases or decreases from the balance sheet. It is redundant to prepare the statement of cash flows as there is no additional value for this statement." Provide arguments on the director's comment.

Learning Objective 1

S14-2 Classifying items on the statement of cash flows

Cash flow items must be categorized into one of four categories. Identify each item as operating (O), investing (I), financing (F), or non-cash (N).

- a. Cash receipt from customers for sale of merchandise inventory
- b. Cash receipt for selling machinery items
- c. Cash payment for buying treasury stock
- d. Cash receipt from borrowing money from a financial institution
- e. Cash payment for utility bills
- f. Cash receipt for interest revenue
- g. Contribution of equipment by a stockholder in exchange for common stock
- h. Cash payment for income tax expense
- i. Cash payment for lending of long-term notes receivable
- j. Cash receipt from the issuance of preferred stock

Learning Objective 1

Learning Objectives 1, 2**S14-3 Classifying items on the indirect statement of cash flows**

Trendy Manufacturer is preparing its statement of cash flows by the *indirect* method. Trendy has the following items for you to consider in preparing the statement:

- a. Amortization expense
- b. Decrease in salaries payable
- c. Purchase of treasury stock
- d. Gain on sale of equipment
- e. Decrease in merchandise inventory
- f. Purchase of equipment by issuing bonds
- g. Retirement of notes payable
- h. Issuance of preferred stock
- i. Sale of patent
- j. Loss on sale of patent

Identify each item as a(n):

- Operating activity—addition to net income (O+) or subtraction from net income (O−)
- Investing activity—cash inflow (I+) or cash outflow (I−)
- Financing activity—cash inflow (F+) or cash outflow (F−)
- Activity that is not used to prepare the indirect statement of cash flows (N)

Learning Objective 2**S14-4 Computing cash flows from operating activities—indirect method**

DVR Equipment, Inc. reported the following data for 2018:

Income Statement:

Net Income	\$ 43,000
Depreciation Expense	6,000

Balance Sheet:

Increase in Accounts Receivable	6,000
Decrease in Accounts Payable	2,000

Compute DVR's net cash provided by operating activities—indirect method.

Learning Objective 2**S14-5 Computing cash flows from operating activities—indirect method**

Winding Road Cellular accountants have assembled the following data for the year ended April 30, 2018:

Cash receipt from sale of land	\$ 27,000	Net income	\$ 55,000
Depreciation expense	2,000	Cash purchase of equipment	44,000
Cash payment of dividends	5,800	Decrease in current liabilities	20,000
Cash receipt from issuance of common stock	17,000	Increase in current assets other than cash	27,000

Prepare the *operating* activities section using the indirect method for Winding Road Cellular's statement of cash flows for the year ended April 30, 2018.

Note: Short Exercise S14-5 must be completed before attempting Short Exercise S14-6.

Learning Objective 2**S14-6 Computing cash flows from investing and financing activities**

Use the data in Short Exercise S14-5 to complete this exercise. Prepare Winding Road Cellular's statement of cash flows using the indirect method for the year ended April 30, 2018. Assume beginning and ending Cash are \$48,000 and \$52,200, respectively.

S14-7 Computing investing and financing cash flows

Preston Media Corporation had the following income statement and balance sheet for 2018:

PRESTON MEDIA CORPORATION Income Statement Year Ended December 31, 2018	
Sales Revenue	\$ 80,000
Depreciation Expense—Plant Assets	11,000
Other Expenses	50,000
Net Income	<u>\$ 19,000</u>

Learning Objective 2

PRESTON MEDIA CORPORATION Comparative Balance Sheet December 31, 2018 and 2017		
	2018	2017
Assets		
Current Assets:		
Cash	\$ 5,000	\$ 3,900
Accounts Receivable	9,600	5,100
Long-term Assets:		
Plants Assets	105,350	84,350
Accumulated Depreciation—Plant Assets	(29,350)	(18,350)
Total Assets	<u>\$ 90,600</u>	<u>\$ 75,000</u>
Liabilities		
Current Liabilities:		
Accounts Payable	\$ 8,000	\$ 4,500
Long-term Liabilities:		
Notes Payable	9,000	12,000
Total Liabilities	17,000	16,500
Stockholders' Equity		
Common Stock, no par	27,000	23,000
Retained Earnings	46,600	35,500
Total Stockholders' Equity	73,600	58,500
Total Liabilities and Stockholders' Equity	<u>\$ 90,600</u>	<u>\$ 75,000</u>

Requirements

1. Compute the acquisition of plant assets for Preston Media Corporation during 2018. The business sold no plant assets during the year. Assume the company paid cash for the acquisition of plant assets.
2. Compute the payment of a long-term note payable. During the year, the business issued a \$4,400 note payable.

Note: Short Exercise S14-7 must be completed before attempting Short Exercise S14-8.

Learning Objective 2

S14-8 Preparing the statement of cash flows—indirect method

Use the Preston Media Corporation data in Short Exercise S14-7 and the results you calculated from the requirements. Prepare Preston Media's statement of cash flows—indirect method—for the year ended December 31, 2018.

Learning Objective 2

S14-9 Computing the change in cash; identifying non-cash transactions

Jennifer's Wedding Shops earned net income of \$27,000, which included depreciation of \$16,000. Jennifer's acquired a \$119,000 building by borrowing \$119,000 on a long-term note payable.

Requirements

1. How much did Jennifer's cash balance increase or decrease during the year?
2. Were there any non-cash transactions for the company? If so, show how they would be reported in the statement of cash flows.

Learning Objective 3

S14-10 Computing free cash flow

Julie Lopez Company expects the following for 2018:

- Net cash provided by operating activities of \$148,000.
- Net cash provided by financing activities of \$56,000.
- Net cash used for investing activities of \$77,000 (no sales of long-term assets).
- Cash dividends paid to stockholders of \$7,000.

How much free cash flow does Lopez expect for 2018?

Learning Objective 4 Appendix 14A

S14A-11 Preparing a statement of cash flows using the direct method

Jelly Bean, Inc. began 2018 with cash of \$58,000. During the year, Jelly Bean earned revenue of \$595,000 and collected \$614,000 from customers. Expenses for the year totaled \$427,000, of which Jelly Bean paid \$212,000 in cash to suppliers and \$205,000 in cash to employees. Jelly Bean also paid \$148,000 to purchase equipment and a cash dividend of \$57,000 to its stockholders during 2018. Prepare the company's statement of cash flows for the year ended December 31, 2018. Format operating activities by the direct method.

Learning Objective 4 Appendix 14A

S14A-12 Preparing operating activities using the direct method

Amy's Learning Center has assembled the following data for the year ended June 30, 2018:

Payments to suppliers	\$ 115,000
Cash payment for purchase of equipment	39,000
Payments to employees	66,000
Payment of notes payable	34,000
Payment of dividends	7,500
Cash receipt from issuance of stock	22,000
Collections from customers	188,000
Cash receipt from sale of land	58,000
Cash balance, June 30, 2017	41,000

Prepare the *operating* activities section of the business's statement of cash flows for the year ended June 30, 2018, using the direct method.

Note: Short Exercise S14A-12 must be completed before attempting Short Exercise S14A-13.

S14A-13 Preparing the direct method statement of cash flows

Use the data in Short Exercise S14A-12 and your results. Prepare the business's complete statement of cash flows for the year ended June 30, 2018, using the *direct* method for operating activities.

S14A-14 Preparing the direct method statement of cash flows

Red Toy Company reported the following comparative balance sheet:

RED TOY COMPANY Comparative Balance Sheet December 31, 2018 and 2017		
	2018	2017
Assets		
Current Assets:		
Cash	\$ 21,000	\$ 17,000
Accounts Receivable	53,000	42,000
Merchandise Inventory	76,000	88,000
Prepaid Expenses	3,100	2,100
Long-term Assets:		
Plants Assets, Net	221,000	185,000
Investments	77,000	91,000
Total Assets	\$ 451,100	\$ 425,100
Liabilities		
Current Liabilities:		
Accounts Payable	\$ 42,000	\$ 38,000
Salaries Payable	25,000	20,000
Accrued Liabilities	7,000	16,000
Long-term Liabilities:		
Notes Payable	61,000	69,000
Total Liabilities	135,000	143,000
Stockholders' Equity		
Common Stock, no par	45,000	40,000
Retained Earnings	271,100	242,100
Total Stockholders' Equity	316,100	282,100
Total Liabilities and Stockholders' Equity	\$ 451,100	\$ 425,100

Requirements

1. Compute the collections from customers during 2018 for Red Toy Company. Sales Revenue totaled \$134,000.
2. Compute the payments for inventory during 2018. Cost of Goods Sold was \$79,000.

Learning Objective 4 Appendix 14A

Learning Objective 4 Appendix 14A

Learning Objective 5
Appendix 14B

**S14B-15 Using a spreadsheet to complete the statement of cash flows—
indirect method**

Companies can use a spreadsheet to complete the statement of cash flows. Each item that follows is recorded in the transaction analysis columns of the spreadsheet.

- a. Net income
- b. Increases in current assets (other than Cash)
- c. Decreases in current liabilities
- d. Cash payment for acquisition of plant assets
- e. Cash receipt from issuance of common stock
- f. Depreciation expense

Identify each as being recorded by a Debit or Credit in the *statement of cash flows section* of the spreadsheet.

> Exercises

Learning Objective 1

E14-16 Classifying cash flow items

Consider the following transactions:

- a. Purchased equipment for \$130,000 cash.
- b. Issued \$14 par preferred stock for cash.
- c. Cash received from sales to customers of \$35,000.
- d. Cash paid to vendors, \$17,000.
- e. Sold building for \$19,000 gain for cash.
- f. Purchased treasury stock for \$28,000.
- g. Retired a notes payable with 1,250 shares of the company's common stock.

Identify the category of the statement of cash flows in which each transaction would be reported.

E14-17 Classifying transactions on the statement of cash flows—indirect method**Learning Objective 1**

Consider the following transactions:

Date	Accounts and Explanation	Debit	Credit
a.	Accumulated Depreciation—Building	89,200	
	Building		89,200
b.	Notes Payable	20,000	
	Cash		20,000
c.	Utilities Expense	3,400	
	Cash		3,400
d.	Equipment	5,200	
	Common Stock—\$1 Par Value		1,000
	Paid-In Capital in Excess of Par—Common		4,200
e.	Patent	32,000	
	Cash		32,000
f.	Amortization Expense—Patent	1,600	
	Patent		1,600
g.	Equity Investment	5,230	
	Cash		5,230
h.	Interest Expense	320	
	Cash		320
i.	Treasury Stock	8,120	
	Cash		8,120
j.	Cash	2,500	
	Unearned Revenue		2,500
k.	Loss on Disposal of Building	14,000	
	Accumulated Depreciation—Building	42,000	
	Building		56,000

Identify the category of the statement of cash flows, indirect method, in which each transaction would be reported.

E14-18 Classifying items on the indirect statement of cash flows**Learning Objectives 1, 2**

The statement of cash flows categorizes like transactions for optimal reporting.

Identify each item as a(n):

- Operating activity—addition to net income (O+) or subtraction from net income (O-)
- Investing activity—cash inflow (I+) or cash outflow (I-)
- Financing activity—cash inflow (F+) or cash outflow (F-)
- Non-cash investing and financing activity (NIF)
- Activity that is not used to prepare the indirect statement of cash flows (N)

The *indirect* method is used to report cash flows from operating activities.

- a. Loss on sale of land.
- b. Acquisition of equipment by issuance of note payable.
- c. Payment of long-term debt.
- d. Acquisition of building by issuance of common stock.
- e. Increase in Salaries Payable.
- f. Decrease in Merchandise Inventory.
- g. Increase in Prepaid Expenses.
- h. Decrease in Accrued Liabilities.
- i. Cash sale of land (no gain or loss).
- j. Issuance of long-term note payable to borrow cash.
- k. Depreciation Expense.
- l. Purchase of treasury stock.
- m. Issuance of common stock.
- n. Increase in Accounts Payable.
- o. Net income.
- p. Payment of cash dividend.

Learning Objective 2

Net Cash Prov. by Op.
Act. \$16,000

E14-19 Computing operating activities cash flow—indirect method

The records of Vintage Color Engraving reveal the following:

Net income	\$ 36,000	Depreciation expense	\$ 5,000
Sales revenue	53,000	Decrease in current liabilities	19,000
Loss on sale of land	4,000	Increase in current assets other than cash	10,000
Acquisition of land	35,000		

Compute cash flows from operating activities by the indirect method for year ended December 31, 2018.

Learning Objective 2

Net Cash Prov. by Op.
Act. \$49,500

E14-20 Computing operating activities cash flow—indirect method

The accounting records of CD Sales, Inc. include the following accounts:

Account	Beginning Balance	Ending Balance
Cash	\$ 7,500	\$ 6,500
Accounts Receivable	21,000	17,500
Merchandise Inventory	20,000	30,000
Accounts Payable	15,000	19,000

Accumulated Depreciation—Equipment		Retained Earnings	
	56,000 Jul. 1		63,000 Jul. 1
	2,000 Depr. Exp.	Dividends 15,000	50,000 Net Inc.
	58,000 Jul. 31		98,000 Jul. 31

Compute CD's net cash provided by (used for) operating activities during July 2018. Use the indirect method.

E14-21 Preparing the statement of cash flows—indirect method

The income statement of Boost Plus, Inc. follows:

BOOST PLUS, INC.	
Income Statement	
Year Ended September 30, 2018	
Net Sales Revenue	\$ 231,000
Cost of Goods Sold	94,000
Gross Profit	<u>137,000</u>
Operating Expenses:	
Salaries Expense	\$ 54,000
Depreciation Expense—Plant Assets	<u>27,000</u>
Total Operating Expenses	<u>81,000</u>
Net Income Before Income Taxes	<u>56,000</u>
Income Tax Expense	3,000
Net Income	<u><u>\$ 53,000</u></u>

Learning Objective 2

Net Cash Prov. by Op.
Act. \$98,000

Additional data follow:

- Acquisition of plant assets is \$124,000. Of this amount, \$108,000 is paid in cash and \$16,000 by signing a note payable.
- Cash receipt from sale of land totals \$20,000. There was no gain or loss.
- Cash receipts from issuance of common stock total \$36,000.
- Payment of notes payable is \$15,000.
- Payment of dividends is \$5,000.
- From the balance sheet:

	September 30	
	2018	2017
Cash	\$ 39,000	\$ 13,000
Accounts Receivable	46,000	61,000
Merchandise Inventory	94,000	88,000
Land	82,000	102,000
Plant Assets	214,000	90,000
Accumulated Depreciation	(61,000)	(34,000)
Accounts Payable	32,000	15,000
Accrued Liabilities	12,000	20,000
Notes Payable (long-term)	16,000	15,000
Common Stock, no par	40,000	4,000
Retained Earnings	314,000	266,000

Prepare Boost Plus's statement of cash flows for the year ended September 30, 2018, using the indirect method. Include a separate section for non-cash investing and financing activities.

Learning Objective 2

2. Book Value on Plant Assets Sold \$7,000

Learning Objective 2

2. Payment: \$8,000
4. Dividends \$47,000

E14-22 Computing cash flows for investing and financing activities

Consider the following facts for Java Jolt:

- a. Beginning and ending Retained Earnings are \$45,000 and \$70,000, respectively. Net income for the period is \$60,000.
- b. Beginning and ending Plant Assets are \$124,500 and \$134,500, respectively.
- c. Beginning and ending Accumulated Depreciation—Plant Assets are \$21,500 and \$26,500, respectively.
- d. Depreciation Expense for the period is \$17,000, and acquisitions of new plant assets total \$29,000. Plant assets were sold at a \$5,000 gain.

Requirements

1. How much are cash dividends?
2. What was the amount of the cash receipt from the sale of plant assets?

E14-23 Computing the cash effect

Rouse Exercise Equipment, Inc. reported the following financial statements for 2018:

ROUSE EXERCISE EQUIPMENT, INC.	
Income Statement	
Year Ended December 31, 2018	
Net Sales Revenue	\$ 713,000
Cost of Goods Sold	342,000
Gross Profit	371,000
Operating Expenses:	
Depreciation Expense	\$ 54,000
Other Operating Expenses	210,000
Total Operating Expenses	264,000
Net Income	\$ 107,000

ROUSE EXERCISE EQUIPMENT, INC.		
Comparative Balance Sheet		
December 31, 2018 and 2017		
	2018	2017
Assets		
Current Assets:		
Cash	\$ 17,000	\$ 16,000
Accounts Receivable	57,000	46,000
Merchandise Inventory	79,000	90,000
Long-term Assets:		
Plants Assets	260,500	216,400
Accumulated Depreciation—Plant Assets	(38,500)	(32,400)
Investments	96,000	73,000
Total Assets	\$ 471,000	\$ 409,000
Liabilities		
Current Liabilities:		
Accounts Payable	\$ 72,000	\$ 71,000
Salaries Payable	3,000	5,000
Long-term Liabilities:		
Notes Payable	61,000	69,000
Total Liabilities	136,000	145,000
Stockholders' Equity		
Common Stock, no par	45,000	34,000
Retained Earnings	290,000	230,000
Total Stockholders' Equity	335,000	264,000
Total Liabilities and Stockholders' Equity	\$ 471,000	\$ 409,000

Requirements

1. Compute the amount of Rouse Exercise's acquisition of plant assets. Assume the acquisition was for cash. Rouse Exercise disposed of plant assets at book value. The cost and accumulated depreciation of the disposed asset was \$47,900. No cash was received upon disposal.
2. Compute new borrowing or payment of long-term notes payable, with Rouse Exercise having only one long-term notes payable transaction during the year.
3. Compute the issuance of common stock with Rouse Exercise having only one common stock transaction during the year.
4. Compute the payment of cash dividends.

Note: Exercise E14-23 must be completed before attempting Exercise E14-24.

E14-24 Preparing the statement of cash flows—indirect method

Use the Rouse Exercise Equipment data in Exercise E14-23. Prepare the company's statement of cash flows—indirect method—for the year ended December 31, 2018. Assume investments are purchased with cash.

Learning Objective 2

Net Cash Prov. by Op.
Act. \$160,000

Learning Objective 2

Total Non-cash Inv. and Fin.
Act. \$153,000

E14-25 Identifying and reporting non-cash transactions

Golden Bookstore identified the following selected transactions that occurred during the year ended December 31, 2018:

- a. Issued 20,000 of \$1 par common stock in order to retire \$200,000 notes payable.
- b. Acquired land by issuing bonds. The piece of land had a fair value of \$320,000 at the date of purchase.
- c. Paid \$17,000 to retire a 2-year notes payable.
- d. Issued 30,000 of \$1 par common stock for cash of \$360,000.
- e. Issued 6,500 of \$1 par common stock for a vehicle with a market value of \$80,000.

Identify any non-cash transactions that occurred during the year, and show how they would be reported in the non-cash investing and financing activities section of the statement of cash flows.

Learning Objective 3**E14-26 Analyzing free cash flow**

Use the Rouse Exercise Equipment data in Exercises E14-23 and E14-24. Rouse plans to purchase a truck for \$23,000 and a forklift for \$125,000 next year. In addition, it plans to pay cash dividends of \$3,500. Assuming Rouse plans similar activity for 2019, what would be the amount of free cash flow?

**Learning Objective 4
Appendix 14A**

Net Cash Prov. by Op. Act. \$3,000

E14A-27 Preparing operating activities cash flow—direct method

The accounting records of Four Seasons Parts reveal the following:

Payment of salaries and wages	\$ 34,000	Net income	\$ 21,000
Depreciation expense	10,000	Payment of income tax	16,000
Payment of interest	17,000	Collection of dividend revenue	5,000
Payment of dividends	5,000	Payment to suppliers	51,000
Collections from customers	116,000		

Compute cash flows from operating activities using the *direct* method for the year ended December 31, 2018.

E14A-28 Preparing the statement of cash flows—direct method

The income statement and additional data of Value Corporation follow:

VALUE CORPORATION Income Statement Year Ended June 30, 2018	
Net Sales Revenue	\$ 233,000
Cost of Goods Sold	104,000
Gross Profit	129,000
Operating Expenses:	
Salaries Expense	\$ 48,000
Depreciation Expense—Plant Assets	21,000
Advertising Expense	12,000
Total Operating Expenses	81,000
Operating Income	48,000
Other Income and (Expenses):	
Dividend Revenue	7,000
Interest Expense	(2,500)
Total Other Income and (Expenses)	4,500
Net Income Before Income Taxes	52,500
Income Tax Expense	7,500
Net Income	\$ 45,000

Learning Objective 4
Appendix 14A

Net Cash Prov. by Op.
Act. \$76,000

- a. Collections from customers are \$13,000 more than sales.
- b. Dividend revenue, interest expense, and income tax expense equal their cash amounts.
- c. Payments to suppliers are the sum of cost of goods sold plus advertising expense.
- d. Payments to employees are \$3,000 more than salaries expense.
- e. Cash payment for the acquisition of plant assets is \$102,000.
- f. Cash receipts from sale of land total \$29,000.
- g. Cash receipts from issuance of common stock total \$38,000.
- h. Payment of long-term notes payable is \$10,000.
- i. Payment of dividends is \$9,000.
- j. Cash balance at June 30, 2017, was \$21,000; at June 30, 2018, it was \$43,000.

Prepare Value Corporation's statement of cash flows for the year ended June 30, 2018. Use the *direct* method.

E14A-29 Computing cash flow items—direct method

Consider the following facts:

- a. Beginning and ending Accounts Receivable are \$24,000 and \$20,000, respectively. Credit sales for the period total \$68,000.
- b. Cost of goods sold is \$77,000.

Learning Objective 4
Appendix 14A

1. Cash Receipts from
Cust. \$72,000

- c. Beginning Merchandise Inventory balance is \$29,000, and ending Merchandise Inventory balance is \$26,000.
- d. Beginning and ending Accounts Payable are \$12,000 and \$16,000, respectively.

Requirements

1. Compute cash collections from customers.
2. Compute cash payments for merchandise inventory.

Learning Objective 4

Appendix 14A

2. Cash Paid for Merchandise Inventory \$18,542
7. Dividends \$374

E14A-30 Computing cash flow items—direct method

A-One Mobile Homes reported the following in its financial statements for the year ended December 31, 2018:

	2018	2017
Income Statement		
Net Sales Revenue	\$ 25,118	\$ 21,893
Cost of Goods Sold	18,074	15,501
Depreciation Expense	271	234
Other Operating Expenses	4,632	4,277
Income Tax Expense	530	482
Net Income	\$ 1,611	\$ 1,399
Balance Sheet		
Cash	\$ 21	\$ 19
Accounts Receivable	798	615
Merchandise Inventory	3,483	2,832
Property, Plant, and Equipment, net	4,351	3,437
Accounts Payable	1,547	1,364
Accrued Liabilities	938	851
Long-term Liabilities	477	461
Common Stock, no par	670	443
Retained Earnings	5,021	3,784

Requirements

1. Compute the collections from customers.
2. Compute payments for merchandise inventory.
3. Compute payments of other operating expenses.
4. Compute the acquisitions of property, plant, and equipment (no sales of property during 2018).
5. Compute the amount of borrowing, with A-One paying no long-term liabilities.
6. Compute the cash receipt from issuance of common stock.
7. Compute the payment of cash dividends.

Learning Objective 5

Appendix 14B

E14B-31 Using a spreadsheet to prepare the statement of cash flows—indirect method

Use the Boost Plus, Inc. data in Exercise E14-21 to prepare the spreadsheet for the 2018 statement of cash flows. Format cash flows from operating activities by the indirect method.

> Problems Group A

P14-32A Identifying the purpose and preparing the statement of cash flows—indirect method

American Rare Coins (ARC) was formed on January 1, 2018. Additional data for the year follow:

- a. On January 1, 2018, ARC issued no par common stock for \$450,000.
- b. Early in January, ARC made the following cash payments:
 1. For store fixtures, \$53,000
 2. For merchandise inventory, \$340,000
 3. For rent expense on a store building, \$20,000
- c. Later in the year, ARC purchased merchandise inventory on account for \$239,000. Before year-end, ARC paid \$139,000 of this accounts payable.
- d. During 2018, ARC sold 2,400 units of merchandise inventory for \$275 each. Before year-end, the company collected 85% of this amount. Cost of goods sold for the year was \$250,000, and ending merchandise inventory totaled \$329,000.
- e. The store employs three people. The combined annual payroll is \$96,000, of which ARC still owes \$3,000 at year-end.
- f. At the end of the year, ARC paid income tax of \$17,000. There are no income taxes payable.
- g. Late in 2018, ARC paid cash dividends of \$44,000.
- h. For store fixtures, ARC uses the straight-line depreciation method, over five years, with zero residual value.

Requirements

1. What is the purpose of the statement of cash flows?
2. Prepare ARC's income statement for the year ended December 31, 2018. Use the single-step format, with all revenues listed together and all expenses listed together.
3. Prepare ARC's balance sheet at December 31, 2018.
4. Prepare ARC's statement of cash flows using the indirect method for the year ended December 31, 2018.

P14-33A Preparing the statement of cash flows—indirect method

Accountants for Morganson, Inc. have assembled the following data for the year ended December 31, 2018:

	2018	2017
Current Assets:		
Cash	\$ 99,400	\$ 25,000
Accounts Receivable	64,100	69,700
Merchandise Inventory	83,000	75,000
Current Liabilities:		
Accounts Payable	57,600	55,200
Income Tax Payable	14,800	16,800

Learning Objectives 1, 2

2. Net Income \$266,400
4. Net Cash Used by Op. Act. \$(48,000)

Learning Objective 2

- Net Cash Used for Inv.
Act. \$(15,500)

Transaction Data for 2018:

Issuance of common stock for cash	\$ 38,000	Payment of notes payable	\$ 46,100
Depreciation expense	24,000	Payment of cash dividends	50,000
Purchase of equipment with cash	74,000	Issuance of notes payable to borrow cash	62,000
Acquisition of land by issuing long-term notes payable	119,000	Gain on sale of building	4,500
Book value of building sold	54,000	Net income	68,500

Prepare Morganson's statement of cash flows using the indirect method. Include an accompanying schedule of non-cash investing and financing activities.

Learning Objective 2**P14-34A Preparing the statement of cash flows—indirect method with non-cash transactions**

Net Cash Prov. by Op.
Act. \$125,100

The 2018 income statement and comparative balance sheet of Rolling Hills, Inc. follow:

ROLLING HILLS, INC.	
Income Statement	
Year Ended December 31, 2018	
Net Sales Revenue	\$ 440,000
Cost of Goods Sold	209,200
Gross Profit	230,800
Operating Expenses:	
Salaries Expense	\$ 77,400
Depreciation Expense—Plant Assets	14,400
Other Operating Expenses	10,200
Total Operating Expenses	102,000
Operating Income	128,800
Other Income and (Expenses):	
Interest Revenue	8,700
Interest Expense	(21,100)
Total Other Income and (Expenses)	(12,400)
Net Income Before Income Taxes	116,400
Income Tax Expense	20,000
Net Income	\$ 96,400

ROLLING HILLS, INC.		
Comparative Balance Sheet		
December 31, 2018 and 2017		
	2018	2017
Assets		
Current Assets:		
Cash	\$ 26,900	\$ 15,700
Accounts Receivable	26,500	25,400
Merchandise Inventory	79,800	91,500
Long-term Assets:		
Land	35,100	14,000
Plant Assets	124,840	114,650
Accumulated Depreciation—Plant Assets	(18,940)	(17,950)
Total Assets	\$ 274,200	\$ 243,300
Liabilities		
Current Liabilities:		
Accounts Payable	\$ 35,700	\$ 30,400
Accrued Liabilities	28,700	30,300
Long-term Liabilities:		
Notes Payable	79,000	108,000
Total Liabilities	143,400	168,700
Stockholders' Equity		
Common Stock, no par	88,900	64,500
Retained Earnings	41,900	10,100
Total Stockholders' Equity	130,800	74,600
Total Liabilities and Stockholders' Equity	\$ 274,200	\$ 243,300

Additionally, Rolling Hills purchased land of \$21,100 by financing it 100% with long-term notes payable during 2018. During the year, there were no sales of land, no retirements of stock, and no treasury stock transactions. A plant asset was disposed of for \$0. The cost and the accumulated depreciation of the disposed asset was \$13,410. The plant acquisition was for cash.

Requirements

1. Prepare the 2018 statement of cash flows, formatting operating activities by the *indirect* method.
2. How will what you learned in this problem help you evaluate an investment?

Learning Objectives 2, 3

1. Net Cash Used for Inv.
Act. \$(152,700)

P14-35A Preparing the statement of cash flows—indirect method, evaluating cash flows, and measuring free cash flows

The comparative balance sheet of Jackson Educational Supply at December 31, 2018, reported the following:

	2018	2017
Current Assets:		
Cash	\$ 87,700	\$ 23,500
Accounts Receivable	15,300	22,000
Merchandise Inventory	62,600	60,400
Current Liabilities:		
Accounts Payable	28,100	26,100
Accrued Liabilities	10,600	11,300

Jackson's transactions during 2018 included the following:

Payment of cash dividends	\$ 16,200	Depreciation expense	\$ 16,700
Purchase of equipment with cash	54,700	Purchase of building with cash	98,000
Issuance of long-term notes payable to borrow cash	48,000	Net income	57,600
Issuance of common stock for cash	105,000		

Requirements

1. Prepare the statement of cash flows of Jackson Educational Supply for the year ended December 31, 2018. Use the indirect method to report cash flows from operating activities.
2. Evaluate Jackson's cash flows for the year. Mention all three categories of cash flows, and give the reason for your evaluation.
3. If Jackson plans similar activity for 2019, what is its expected free cash flow?

**Learning Objective 4
Appendix 14A**

2. Total Assets \$1,051,400
3. Net Cash Prov. by Op.
Act. \$308,500

P14A-36A Preparing the statement of cash flows—direct method

Boundary Rare Coins (BRC) was formed on January 1, 2018. Additional data for the year follow:

- a. On January 1, 2018, BRC issued no par common stock for \$475,000.
- b. Early in January, BRC made the following cash payments:
 1. For store fixtures, \$53,000
 2. For merchandise inventory, \$260,000
 3. For rent expense on the store building, \$13,000
- c. Later in the year, BRC purchased merchandise inventory on account for \$240,000. Before year-end, BRC paid \$160,000 of this accounts payable.
- d. During 2018, BRC sold 2,200 units of merchandise inventory for \$450 each. Before year-end, the company collected 85% of this amount. Cost of goods sold for the year was \$330,000, and ending merchandise inventory totaled \$170,000.
- e. The store employs three people. The combined annual payroll is \$80,000, of which BRC still owes \$4,000 at year-end.
- f. At the end of the year, BRC paid income tax of \$24,000. There are no income taxes payable.

- g. Late in 2018, BRC paid cash dividends of \$40,000.
- h. For store fixtures, BRC uses the straight-line depreciation method, over five years, with zero residual value.

Requirements

1. Prepare BRC's income statement for the year ended December 31, 2018. Use the single-step format, with all revenues listed together and all expenses listed together.
2. Prepare BRC's balance sheet at December 31, 2018.
3. Prepare BRC's statement of cash flows for the year ended December 31, 2018. Format cash flows from operating activities by the *direct* method.

P14A-37A Preparing the statement of cash flows—direct method

Use the Rolling Hills, Inc. data from Problem P14-34A.

Requirements

1. Prepare the 2018 statement of cash flows by the direct method.
2. How will what you learned in this problem help you evaluate an investment?

P14B-38A Using a spreadsheet to prepare the statement of cash flows—indirect method

The 2018 comparative balance sheet and income statement of Holmes Trading Ltd. follow. Holmes disposed of a plant asset at book value in 2018.

Learning Objective 4 Appendix 14A

1. Net Cash Prov. by Op.
Act. \$125,100
Collections from Cust. \$438,900

Learning Objective 5 Appendix 14B

- Cash Pmt. of Div. \$28,300
Cash Pmt. for Acq. of
Land \$25,200

HOLMES TRADING LTD.	
Income Statement	
Year Ended December 31, 2018	
Net Sales Revenue	\$ 752,300
Cost of Goods Sold	468,400
Gross Profit	283,900
Operating Expenses:	
Salaries Expense	\$ 57,200
Depreciation Expense	18,000
Other Operating Expenses	78,200
Total Operating Expenses	153,400
Operating Income	130,500
Other Income and (Expenses):	
Interest Revenue	14,200
Interest Expense	(48,200)
Total Other Income and (Expenses)	(34,000)
Net Income Before Income Taxes	96,500
Income Tax Expense	18,250
Net Income	\$ 78,250

HOLMES TRADING LTD. Comparative Balance Sheet December 31, 2018 and 2017		
	2018	2017
Assets		
Current Assets:		
Cash	\$ 80,910	\$ 72,300
Accounts Receivable	31,040	32,800
Merchandise Inventory	64,200	52,300
Long-term Assets:		
Land	84,200	52,300
Plant Assets	140,000	132,500
Accumulated Depreciation—Plant Assets	(35,500)	(32,700)
Total Assets	\$ 364,850	\$ 309,500
Liabilities		
Current Liabilities:		
Accounts Payable	\$ 28,400	\$ 29,700
Accrued Liabilities	41,200	39,200
Long-term Liabilities:		
Notes Payable	39,200	52,300
Total Liabilities	108,800	121,200
Stockholders' Equity		
Common Stock, no par	112,000	103,000
Retained Earnings	144,050	85,300
Total Stockholders' Equity	256,050	188,300
Total Liabilities and Stockholders' Equity	\$ 364,850	\$ 309,500

Prepare the spreadsheet for the 2018 statement of cash flows. Format cash flows from operating activities by the indirect method. A plant asset was disposed of for \$0. The cost and accumulated depreciation of the disposed asset was \$15,200. There were no sales of land, no retirement of common stock, and no treasury stock transactions. Assume plant asset and land acquisitions were for cash.

> Problems Group B

Learning Objectives 1, 2

P14-39B Identifying the purpose and preparing the statement of cash flows—indirect method

- 2. Net Income \$492,800
- 4. Net Cash Prov. by Op. Act. \$359,500

Classic Rare Coins (CRC) was formed on January 1, 2018. Additional data for the year follow:

- a. On January 1, 2018, CRC issued no par common stock for \$525,000.
- b. Early in January, CRC made the following cash payments:
 1. For store fixtures, \$51,000
 2. For merchandise inventory, \$240,000
 3. For rent expense on a store building, \$18,000

- c. Later in the year, CRC purchased merchandise inventory on account for \$243,000. Before year-end, CRC paid \$153,000 of this accounts payable.
- d. During 2018, CRC sold 2,800 units of merchandise inventory for \$325 each. Before year-end, the company collected 95% of this amount. Cost of goods sold for the year was \$290,000, and ending merchandise inventory totaled \$193,000.
- e. The store employs three people. The combined annual payroll is \$82,000, of which CRC still owes \$5,000 at year-end.
- f. At the end of the year, CRC paid income tax of \$17,000. There was no income taxes payable.
- g. Late in 2018, CRC paid cash dividends of \$38,000.
- h. For store fixtures, CRC uses the straight-line depreciation method, over five years, with zero residual value.

Requirements

1. What is the purpose of the statement of cash flows?
2. Prepare CRC's income statement for the year ended December 31, 2018. Use the single-step format, with all revenues listed together and all expenses listed together.
3. Prepare CRC's balance sheet at December 31, 2018.
4. Prepare CRC's statement of cash flows using the indirect method for the year ended December 31, 2018.

P14-40B Preparing the statement of cash flows—indirect method

Accountants for Andy Toys have assembled the following data for the year ended December 31, 2018:

Learning Objective 2

Net Cash Prov. by Op.
Act. \$85,700

	2018	2017
Current Assets:		
Cash	\$ 87,570	\$ 65,200
Accounts Receivable	72,000	68,740
Merchandise Inventory	62,300	69,000
Current Liabilities:		
Accounts Payable	45,000	42,700
Income Tax Payable	15,420	18,790

Transaction Data for 2018:

Issuance of common stock for cash	\$ 44,200	Payment of notes payable	\$ 32,100
Depreciation expense	19,800	Payment of cash dividends	59,200
Purchase of equipment with cash	93,200	Issuance of notes payable to borrow cash	72,300
Acquisition of land by issuing long-term notes payable	89,200	Gain on sale of equipment	3,420
Book value of equipment sold	-	Net income	68,200

Prepare Andy's statement of cash flows using the indirect method. Include an accompanying schedule of non-cash investing and financing activities.

Learning Objective 2**P14-41B Preparing the statement of cash flows—indirect method with non-cash transactions**

1. Net Cash Prov. by Op.
Act. \$136,300

The 2018 income statement and comparative balance sheet of Sweet Valley, Inc. follow:

SWEET VALLEY, INC.	
Income Statement	
Year Ended December 31, 2018	
Net Sales Revenue	\$ 445,000
Cost of Goods Sold	203,200
Gross Profit	241,800
Operating Expenses:	
Salaries Expense	\$ 77,400
Depreciation Expense—Plant Assets	14,500
Other Operating Expenses	10,100
Total Operating Expenses	102,000
Operating Income	139,800
Other Income and (Expenses):	
Interest Revenue	8,200
Interest Expense	(21,100)
Total Other Income and (Expenses)	(12,900)
Net Income Before Income Taxes	126,900
Income Tax Expense	19,400
Net Income	\$ 107,500

SWEET VALLEY, INC.		
Comparative Balance Sheet		
December 31, 2018 and 2017		
	2018	2017
Assets		
Current Assets:		
Cash	\$ 26,300	\$ 15,400
Accounts Receivable	26,400	25,100
Merchandise Inventory	79,300	91,300
Long-term Assets:		
Land	34,900	14,000
Plant Assets	115,790	108,330
Accumulated Depreciation—Plant Assets	(19,890)	(18,630)
Total Assets	\$ 262,800	\$ 235,500
Liabilities		
Current Liabilities:		
Accounts Payable	\$ 35,600	\$ 30,100
Accrued Liabilities	28,900	30,800
Long-term Liabilities:		
Notes Payable	78,000	105,000
Total Liabilities	142,500	165,900
Stockholders' Equity		
Common Stock, no par	88,200	64,800
Retained Earnings	32,100	4,800
Total Stockholders' Equity	120,300	69,600
Total Liabilities and Stockholders' Equity	\$ 262,800	\$ 235,500

Additionally, Sweet Valley purchased land of \$20,900 by financing it 100% with long-term notes payable during 2018. During the year, there were no sales of land, no retirements of stock, and no treasury stock transactions. A plant asset was disposed of for \$0. The cost and the accumulated depreciation of the disposed asset was \$13,240. Plant asset was acquired for cash.

Requirements

1. Prepare the 2018 statement of cash flows, formatting operating activities by the *indirect* method.
2. How will what you learned in this problem help you evaluate an investment?

Learning Objectives 2, 3

1. Net Cash Used for Inv. Act.
\$(157,400)

P14-42B Preparing the statement of cash flows—indirect method, evaluating cash flows, and measuring free cash flows

The comparative balance sheet of Robeson Educational Supply at December 31, 2018, reported the following:

	2018	2017
Current Assets:		
Cash	\$ 83,900	\$ 20,500
Accounts Receivable	14,500	21,800
Merchandise Inventory	61,800	60,400
Current Liabilities:		
Accounts Payable	29,600	28,100
Accrued Liabilities	10,500	11,900

Robeson's transactions during 2018 included the following:

Payment of cash dividends	\$ 21,200	Depreciation expense	\$ 17,400
Purchase of equipment with cash	54,400	Purchase of building with cash	103,000
Issuance of long-term notes payable to borrow cash	44,000	Net income	63,600
Issuance of common stock for cash	111,000		

Requirements

1. Prepare the statement of cash flows of Robeson Educational Supply for the year ended December 31, 2018. Use the indirect method to report cash flows from operating activities.
2. Evaluate Robeson's cash flows for the year. Mention all three categories of cash flows, and give the reason for your evaluation.
3. If Robeson plans similar activity for 2018, what is its expected free cash flow?

**Learning Objective 4
Appendix 14A**

2. Total Assets \$1,118,800
3. Collections from
Cust. \$918,000

P14A-43B Preparing the statement of cash flows—direct method

Diversion Rare Coins (DRC) was formed on January 1, 2018. Additional data for the year follow:

- a. On January 1, 2018, DRC issued no par common stock for \$450,000.
- b. Early in January, DRC made the following cash payments:
 1. For store fixtures, \$46,000
 2. For merchandise inventory, \$310,000
 3. For rent expense on a store building, \$18,000
- c. Later in the year, DRC purchased merchandise inventory on account for \$238,000. Before year-end, DRC paid \$138,000 of this accounts payable.
- d. During 2018, DRC sold 2,700 units of merchandise inventory for \$400 each. Before year-end, the company collected 85% of this amount. Cost of goods sold for the year was \$340,000, and ending merchandise inventory totaled \$208,000.
- e. The store employs three people. The combined annual payroll is \$97,000, of which DRC still owes \$6,000 at year-end.

- f. At the end of the year, DRC paid income tax of \$18,000. There was no income taxes payable.
- g. Late in 2018, DRC paid cash dividends of \$35,000.
- h. For store fixtures, DRC uses the straight-line depreciation method, over five years, with zero residual value.

Requirements

1. Prepare DRC's income statement for the year ended December 31, 2018. Use the single-step format, with all revenues listed together and all expenses listed together.
2. Prepare DRC's balance sheet at December 31, 2018.
3. Prepare DRC's statement of cash flows for the year ended December 31, 2018. Format cash flows from operating activities by the direct method.

P14A-44B Preparing the statement of cash flows—direct method

Use the Sweet Valley data from Problem P14-41B.

Requirements

1. Prepare the 2018 statement of cash flows by the direct method.
2. How will what you learned in this problem help you evaluate an investment?

P14B-45B Using a spreadsheet to prepare the statement of cash flows—indirect method

The 2018 comparative balance sheet and income statement of Attleboro Group, Inc. follow. Attleboro disposed of a plant asset at book value in 2018.

Learning Objective 4 Appendix 14A

1. Net Cash Prov. by Op.
Act. \$136,300
Collections from Cust. \$443,700

Learning Objective 5 Appendix 14B

- Cash Pmt. of Div. \$28,200
Cash Pmt. of N/P \$13,000

ATTLEBORO GROUP, INC.	
Income Statement	
Year Ended December 31, 2018	
Net Sales Revenue	\$ 441,000
Cost of Goods Sold	205,400
Gross Profit	<u>235,600</u>
Operating Expenses:	
Salaries Expense	\$ 76,300
Depreciation Expense	15,300
Other Operating Expenses	<u>49,600</u>
Total Operating Expenses	<u>141,200</u>
Operating Income	94,400
Other Income and (Expenses):	
Interest Revenue	11,500
Interest Expense	(24,400)
Total Other Income and (Expenses)	<u>(12,900)</u>
Net Income Before Income Taxes	81,500
Income Tax Expense	16,200
Net Income	<u><u>\$ 65,300</u></u>

ATTLEBORO GROUP, INC. Comparative Balance Sheet December 31, 2018 and 2017		
	2018	2017
Assets		
Current Assets:		
Cash	\$ 14,000	\$ 15,500
Accounts Receivable	42,000	43,700
Merchandise Inventory	96,800	93,300
Long-term Assets:		
Land	36,400	11,000
Plant Assets	121,250	112,850
Accumulated Depreciation—Plant Assets	(20,350)	(18,650)
Total Assets	\$ 290,100	\$ 257,700
Liabilities		
Current Liabilities:		
Accounts Payable	\$ 24,500	\$ 26,000
Accrued Liabilities	23,900	22,600
Long-term Liabilities:		
Notes Payable	56,000	69,000
Total Liabilities	104,400	117,600
Stockholders' Equity		
Common Stock, no par	129,500	121,000
Retained Earnings	56,200	19,100
Total Stockholders' Equity	185,700	140,100
Total Liabilities and Stockholders' Equity	\$ 290,100	\$ 257,700

Prepare the spreadsheet for the 2018 statement of cash flows. Format cash flows from operating activities by the indirect method. A plant asset was disposed of for \$0. The cost and accumulated depreciation of the disposed asset was \$13,600. There were no sales of land, no retirement of common stock, and no treasury stock transactions. Assume plant asset and land acquisitions were for cash.

CRITICAL THINKING

> Using Excel

P14-46 Using Excel to prepare the statement of cash flows, indirect method

Download an Excel template for this problem online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

The James Island Clothing Company began operations on July 1, 2018. The adjusted trial balance as of December 31, 2018, appears below, along with transaction data for 2018.

James Island Clothing Company Adjusted Trial Balance December 31, 2018		
Account Title	Balance	
	Debit	Credit
Cash	\$ 95,700	
Accounts Receivable	12,000	
Inventory	4,400	
Office Equipment	26,000	
Truck	18,000	
Accumulated Depreciation—Plant Assets		\$ 6,000
Accounts Payable		5,500
Note Payable (Short-term)		10,000
Note Payable (Long-term)		33,000
Common Stock		100,000
Retained Earnings		
Dividends	1,000	
Sales Revenue		15,000
Cost of Goods Sold	3,600	
Rent Expense	2,000	
Advertising Expense	800	
Depreciation Expense	6,000	
	\$ 169,500	\$ 169,500

Transaction data for 2018

Cash paid for purchase of office equipment	\$ 6,000
Cash paid for purchase of truck	5,000
Acquisition of plant assets with a long-term notes payable	33,000
Cash payment of dividends	1,000
Cash receipt from issuance of common stock	100,000

Requirements

1. Complete the worksheet for the James Island Clothing Company, filling in the Transaction Analysis columns. Note: Some of the input cells marked in blue may not require entries.
2. Prepare the James Island Clothing Company statement of cash flows for the year ended December 31, 2018. Use the indirect method.

> Continuing Problem

P14-47 Preparing the statement of cash flows—indirect method

This problem continues the Let's Bike Company situation from Chapter 13. Let's Bike Company's comparative balance sheet is shown below. 2019 and 2020 amounts are assumed but include several transactions from prior chapters.

LET'S BIKE COMPANY Comparative Balance Sheet December 31, 2019 and 2020		
	2020	2019
Assets		
Current Assets:		
Cash	\$ 187,287	\$ 2,520
Accounts Receivable, net	4,520	3,000
Merchandise Inventory	1,420	975
Office Supplies	1,020	520
Prepaid Rent	2,200	0
Long-term Investments, net	194,800	184,200
Property, Plant, and Equipment:		
Land	94,000	94,000
Building	252,000	40,000
Bikes	38,520	11,520
Office Furniture and Equipment	42,500	6,900
Accumulated Depreciation—PP&E	(87,085)	(14,020)
Total Assets	\$ 731,182	\$ 329,615
Liabilities		
Current Liabilities:		
Accounts Payable	\$ 4,500	\$ 7,120
Utilities Payable	1,450	2,800
Telephone Payable	1,990	3,200
Wages Payable	3,230	4,230
Notes Payable	—	120,000
Interest Payable	—	2,100
Unearned Revenue	1,920	3,645
Long-term Liabilities:		
Mortgage Payable	270,000	—
Bonds Payable	250,000	—
Premium on Bonds Payable	11,072	—
Total Liabilities	544,162	143,095
Stockholders' Equity		
Paid-In Capital:		
Common Stock	157,000	157,000
Retained Earnings	30,020	29,520
Total Stockholders' Equity	187,020	186,520
Total Liabilities and Stockholders' Equity	\$ 731,182	\$ 329,615

Additional data follow:

1. The income statement for 2020 included the following items:
 - a. Net income, \$3,200.
 - b. Depreciation expense for the year, \$73,065.
 - c. Amortization on the bonds payable, \$1,007.
2. There were no disposals of property, plant and equipment during the year. All acquisitions of PP&E were for cash.
3. There were neither purchase nor disposal of long-term investments. The increase in balance of long-term investments was entirely due to the increase in the fair value which has been included in the net income.
4. The company issued bonds payable with a face value of \$250,000, receiving cash of \$262,079.
5. The cash receipt from the notes payable in 2019 is considered a financing activity because it does not relate to operations.

Requirement

Prepare the statement of cash flows for the year ended December 31, 2020, using the indirect method.

> Tying It All Together Case 14-1

Before you begin this assignment, review the Tying It All Together feature in the chapter. It will also be helpful if you review Amazon.com, Inc.'s 2015 annual report (<http://phx.corporate-ir.net/phoenix.zhtml?c=97664&p=irol-reportsAnnual>).

Amazon.com, Inc. serves its customers through its retail Web sites, selling millions of unique products. In addition, the company manufactures and sells electronic devices including Kindle e-readers and Fire tablets. Amazon.com also offers Amazon Prime, a membership program that includes unlimited free shipping on items and access to unlimited streaming of movies and TV episodes.

Requirements

1. Review Item 7 (Management's Discussion and Analysis of Financial Condition and Results of Operations) included in the 2015 Annual Report. What does Amazon.com, Inc. state is the company's financial focus? What are free cash flows and how does Amazon.com plan to increase its free cash flows?
2. Review the statement of cash flows for Amazon.com, Inc. What type of noncash adjustments to net income did Amazon.com report in 2015?
3. Review the 2015 statement of cash flows for Amazon.com, Inc. What was the net cash provided (used) for investing activities? What were the cash inflows and outflows related to this section?
4. Review the 2015 statement of cash flows for Amazon.com, Inc. What was the net cash provided (used) for financing activities? What were the cash inflows and outflows related to this section?

> Decision Case 14-1

Theater by Design and Show Cinemas are asking you to recommend their stock to your clients. Because Theater by Design and Show Cinemas earn about the same net income and have similar financial positions, your decision depends on their statement of cash flows, summarized as follows:

	Theater by Design	Show Cinemas	
Net Cash Provided by Operating Activities	\$ 30,000	\$ 70,000	
Cash Provided by (Used for) Investing Activities:			
Purchase of Plant Assets	\$ (20,000)	\$ (100,000)	
Sale of Plant Assets	<u>40,000</u>	20,000	<u>10,000</u> (90,000)
Cash Provided by (Used for) Financing Activities:			
Issuance of Common Stock	0	30,000	
Payment of Long-term Debt	<u>(40,000)</u>	0	
Net Increase (Decrease) in Cash	<u><u>\$ 10,000</u></u>	<u><u>\$ 10,000</u></u>	

Based on their cash flows, which company looks better? Give your reasons.

> Ethical Issue 14-1

Moss Exports is having a bad year. Net income is only \$60,000. Also, two important overseas customers are falling behind in their payments to Moss, and Moss's accounts receivable are ballooning. The company desperately needs a loan. The Moss Exports Board of Directors is considering ways to put the best face on the company's financial statements. Moss's bank closely examines cash flow from operating activities. Daniel Peavey, Moss's controller, suggests reclassifying the receivables from the slow-paying clients as long-term. He explains to the board that removing the \$80,000 increase in accounts receivable from current assets will increase net cash provided by operations. This approach may help Moss get the loan.

Requirements

1. Using only the amounts given, compute net cash provided by operations, both without and with the reclassification of the receivables. Which reporting makes Moss look better?
2. Under what condition would the reclassification of the receivables be ethical? Unethical?

> Financial Statement Case 14-1

Details about a company's cash flows appear in a number of places in the annual report. Use **Target Corporation's** Fiscal 2015 Annual Report to answer the following questions. Visit <http://www.pearsonglobaleditions.com/Sitemap/Horngren/> to view a link to Target Corporation's Fiscal 2015 Annual Report.

Requirements

1. Which method does Target use to report net cash flows from *operating* activities? How can you tell?
2. Target earned net income during 2015. Did operations *provide* cash or *use* cash during 2015? Give the amount. How did net cash provided by (used for) operations during 2015 compare with net income in 2015?
3. For the year ended January 30, 2016 (fiscal year 2015), did Target pay cash dividends? If so, how much?
4. For the year ended January 30, 2016, did Target use cash to purchase property, plant, and equipment? If so, how much?

Pearson MyLab Accounting

For a wealth of online resources, including exercises, problems, media, and immediate tutorial help, please visit <http://www.myaccountinglab.com>.

> Quick Check Answers

1. d 2. d 3. b 4. a 5. d 6. c 7. c 8. c 9A. d 10B. d

15

Financial Statement Analysis



What Companies Should I Invest In?

Clara Wu misses her mom, Sylvia, a lot these days. Her mom always knew just the right words to say when Clara came to visit after a long hard day at work, and her mom's chocolate cookies always worked magic in making her feel better. Since her mom passed away six months ago, Clara has had to make a lot of decisions on her own. As executor of her mom's estate, she was responsible for helping the accountant and attorney finalize the financial details and the estate paperwork. Clara knew that once the estate was settled, she would be receiving a large amount of cash. She knew that deciding what to do with the cash would be a very important decision.

When Clara met with her financial planner, she shared her goals of paying off her student loans and other personal debt

and then saving toward her retirement. She wanted to take the cash remaining after paying off her debts and invest it in the stock market. Clara was worried, though. She tried to stay current on the financial markets by reading the business section of the newspaper and listening to the financial news, but she wasn't sure how to decide which companies would be the best investment choices. Clara's financial planner advised her that there are a number of tools that she could use to evaluate companies and determine which company is more profitable. Other tools will be helpful in helping her determine trends across a period of time. Clara knew that with help from her financial planner and these tools she could make sense out of companies' financial statements and invest with a confidence that would make her mom proud.



What Are the Tools That Help Users Analyze a Business?

In this chapter, you learn about tools that allow users to see beyond the pure numbers on the financial statements and translate them into meaningful analysis. So far you have learned some of what it takes to prepare financial statements; now you will learn how to use financial statements to help manage a company effectively, make wise investments, and compare one company to another. Certified financial planners who work for companies, such as **Raymond James Financial, Inc.**, a financial services holding company that operates a full-service brokerage and investment firm headquartered in Florida, analyze financial statements to compare a company's performance across several periods of time. This comparison helps investors determine how a company is performing over time. In addition, financial planners use another tool, called *ratio analysis*, to measure one company against other companies in the same industry. Whether you will be an investor, an employee, or a manager of a company, knowing how to evaluate a company's performance accurately will help you make smart business decisions.





Chapter 15 Learning Objectives

- 1 Explain how financial statements are used to analyze a business
- 2 Perform a horizontal analysis of financial statements
- 3 Perform a vertical analysis of financial statements
- 4 Compute and evaluate the standard financial ratios

HOW ARE FINANCIAL STATEMENTS USED TO ANALYZE A BUSINESS?

In this chapter, we use what you have learned about financial statements to analyze Smart Touch Learning. We will determine if it was profitable, as well as its overall financial health.

Purpose of Analysis

Investors and creditors cannot evaluate a company by examining only one year's data. That is why most financial statements cover at least two periods. In fact, most financial analyses cover trends over three to five years. This chapter shows you how to use some of the analytical tools for charting a company's progress through time. These tools can be used by small business owners to measure performance, by financial analysts to analyze stock investments, by auditors to obtain an overall sense of a company's financial health, by creditors to determine credit risk, or by any other person wanting to compare financial data in relevant terms.

To accurately determine the financial performance of a company, such as Smart Touch Learning, we need to compare its performance in the following ways:

- from year to year
- with a competing company
- with the same industry as a whole

After this comparison, we will have a better idea of how to judge the company's present situation and predict what might happen in the near future.

Tools of Analysis

There are three main ways to analyze financial statements:

- Horizontal analysis provides a year-to-year comparison of a company's performance in different periods.
- Vertical analysis provides a way to compare different companies.
- Ratio analysis can be used to provide information about a company's performance. It is used most effectively to measure a company against other companies in the same industry and to denote trends within the company.

Corporate Financial Reports

Before we discuss the different tools available for financial statement analysis, let's review corporate financial reports.

Learning Objective 1

Explain how financial statements are used to analyze a business



Annual Report

Provides information about a company's financial condition.

Publicly traded corporations have their stock listed on public stock exchanges, such as the New York Stock Exchange or the NASDAQ. They are required by the Securities and Exchange Commission (SEC) to file annual and quarterly reports (also called a *Form 10-K* and *Form 10-Q*). An **annual report** provides information about a company's financial condition. These reports help investors make informed investment decisions.

Business Overview

A typical annual report begins with an overview of the business—including the industry the company is in, its growth strategy, and an overview of the company's brands. It also often discusses the company's competitors and the risks related to the company's business.

Management's Discussion and Analysis of Financial Condition and Results of Operations (MD&A)

Management's Discussion and Analysis of Financial Condition and Results of Operations (MD&A)

The section of the annual report that is intended to help investors understand the results of operations and the financial condition of the company.

Another part of the annual report is **management's discussion and analysis of financial condition and results of operations (MD&A)**. This section of the annual report is intended to help investors understand the results of operations and the financial condition of the company. It is important to realize that this section is written by the company and could present a biased view of the company's financial condition and results. This section of the report is the company's attempt to explain its financial statements and to discuss its performance.

The MD&A section is of interest to investors, though, because it often contains information that is not found in the financial data. Such information might include how a company is planning to spend its cash during the next year for property, plant, and equipment or whether significant changes are expected to occur that would cause revenue or expenses to increase or decrease in the future. This section often provides forward-looking information that can be useful to investors who are trying to estimate what future earnings will be for the company.

Report of Independent Registered Public Accounting Firm

A report of the independent registered public accounting firm (often referred to as the *auditor's report*) is included in an annual report. The audit report attests to the fairness of the presentation of the financial statements and states whether the financial statements are presented in accordance with Generally Accepted Accounting Principles (GAAP). This report is prepared by an independent external auditor who has performed an audit on the financial statements. In addition, the external auditor is responsible for assessing the effectiveness of the company's internal controls.

Most audit reports have *unqualified opinions*, which means that the financial statements are presented fairly, in all material respects. A *qualified opinion* might be issued if the financial statements include a departure from GAAP. If the auditor finds that the financial statements are not represented fairly, an *adverse opinion* would be given.

DECISIONS

Should an unqualified opinion be issued?

Patty Schneider was performing the independent audit for Drake Storage, Inc. Patty was reviewing the work that her staff auditors had completed, and she had several concerns about the company's financial statements. Patty's staff had determined that Drake had underreported its cost of goods sold in order to overstate net income. Patty had spoken to Drake Storage's audit committee and discussed her concerns. The audit committee disagreed with the accounting firm's findings. What should Patty do?

Solution

Patty's accounting firm should issue either a qualified opinion or an adverse opinion. To issue an unqualified opinion stating that the financial statements are presented fairly in all material respects would be misleading to investors and creditors. As an independent auditor, Patty's primary responsibility is to report on the fairness of the financial statements and assure the public that the financial statements are presented in accordance with GAAP. If they are not, her firm has a responsibility to issue either a qualified or adverse opinion.



Financial Statements

An annual report contains the four basic financial statements you have learned in this textbook: the balance sheet (sometimes referred to as *statement of financial position*), the income statement (or *statement of operations*), the statement of stockholders' equity, and the statement of cash flows. Corporations are required to report multiple-period information for all financial statements. For example, the **Kohl's Corporation** 2015 Annual Report presents financial data for the past three fiscal periods (2015, 2014, and 2013).

Notes to Financial Statements

Immediately following the financial statements are the notes to the financial statements. These notes include a summary of significant accounting policies and explanations of specific items on the financial statements. These notes are an important part of the financial statements and are often referred to by investors to understand the information included in the financial statements.

Try It!

Match the different parts of the annual report with the appropriate description.

- | | |
|---|---|
| 1. Includes the income statement, balance sheet, statement of stockholders' equity, and statement of cash flows. | a. Notes to financial statements |
| 2. Attests to the fairness of the presentation of the financial statements. | b. Report of independent registered public accounting firm |
| 3. Includes a summary of significant accounting policies and explanations of specific items on the financial statements. | c. Management's discussion and analysis of financial condition and results of operations (MD&A) |
| 4. Is written by the company to help investors understand the results of operations and the financial condition of the company. | d. Financial statements |

Check your answers online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercise S15-1.

Pearson MyLab Accounting

HOW DO WE USE HORIZONTAL ANALYSIS TO ANALYZE A BUSINESS?

Many decisions hinge on whether the numbers—sales, expenses, and net income, for example—are increasing or decreasing. For example, have sales and other revenues risen from last year? By how much?

Sales may have increased, but considered in isolation, this fact is not very helpful. The *percentage change* in sales over time is more relative and, therefore, more helpful. For example, if a company had sales of \$100,000 one year and sales increased by \$50,000 the next year, that would be a significant increase. However, if the company had sales of \$1 billion and sales increased by \$50,000, that would not be significant. Therefore, it is often more relevant to know the percentage increase than the dollar increase.

Learning Objective 2

Perform a horizontal analysis of financial statements



Horizontal Analysis

The study of percentage changes in line items from comparative financial statements.
 $(\text{Dollar amount of change} / \text{Base period amount}) \times 100.$

The study of percentage changes in line items from comparative financial statements is called **horizontal analysis**. Horizontal analysis compares the change in each financial statement item from one year to the next. Computing a percentage change in comparative statements requires two steps:

1. Compute the dollar amount of the change in a line item from the earlier period to the later period.
2. Divide the dollar amount of change by the earlier period amount, and multiply by 100. We call the earlier period the base period.

Horizontal analysis is illustrated for Smart Touch Learning as:

			Increase (Decrease)
	2020	2019	Amount
			Percentage
Net Sales Revenue	\$858,000	\$803,000	\$55,000

Smart Touch Learning's net sales revenue increased by 6.8% during 2020, computed as follows:

Step 1: Compute the dollar amount of change in sales from 2019 to 2020:

$$\begin{aligned}\text{Dollar amount of change} &= \text{Later period amount} - \text{Earlier period amount} \\ &= \$858,000 - \$803,000 \\ &= \$55,000\end{aligned}$$

Step 2: Divide the dollar amount of change by the base period amount and multiply by 100. This computes the percentage change for the period:

$$\begin{aligned}\text{Horizontal analysis \%} &= (\text{Dollar amount of change} / \text{Base period amount}) \times 100 \\ &= (\$55,000 / \$803,000) \times 100 \\ &= 6.8\%\end{aligned}$$

*All percentage calculations are rounded to the nearest tenth for the rest of this chapter.

Horizontal Analysis of the Income Statement

The horizontal analysis of Smart Touch Learning's income statement is shown in Exhibit 15-1. This comparative income statement reveals a significant amount of growth during 2020. Net sales revenue increased by 6.8% while Cost of Goods Sold increased by only 0.8%, resulting in a 17.3% increase in gross profit. Additionally, Smart Touch Learning was able to control its operating expenses, creating a 77.2% growth in operating income.

Two items on Smart Touch Learning's income statement with the slowest growth rates are Cost of Goods Sold and Administrative Expenses. Cost of Goods Sold increased by only 0.8%, and administrative expenses decreased by 4.1%. On the bottom line, net income grew by an incredible 84.6%. That is real progress!


Exhibit 15-1 | Comparative Income Statement—Horizontal Analysis

SMART TOUCH LEARNING Income Statement Years Ended December 31, 2020 and 2019				
	2020	2019	Increase (Decrease)	
			Amount	Percentage
Net Sales Revenue	\$ 858,000	\$ 803,000	\$ 55,000	6.8%
Cost of Goods Sold	513,000	509,000	4,000	0.8
Gross Profit	345,000	294,000	51,000	17.3
Operating Expenses:				
Selling Expenses	126,000	114,000	12,000	10.5
Administrative Expenses	118,000	123,000	(5,000)	(4.1)
Total Operating Expenses	244,000	237,000	7,000	3.0
Operating Income	101,000	57,000	44,000	77.2
Other Income and (Expenses):				
Interest Revenue	4,000	0	4,000	—
Interest Expense	(24,000)	(14,000)	10,000	71.4
Total Other Income and (Expenses)	(20,000)	(14,000)	6,000	42.9
Income Before Income Taxes	81,000	43,000	38,000	88.4
Income Tax Expense	33,000	17,000	16,000	94.1
Net Income	\$ 48,000	\$ 26,000	\$ 22,000	84.6%

Horizontal Analysis of the Balance Sheet

Horizontal analysis of Smart Touch Learning's comparative balance sheet is shown in Exhibit 15-2 (on the next page). This analysis also shows growth in assets, with total assets increasing by 22.2%. Notice that both Cash and Cash Equivalents and Prepaid Expenses decreased during the year, but these decreases were offset by increases in other assets.

Smart Touch Learning's total liabilities also grew. Total liabilities increased by 33.0% but notice that Accrued Liabilities decreased by 12.9%, as indicated by the percentage in parentheses. This is another indicator of positive growth for Smart Touch Learning because it implies the corporation is using debt to grow the company. Accrued liabilities actually decreased, as indicated by the liability figures in parentheses.


Exhibit 15-2 | Comparative Balance Sheet—Horizontal Analysis

SMART TOUCH LEARNING Balance Sheet December 31, 2020 and 2019				
	2020	2019	Increase (Decrease)	
			Amount	Percentage
Assets				
Current Assets:				
Cash and Cash Equivalents	\$ 29,000	\$ 32,000	\$ (3,000)	(9.4)%
Accounts Receivable, Net	114,000	85,000	29,000	34.1
Merchandise Inventory	113,000	111,000	2,000	1.8
Prepaid Expenses	6,000	8,000	(2,000)	(25.0)
Total Current Assets	262,000	236,000	26,000	11.0
Property, Plant, and Equipment, Net	507,000	399,000	108,000	27.1
Long-term Investments	18,000	9,000	9,000	100.0
Total Assets	\$ 787,000	\$ 644,000	\$ 143,000	22.2%
Liabilities				
Current Liabilities:				
Accounts Payable	\$ 73,000	\$ 68,000	\$ 5,000	7.4%
Accrued Liabilities	27,000	31,000	(4,000)	(12.9)
Notes Payable	42,000	27,000	15,000	55.6
Total Current Liabilities	142,000	126,000	16,000	12.7
Long-term Liabilities	289,000	198,000	91,000	46.0
Total Liabilities	431,000	324,000	107,000	33.0
Stockholders' Equity				
Common Stock, no par	186,000	186,000	0	0.0
Retained Earnings	170,000	134,000	36,000	26.9
Total Stockholders' Equity	356,000	320,000	36,000	11.3
Total Liabilities and Stockholders' Equity	\$ 787,000	\$ 644,000	\$ 143,000	22.2%

Trend Analysis

Trend Analysis

A form of horizontal analysis in which percentages are computed by selecting a base period as 100% and expressing amounts for following periods as a percentage of the base period amount. $(\text{Any period amount} / \text{Base period amount}) \times 100$.

Trend analysis is a form of horizontal analysis. Trend percentages indicate the direction a business is taking. For example, how have sales changed over a five-year period? What trend does net income show? These questions can be answered by trend analysis over a period, such as three to five years.

Trend analysis percentages are computed by selecting a base period (for example, the earliest year). The base period amounts are set equal to 100%. The amounts for each subsequent year are expressed as a percentage of the base amount. To compute trend analysis percentages, we divide each item for the following years by the base period amount and multiply by 100.

$$\text{Trend \%} = (\text{Any period amount} / \text{Base period amount}) \times 100$$



Assume Smart Touch Learning's Net Sales Revenue were \$750,000 in 2016 and rose to \$858,000 in 2020. To illustrate trend analysis, review the trend of net sales revenue during 2016–2020. The base year is 2016, the earliest year, so that year's percentage is set equal to 100.

	2020	2019	2018	2017	2016
Net Sales Revenue	\$ 858,000	\$ 803,000	\$ 780,000	\$ 748,000	\$ 750,000
Trend Percentages	114.4%	107.1%	104.0%	99.7%	100.0%

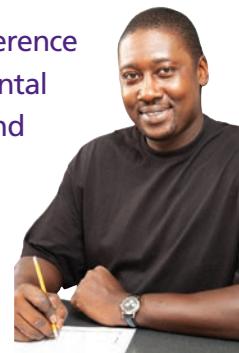
We want percentages for the five-year period 2016–2020. We compute these by dividing each year's net sales revenue amount by the 2016 net sales revenue amount and multiply by 100. For example, the trend percentage for 2017 is calculated as follows:

$$\begin{aligned}\text{Trend \%} &= (\text{Any period amount} / \text{Base period amount}) \times 100 \\ &= (\$748,000 / \$750,000) \times 100 \\ &= 99.7\%\end{aligned}$$

Notice that net sales revenue decreased slightly in 2017, and then the rate of growth increased from 2018–2020. You can perform a trend analysis on any one or multiple item(s) you consider important. Trend analysis is widely used to predict the future health of a company.

Trend analysis and horizontal analysis are very similar, but they can be used to indicate different things for a company. **Horizontal analysis allows a company to see the percentage change from one year to the next. Trend analysis shows the percentage change from a base year forward to determine whether the trend in net sales revenue, for example, is positive or negative over a longer period of time.**

What is the difference between horizontal analysis and trend analysis?



Try It!

5. Freedom Corp. reported the following on its comparative income statement:

(In millions)	2019	2018
Net Sales Revenue	\$ 10,000	\$ 8,000
Cost of Goods Sold	4,500	3,000

Prepare a horizontal analysis of net sales revenue, cost of goods sold, and gross profit—both in dollar amounts and in percentages.

Check your answers online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercises S15-2 and S15-3.

Pearson MyLab Accounting

HOW DO WE USE VERTICAL ANALYSIS TO ANALYZE A BUSINESS?

As you have seen, horizontal analysis and trend analysis percentages highlight changes in an item from year to year, or over *time*. But no single technique gives a complete picture of a business, so we also need vertical analysis.

Learning Objective 3

Perform a vertical analysis of financial statements



Vertical Analysis

An analysis of a financial statement that reveals the relationship of each statement item to its base amount, which is the 100% figure.
 $(\text{Specific item} / \text{Base amount}) \times 100$.

Vertical analysis of a financial statement shows the relationship of each item to its base amount, which is the 100% figure. Every other item on the statement is then reported as a percentage of that base. For the income statement, net sales revenue is the base. For the balance sheet, total assets is the base.

$$\text{Vertical analysis \%} = (\text{Specific item} / \text{Base amount}) \times 100$$

Vertical Analysis of the Income Statement

Exhibit 15-3 shows the completed vertical analysis of Smart Touch Learning's 2020 and 2019 comparative income statement.

Exhibit 15-3 | Comparative Income Statement—Vertical Analysis

SMART TOUCH LEARNING Income Statement Years Ended December 31, 2020 and 2019				
	2020	Percent of Total	2019	Percent of Total
Net Sales Revenue	\$ 858,000	100.0%	\$ 803,000	100.0%
Cost of Goods Sold	513,000	59.8	509,000	63.4
Gross Profit	345,000	40.2	294,000	36.6
Operating Expenses:				
Selling Expenses	126,000	14.7	114,000	14.2
Administrative Expenses	118,000	13.8	123,000	15.3
Total Operating Expenses	244,000	28.4	237,000	29.5
Operating Income	101,000	11.8	57,000	7.1
Other Income and (Expenses):				
Interest Revenue	4,000	0.5	0	0.0
Interest Expense	(24,000)	(2.8)	(14,000)	(1.7)
Total Other Income and (Expenses)	(20,000)	(2.3)	(14,000)	(1.7)
Income Before Income Taxes	81,000	9.4	43,000	5.4
Income Tax Expense	33,000	3.8	17,000	2.1
Net Income	\$ 48,000	5.6%	\$ 26,000	3.2%

The vertical analysis percentage for Smart Touch Learning's cost of goods sold is 59.8% of net sales revenue ($(\$513,000 / \$858,000) \times 100 = 59.8\%$) in 2020 and 63.4% ($(\$509,000 / \$803,000) \times 100 = 63.4\%$) in 2019. This means that for every \$1 in net sales revenue, almost \$0.60 in 2020 and approximately \$0.63 in 2019 is spent on cost of goods sold. This percentage decrease in cost of goods sold helps explain the percentage increase in gross profit as calculated in the horizontal analysis in Exhibit 15-1. Smart Touch Learning was able to decrease the cost of goods sold by more than \$0.03 for every \$1 of net sales revenue.

Smart Touch Learning's net income is 5.6% of net sales revenue in 2020 and 3.2% of net sales revenue in 2019. That improvement from 2019 to 2020 is extremely good. Suppose under normal conditions a company's net income is 10% of revenues. A drop to 4% may cause the investors to be alarmed and sell their stock.



Vertical Analysis of the Balance Sheet

Exhibit 15-4 depicts the vertical analysis of Smart Touch Learning's balance sheet. The base amount (100%) is total assets. The base amount is also total liabilities and stockholders' equity because they are exactly the same number (remember the accounting equation); in 2020, that's \$787,000.

Exhibit 15-4 | Comparative Balance Sheet—Vertical Analysis

SMART TOUCH LEARNING Balance Sheet December 31, 2020 and 2019				
	2020	Percent of Total	2019	Percent of Total
Assets				
Current Assets:				
Cash and Cash Equivalents	\$ 29,000	3.7%	\$ 32,000	5.0%
Accounts Receivable, Net	114,000	14.5	85,000	13.2
Merchandise Inventory	113,000	14.4	111,000	17.2
Prepaid Expenses	6,000	0.8	8,000	1.2
Total Current Assets	262,000	33.3	236,000	36.6
Property, Plant, and Equipment, Net	507,000	64.4	399,000	62.0
Long-term Investments	18,000	2.3	9,000	1.4
Total Assets	\$ 787,000	100.0%	\$ 644,000	100.0%
Liabilities				
Current Liabilities:				
Accounts Payable	\$ 73,000	9.3%	\$ 68,000	10.6%
Accrued Liabilities	27,000	3.4	31,000	4.8
Notes Payable	42,000	5.3	27,000	4.2
Total Current Liabilities	142,000	18.0	126,000	19.6
Long-term Liabilities	289,000	36.7	198,000	30.7
Total Liabilities	431,000	54.8	324,000	50.3
Stockholders' Equity				
Common Stock, no par	186,000	23.6	186,000	28.9
Retained Earnings	170,000	21.6	134,000	20.8
Total Stockholders' Equity	356,000	45.2	320,000	49.7
Total Liabilities and Stockholders' Equity	\$ 787,000	100.0%	\$ 644,000	100.0%

The vertical analysis of Smart Touch Learning's balance sheet reveals several interesting things:

- Current assets make up 33.3% of total assets in 2020 and 36.6% of total assets in 2019. This is typical for most companies with current assets representing close to 30% of total assets.
- Total liabilities are 54.8% of total assets in 2020, increasing slightly from 2019, 50.3%.
- Stockholders' equity makes up 45.2% of total assets in 2020 and 49.7% of total assets in 2019. The percentage share of total assets was nearly equally distributed between total liabilities and total equity for both years.



Common-Size Statements

Horizontal analysis and vertical analysis provide much useful data about a company. As we have seen, Smart Touch Learning's percentages depict a very successful company. But the data apply only to one business.

To compare Smart Touch Learning to another company, we can use a common-size statement. A **common-size statement** reports only percentages—the same percentages that appear in a vertical analysis. By only reporting percentages, it removes dollar value bias when comparing one company to another company. **Dollar value bias** is the bias one sees from comparing numbers in absolute (dollars) rather than relative (percentage) terms. For us, \$1 million seems like a large number. For some large companies, it is immaterial.

We could prepare common-size statements for Smart Touch Learning from year to year; however, we will start by preparing common-size income statements for Smart Touch Learning and Learning School, another fictitious company, both of which compete in the same industry. Which company earns a higher percentage of revenues as profits for its shareholders? Exhibit 15-5 gives both companies' common-size income statements for 2020 so that we can compare them on a relative, not absolute, basis.

Exhibit 15-5 | Common-Size Income Statement—Smart Touch Learning Versus Learning School

	Smart Touch Learning	Learning School
Net Sales Revenue	100.0%	100.0%
Cost of Goods Sold	59.8	36.3
Gross Profit	40.2	63.7
Operating Expenses:		
Selling Expenses	14.7	21.8
Administrative Expenses	13.8	7.3
Total Operating Expenses	28.4	29.1
Operating Income	11.8	34.6
Other Income and (Expenses):		
Interest Revenue	0.5	11.5
Interest Expense	(2.8)	(10.3)
Total Other Income and (Expenses)	(2.3)	1.2
Income Before Income Taxes	9.4	35.8
Income Tax Expense	3.8	12.3
Net Income	5.6%	23.5%

Exhibit 15-5 shows that Learning School was more profitable than Smart Touch Learning in 2020. Learning School's gross profit percentage is 63.7%, compared with Smart Touch Learning's 40.2%. This means that Learning School is earning more gross profit from every dollar of revenue than Smart Touch Learning is earning. And, most importantly, Learning School's percentage of net income to revenues is 23.5%. That means almost one-fourth of Learning School's revenues result in profits for the company's stockholders. Smart Touch

Common-Size Statement

A financial statement that reports only percentages (no dollar amounts).

Dollar Value Bias

The bias one sees from comparing numbers in absolute (dollars) rather than relative (percentage) terms.



Learning's percentage of net income to revenues, on the other hand, is 5.6%, significantly lower than Learning School's. Smart Touch Learning's lower net income is directly attributable to its larger percentage of cost of goods sold to net sales revenue. Smart Touch Learning's cost of goods sold represents 59.8% of net sales revenue, whereas Learning School's cost of goods sold is only 36.3%.

Benchmarking

Benchmarking is the practice of comparing a company's performance with best practices from other companies. It often uses the common-size percentages in a graphical manner to highlight differences. There are two main types of benchmarks in financial statement analysis: benchmarking against a key competitor and benchmarking against the industry average.

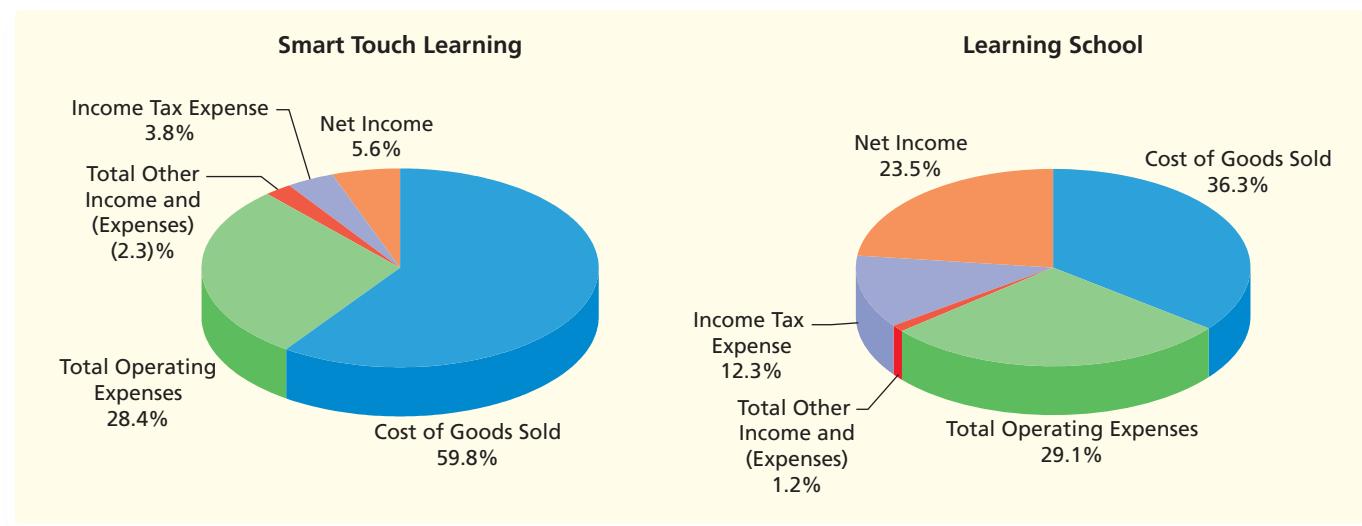
Benchmarking

The practice of comparing a company's performance with best practices from other companies.

Benchmarking Against a Key Competitor

Exhibit 15-5 uses a key competitor, Learning School, to compare Smart Touch Learning's profitability. The two companies compete in the same industry, so Learning School serves as an ideal benchmark for Smart Touch Learning. The charts in Exhibit 15-6 highlight the profitability difference between the companies. Focus on the segments of the graphs showing cost of goods sold and net income. Learning School is clearly more profitable than Smart Touch Learning, primarily because its cost of goods sold is significantly lower.

Exhibit 15-6 | Graphical Analysis of Common-Size Income Statement—Smart Touch Learning Versus Learning School



Benchmarking Against the Industry Average

The industry average can also serve as a very useful benchmark for evaluating a company. An industry comparison would show how Smart Touch Learning is performing alongside the average for the e-learning industry. *Annual Statement Studies*, published by the Risk Management Association, provides common-size statements for most industries. To compare Smart Touch Learning to the industry average, we would simply insert the industry-average common-size income statement in place of Learning School in Exhibit 15-5.



As you are taking classes toward your degree, how do you know how quickly you can complete your studies? If you knew the average credit hours taken each semester was 12 credit hours, then 12 credit hours would be your benchmark. Comparing the number of classes you take to the average of 12 credit hours a semester is the same concept as benchmarking. Maybe you are taking 15 credit hours a semester. Then you'd be completing your degree faster than the average student. Maybe you take only 3 credit hours in the spring so you can work a part-time job. Then you'd be completing classes at a slower pace than average.

Try It!

6. Monroe Corp. reported the following amounts on its balance sheet at December 31, 2018 and 2017:

	2018	2017
Cash and Receivables	\$ 35,000	\$ 40,000
Merchandise Inventory	20,000	15,000
Property, Plant, and Equipment, Net	80,000	60,000
Total Assets	<u>\$ 135,000</u>	<u>\$ 115,000</u>

Prepare a vertical analysis of Monroe Corp. for 2018 and 2017.

Check your answers online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercises S15-4 and S15-5. [Pearson MyLab Accounting](#)

HOW DO WE USE RATIOS TO ANALYZE A BUSINESS?

Learning Objective 4

Compute and evaluate the standard financial ratios

Online financial databases, such as LexisNexis and the Dow Jones, provide data on thousands of companies. Suppose you want to compare some companies' recent earnings histories. You might want to compare companies' returns on stockholders' equity. You could use a computer to search the databases and give you the names of the 20 companies with the highest return on equity. You can use any ratio to search for information that is relevant to a particular decision.

Remember, however, that no single ratio tells the whole picture of any company's performance. Different ratios explain different aspects of a company. The ratios we discuss in this chapter may be classified and used for the following purposes:

- Evaluating the ability to pay current liabilities
- Evaluating the ability to sell merchandise inventory and collect receivables
- Evaluating the ability to pay long-term debt
- Evaluating profitability
- Evaluating stock as an investment

We will use the comparative income statement and balance sheet of Smart Touch Learning, shown in Exhibit 15-7, to discuss the ratios that can be used to evaluate a company. Let's begin by discussing ratios that can be used to evaluate a company's ability to pay its current liabilities.


Exhibit 15-7 | Comparative Financial Statements

SMART TOUCH LEARNING Balance Sheet December 31, 2020 and 2019		
	2020	2019
Assets		
Current Assets:		
Cash and Cash Equivalents	\$ 29,000	\$ 32,000
Accounts Receivable, Net	114,000	85,000
Merchandise Inventory	113,000	111,000
Prepaid Expenses	6,000	8,000
Total Current Assets	262,000	236,000
Property, Plant, and Equipment, Net	507,000	399,000
Long-term Investments	18,000	9,000
Total Assets	\$ 787,000	\$ 644,000
Liabilities		
Current Liabilities:		
Accounts Payable	\$ 73,000	\$ 68,000
Accrued Liabilities	27,000	31,000
Notes Payable	42,000	27,000
Total Current Liabilities	142,000	126,000
Long-term Liabilities	289,000	198,000
Total Liabilities	431,000	324,000
Stockholders' Equity		
Common Stock, no par	186,000	186,000
Retained Earnings	170,000	134,000
Total Stockholders' Equity	356,000	320,000
Total Liabilities and Stockholders' Equity	\$ 787,000	\$ 644,000

SMART TOUCH LEARNING Income Statement Years Ended December 31, 2020 and 2019		
	2020	2019
Net Sales Revenue	\$ 858,000	\$ 803,000
Cost of Goods Sold	513,000	509,000
Gross Profit	345,000	294,000
Operating Expenses:		
Selling Expenses	126,000	114,000
Administrative Expenses	118,000	123,000
Total Operating Expenses	244,000	237,000
Operating Income	101,000	57,000
Other Income and (Expenses):		
Interest Revenue	4,000	0
Interest Expense	(24,000)	(14,000)
Total Other Income and (Expenses)	(20,000)	(14,000)
Income Before Income Taxes	81,000	43,000
Income Tax Expense	33,000	17,000
Net Income	\$ 48,000	\$ 26,000

Evaluating the Ability to Pay Current Liabilities

In this section, we discuss one equation and three ratios that measure a company's ability to pay current liabilities.

Working Capital

Determining a company's working capital is a good starting place to evaluate a company's ability to pay its current liabilities. **Working capital** measures the ability to meet short-term obligations with current assets. Working capital is defined as follows:

$$\text{Working capital} = \text{Current assets} - \text{Current liabilities}$$

Smart Touch Learning's working capital at December 31, 2020 and 2019, is calculated as follows:

Working capital = Current assets – Current liabilities
2020: \$262,000 – \$142,000 = \$120,000
2019: \$236,000 – \$126,000 = \$110,000

Working Capital

A measure of a business's ability to meet its short-term obligations with its current assets. Current assets – Current liabilities.



Smart Touch Learning's working capital is positive, indicating that the company has more current assets than current liabilities, but additional information would be helpful. Three additional decision tools based on working capital are the cash ratio, acid-test ratio, and current ratio.

Cash Ratio

Cash Ratio
A measure of a company's ability to pay current liabilities from cash and cash equivalents:
 $(\text{Cash} + \text{Cash equivalents}) / \text{Total current liabilities}$.

Cash is an important part of every business. Without an adequate supply of available cash, businesses cannot continue to operate. Businesses, therefore, monitor cash very carefully. One measure that can be used to calculate a company's liquidity is the cash ratio. The **cash ratio** helps to determine a company's ability to meet its short-term obligations and is calculated as cash plus cash equivalents divided by total current liabilities.

Notice that the cash ratio includes cash and cash equivalents. As a reminder, cash equivalents are highly liquid investments that can be converted into cash in three months or less. Examples of cash equivalents are money-market accounts and investments in U.S. government securities.

The cash ratios of Smart Touch Learning, at December 31, 2020 and 2019, along with the average for the industry are as follows:

$$\text{Cash ratio} = \frac{\text{Cash} + \text{Cash equivalents}}{\text{Total current liabilities}}$$

2020: $\frac{\$29,000}{\$142,000} = 0.20$

2019: $\frac{\$32,000}{\$126,000} = 0.25$

Industry average = 0.40

The cash ratio has decreased slightly from 2019 to 2020 due to a decrease in available cash and cash equivalents and an increase in total current liabilities. This ratio is the most conservative valuation of liquidity because it looks at only cash and cash equivalents, leaving out other current assets such as merchandise inventory and accounts receivable. Notice that for both years, the cash ratio was below 1.0. Having a cash ratio below 1.0 is a good thing. A cash ratio above 1.0 might signify that the company has an unnecessarily large amount of cash supply. This cash could be used to generate higher profits or be distributed as dividends to stockholders. However, a very low ratio doesn't send a strong message to investors and creditors that the company has the ability to repay its short-term debt.

Acid-Test (or Quick) Ratio

Acid-Test Ratio

The ratio of the sum of cash, cash equivalents, short-term investments, and net current receivables to total current liabilities.

The ratio tells whether the entity could pay all its current liabilities if they came due immediately.
(Cash including cash equivalents
+ Short-term investments
+ Net current receivables) / Total current liabilities.

The **acid-test ratio** (sometimes called the *quick ratio*) tells us whether a company could pay all its current liabilities if they came due immediately. That is, could the company pass the acid test? The acid-test ratio is not as stringent as the cash ratio because it includes more assets in the calculation.

To compute the acid-test ratio, we add cash and cash equivalents, short-term investments (those that may be sold in the next 12 months or the business operating cycle, whichever is longer), and net current receivables (accounts receivable and notes receivable, net of allowances) and divide this sum by total current liabilities. Merchandise inventory and prepaid expenses are *not* included in the acid-test ratio because they are the least-liquid current assets. Smart Touch Learning's acid-test ratios for 2020 and 2019 follow:



Acid-test ratio =	$\frac{\text{Cash including cash equivalents} + \text{Short-term investments} + \text{Net current receivables}}{\text{Total current liabilities}}$
2020:	$\frac{\$29,000 + \$0 + \$114,000}{\$142,000} = 1.01$
2019:	$\frac{\$32,000 + \$0 + \$85,000}{\$126,000} = 0.93$
Industry average =	0.46

The company's acid-test ratio improved during 2020 and is significantly better than the industry average. The norm for the acid-test ratio ranges from 0.20 for shoe retailers to 1.20 for manufacturers of equipment, as reported by the Risk Management Association. An acid-test ratio of 0.90 to 1.00 is acceptable in most industries.

Current Ratio

The most widely used ratio is the **current ratio**, which is calculated as the total current assets divided by total current liabilities. The current ratio measures a company's ability to pay its current liabilities with its current assets. It is less stringent than the acid-test ratio and the cash ratio because it includes all current assets in the calculation.

The current ratios of Smart Touch Learning, at December 31, 2020 and 2019, along with the average for the industry, are as follows:

Current ratio =	$\frac{\text{Total current assets}}{\text{Total current liabilities}}$
2020:	$\frac{\$262,000}{\$142,000} = 1.85$
2019:	$\frac{\$236,000}{\$126,000} = 1.87$
Industry average =	0.60

A high current ratio indicates that the business has sufficient current assets to maintain normal business operations. Compare Smart Touch Learning's current ratio of 1.85 for 2020 with the industry average of 0.60.

What is an acceptable current ratio? The answer depends on the industry. The norm for companies in most industries is around 1.50, as reported by the Risk Management Association. Smart Touch Learning's current ratio of 1.85 is strong. Keep in mind that we would not want to see a current ratio that is too high, say 2.5. This would indicate that the company is too liquid and, therefore, is not using its current assets effectively. For example, the company may need to reduce merchandise inventory levels so as not to tie up available resources.

ETHICS

Should the debt be reclassified?

Victor Brannon, senior accountant for Moose Corporation, was preparing the latest financial ratios. He knew that the ratios were watched carefully by Moose Corporation's lenders due to strict loan agreements that required the corporation to maintain a minimum current ratio of 1.5. Victor knew that the past quarter's financial ratios would not meet the lenders' requirements. His boss, Cara Romano, suggested that Victor classify a note payable due in 11 months as a long-term liability. What should Victor do? What would you do?

Solution

Liabilities are classified as current if they will be settled within one year or the operating cycle, whichever is longer. The classification between current and long-term is clear. Victor should not classify the note payable as a long-term liability. It should be classified as current even though the corporation will not meet the lenders' requirements.



Evaluating the Ability to Sell Merchandise Inventory and Collect Receivables

In this section, we discuss five ratios that measure a company's ability to sell merchandise inventory and collect receivables.

Inventory Turnover

Inventory Turnover

Measures the number of times a company sells its average level of merchandise inventory during a period. Cost of goods sold / Average merchandise inventory.

The **inventory turnover** ratio measures the number of times a company sells its average level of merchandise inventory during a year. A high rate of turnover indicates ease in selling merchandise inventory; a low rate indicates difficulty. A value of 4 means that the company sold its average level of merchandise inventory four times—once every three months—during the year.

To compute inventory turnover, we divide cost of goods sold by the average merchandise inventory for the period. We use the cost of goods sold—not sales—because both cost of goods sold and inventory are stated *at cost*. Sales at *sales price* are not comparable with merchandise inventory *at cost*.

Smart Touch Learning's inventory turnover for 2020 is as follows:

$$\text{Inventory turnover} = \frac{\text{Cost of goods sold}}{\text{Average merchandise inventory}}$$

$$2020: \frac{\$513,000}{[(\$111,000 + \$113,000) / 2]} = 4.58$$

Industry average = 27.70

Cost of goods sold comes from the income statement (Exhibit 15-7). Average merchandise inventory is figured by adding the beginning merchandise inventory of \$111,000 to the ending inventory of \$113,000 and dividing by 2. (See the balance sheet, Exhibit 15-7. Remember that 2019's ending balances become 2020's beginning balances.)

Inventory turnover varies widely with the nature of the business. For example, most manufacturers of farm machinery have an inventory turnover close to three times a year. In contrast, companies that remove natural gas from the ground hold their merchandise inventory for a very short period of time and have an average turnover of 30. Smart Touch Learning's turnover of 4.58 times a year means, on average, the company has enough inventory to handle sales for almost 80 days ($365 / 4.58$ times). The inventory turnover is very low for this industry, which has an average turnover of 27.70 times per year. This ratio has identified an area in which Smart Touch Learning needs to improve.

Days' Sales in Inventory

Days' Sales in Inventory

Measures the average number of days that inventory is held by a company. 365 days / Inventory turnover.

Another key measure is the **days' sales in inventory** ratio. This measures the average number of days merchandise inventory is held by the company. Smart Touch Learning's days' sales in inventory for 2020 is as follows:

$$\text{Days' sales in inventory} = \frac{365 \text{ days}}{\text{Inventory turnover}}$$

$$2020: \frac{365 \text{ days}}{4.58} = 79.7 \text{ days}$$

Industry average = 13 days

Days' sales in inventory varies widely, depending on the business. Smart Touch Learning's days' sales in inventory of 79.7 days is too high for its industry, which has an average days' sales in inventory ratio of only 13 days. This ratio has identified an area in



which Smart Touch Learning needs to improve. Smart Touch Learning should focus on reducing average merchandise inventory held. By decreasing average merchandise inventory, the company can increase inventory turnover and lower the average days' sales in merchandise inventory. Smart Touch Learning will also be able to reduce its merchandise inventory storage and insurance costs as well as reduce the risk of holding obsolete merchandise inventory.

Gross Profit Percentage

Gross profit (sometimes called *gross margin*) is net sales revenue minus the cost of goods sold. Merchandisers strive to increase the **gross profit percentage** (also called the *gross margin percentage*). This ratio measures the profitability of each net sales dollar above the cost of goods sold and is computed as gross profit divided by net sales revenue.

The gross profit percentage is one of the most carefully watched measures of profitability. It reflects a business's ability to earn a profit on the merchandise inventory. The gross profit earned on merchandise inventory must be high enough to cover the remaining operating expenses and to earn net income. A small increase in the gross profit percentage from last year to this year may signal an important rise in income. Conversely, a small decrease from last year to this year may signal trouble.

Smart Touch Learning's gross profit percentage for 2020 is as follows:

$$\text{Gross profit percentage} = \frac{\text{Gross profit}}{\text{Net sales revenue}}$$

$$2020: \frac{\$345,000}{\$858,000} = 0.402 = 40.2\%$$

Industry average = 43%

Gross profit percentage varies widely, depending on the business. Smart Touch Learning's gross profit percentage is 40.2%, which is slightly lower than the industry average of 43%. This ratio has identified an area in which Smart Touch Learning needs to improve. To increase gross profit percentage, Smart Touch Learning needs to decrease the cost of the merchandise inventory and/or increase revenue (sales price). Additionally, addressing Smart Touch Learning's inventory turnover issues will probably help Smart Touch Learning to increase its gross profit percentage.

Accounts Receivable Turnover Ratio

The **accounts receivable turnover ratio** measures the number of times the company collects the average receivables balance in a year. The higher the ratio, the faster the cash collections. However, a receivable turnover that is too high may indicate that credit is too tight, causing the loss of sales to good customers. To compute accounts receivable turnover, we divide net credit sales (assuming all Smart Touch Learning's sales from Exhibit 15-7 are on account) by average net accounts receivable.

Smart Touch Learning's accounts receivable turnover ratio for 2020 is computed as follows:

$$\text{Accounts receivable turnover ratio} = \frac{\text{Net credit sales}}{\text{Average net accounts receivable}}$$

$$2020: \frac{\$858,000}{[(\$85,000 + \$114,000) / 2]} = 8.6$$

Industry average = 29.1

Gross Profit Percentage

Measures the profitability of each sales dollar above the cost of goods sold. Gross profit / Net sales revenue.

Accounts Receivable Turnover Ratio

A ratio that measures the number of times the company collects the average accounts receivable balance in a year. Net credit sales / Average net accounts receivable.



Net credit sales, assumed to equal net sales, comes from the income statement (Exhibit 15-7). Average net accounts receivable is figured by adding the beginning Accounts Receivable of \$85,000 to the ending Accounts Receivable of \$114,000 and dividing by 2. (See the balance sheet, Exhibit 15-7.)

Smart Touch Learning's accounts receivable turnover ratio of 8.6 times per year is much slower than the industry average of 29.1. Why the difference? Smart Touch Learning is a fairly new business that sells to established people who pay their accounts over time. Further, this turnover coincides with the lower-than-average inventory turnover. So, Smart Touch Learning may achieve a higher accounts receivable turnover by increasing its inventory turnover ratio.

Days' Sales in Receivables

Days' Sales in Receivables

The ratio of average net accounts receivable to one day's sales. The ratio tells how many days it takes to collect the average level of accounts receivable. 365 days / Accounts receivable turnover ratio.

Days' sales in receivables, also called the *collection period*, indicates how many days it takes to collect the average level of receivables and is computed as 365 days divided by the accounts receivable turnover ratio. The number of days in average accounts receivable should be close to the number of days customers are allowed to make payment. The shorter the collection period, the more quickly the organization can use its cash. The longer the collection period, the less cash is available for operations.

To compute this ratio for Smart Touch Learning for 2020, we divide 365 days by the accounts receivable turnover ratio we previously calculated:

$$\text{Days' Sales in Receivables} = \frac{365 \text{ days}}{\text{Accounts receivable turnover ratio}}$$

$$\text{2020: } \frac{365 \text{ days}}{8.6} = 42.4 \text{ days}$$

$$\text{Industry average} = 25 \text{ days}$$

Smart Touch Learning's ratio tells us that 42.4 average days' sales remain in Accounts Receivable and need to be collected. The company's days' sales in receivables ratio is much higher (worse) than the industry average of 25 days. We need to determine the company's credit terms to assess this ratio. Smart Touch Learning might give its customers a longer time to pay, such as 45 days versus 30 days. Alternatively, Smart Touch Learning's credit department may need to review the criteria it uses to evaluate individual customers' credit. Without the customers' good paying habits, the company's cash flow would suffer.

Evaluating the Ability to Pay Long-term Debt

The ratios discussed so far yield insight into current assets and current liabilities. They help us measure ability to sell merchandise inventory, collect receivables, and pay current liabilities. Most businesses also have long-term debt. Three key indicators of a business's ability to pay long-term liabilities are the debt ratio, the debt to equity ratio, and the times-interest-earned ratio.

Debt Ratio

Debt Ratio

Shows the proportion of assets financed with debt. Total liabilities / Total assets.

The relationship between total liabilities and total assets—called the **debt ratio**—shows the proportion of assets financed with debt and is calculated by dividing total liabilities by total assets. If the debt ratio is 100%, then all the assets are financed with debt. A debt ratio of 50% means that half the assets are financed with debt, and the other half are financed by the owners of the business. The higher the debt ratio, the higher the company's financial risk. The debt ratio can be used to evaluate a business's ability to pay its debts.



The debt ratios for Smart Touch Learning at the end of 2020 and 2019 follow:

$$\text{Debt ratio} = \frac{\text{Total liabilities}}{\text{Total assets}}$$

2020: $\frac{\$431,000}{\$787,000} = 0.548 = 54.8\%$

2019: $\frac{\$324,000}{\$644,000} = 0.503 = 50.3\%$

Industry average = 69%

Both total liabilities and total asset amounts are from the balance sheet, presented in Exhibit 15-7. Smart Touch Learning's debt ratio in 2020 of 54.8% is not very high. The Risk Management Association reports that the average debt ratio for most companies ranges from 57% to 67%, with relatively little variation from company to company. Smart Touch Learning's debt ratio indicates a fairly low-risk position compared with the industry average debt ratio of 69%.

Debt to Equity Ratio

The relationship between total liabilities and total equity—called the **debt to equity ratio**—shows the proportion of total liabilities relative to total equity. Thus, this ratio measures financial leverage. If the debt to equity ratio is greater than 1, then the company is financing more assets with debt than with equity. If the ratio is less than 1, then the company is financing more assets with equity than with debt. The higher the debt to equity ratio, the greater the company's financial risk.

The debt to equity ratios for Smart Touch Learning at the end of 2020 and 2019 follow:

$$\text{Debt to equity ratio} = \frac{\text{Total liabilities}}{\text{Total equity}}$$

2020: $\frac{\$431,000}{\$356,000} = 1.21$

2019: $\frac{\$324,000}{\$320,000} = 1.01$

Industry average = 2.23

Smart Touch Learning's debt to equity ratio in 2020 of 1.21 is not very high. Smart Touch Learning's debt to equity ratio indicates a fairly low-risk position compared with the industry average debt to equity ratio of 2.23.

Times-Interest-Earned Ratio

The debt ratio and debt to equity ratio say nothing about the ability to pay interest expense. Analysts and investors use the **times-interest-earned ratio** to evaluate a business's ability to pay interest expense. This ratio measures the number of times earnings before interest and taxes (EBIT) can cover (pay) interest expense. This ratio is also called the *interest-coverage ratio*. A high times-interest-earned ratio indicates a business's ease in paying interest expense; a low ratio suggests difficulty. The times-interest-earned ratio is calculated as EBIT (Net income + Income tax expense + Interest expense) divided by interest expense.

Debt to Equity Ratio

A ratio that measures the proportion of total liabilities relative to total equity. Total liabilities / Total equity.

Times-Interest-Earned Ratio

Evaluates a business's ability to pay interest expense.
 $(\text{Net income} + \text{Income tax expense} + \text{Interest expense}) / \text{Interest expense}$.



Calculation of Smart Touch Learning's times-interest-earned ratio follows:

$$\text{Times-interest-earned ratio} = \frac{\text{Net income} + \text{Income tax expense} + \text{Interest expense}}{\text{Interest expense}}$$

2020: $\frac{\$48,000 + \$33,000 + \$24,000}{\$24,000} = 4.38$

2019: $\frac{\$26,000 + \$17,000 + \$14,000}{\$14,000} = 4.07$

Industry average = 7.80

The company's times-interest-earned ratios of 4.38 for 2020 and 4.07 for 2019 are significantly lower than the industry average of 7.80 times, but it is slightly better than the ratio for the average U.S. business. The norm for U.S. business, as reported by the Risk Management Association, falls in the range of 2.0 to 3.0. When you consider Smart Touch Learning's debt ratio and its times-interest-earned ratio, Smart Touch Learning appears to have little difficulty paying its liabilities.

Evaluating Profitability

The fundamental goal of business is to earn a profit. Ratios that measure profitability often are reported in the business press. Let's examine five profitability measures.

Profit Margin Ratio

Profit Margin Ratio

A profitability measure that shows how much net income is earned on every dollar of net sales. Net income / Net sales revenue.

The **profit margin ratio** shows the percentage of each net sales dollar earned as net income. In other words, the profit margin ratio shows how much net income a business earns on every \$1.00 of sales. This ratio focuses on the profitability of a business and is calculated as net income divided by net sales revenue.

Smart Touch Learning's profit margin ratio follows:

$$\text{Profit margin ratio} = \frac{\text{Net income}}{\text{Net sales revenue}}$$

2020: $\frac{\$48,000}{\$858,000} = 0.056 = 5.6\%$

2019: $\frac{\$26,000}{\$803,000} = 0.032 = 3.2\%$

Industry average = 1.7%

Both net income and net sales revenue amounts are from the income statement presented in Exhibit 15-7. Companies strive for a high profit margin. The higher the profit margin, the more sales dollars end up as profit. The increase in Smart Touch Learning's profit margin ratio from 2019 to 2020 is significant and identifies the company as more successful than the average e-learning providers, whose profit margin ratio is 1.7%.

Rate of Return on Total Assets

Rate of Return on Total Assets

A ratio that measures the success a company has in using its assets to earn income.
(Net income + Interest expense) / Average total assets.

The **rate of return on total assets** measures a company's success in using its assets to earn a profit. There are two ways that a company can finance its assets:

- Debt—A company can borrow cash from creditors to purchase assets. Creditors earn interest on the money that is loaned.
- Equity—A company receives cash or other assets from stockholders. Stockholders invest in the company and hope to receive a return on their investment.



Rate of return on total assets is calculated by adding interest expense to net income and dividing by average total assets. Interest expense is added back to net income to determine the real return on the assets regardless of the corporation's financing choices (debt or equity).

Computation of the rate of return on total assets ratio for Smart Touch Learning follows:

$$\text{Rate of return on total assets} = \frac{\text{Net income} + \text{Interest expense}}{\text{Average total assets}}$$

2020: $\frac{\$48,000 + \$24,000}{[(\$644,000 + \$787,000) / 2]} = 0.101 = 10.1\%$

Industry average = 6.0%

Net income and interest expense come from the income statement (Exhibit 15-7). Average total assets is figured by adding the beginning total assets of \$644,000 to the ending total assets of \$787,000 and dividing by 2. (See the balance sheet, Exhibit 15-7.) Smart Touch Learning's rate of return on total assets ratio of 10.1% is much better than the industry average of 6.0%.

Asset Turnover Ratio

The **asset turnover ratio** measures the amount of net sales revenue generated for each average dollar of total assets invested. This ratio measures how well a company is using its assets to generate sales revenues. To compute this ratio, we divide net sales revenue by average total assets.

Smart Touch Learning's 2020 asset turnover ratio is as follows:

$$\text{Asset turnover ratio} = \frac{\text{Net sales revenue}}{\text{Average total assets}}$$

2020: $\frac{\$858,000}{[(\$644,000 + \$787,000) / 2]} = 1.20 \text{ times}$

Industry average = 3.52 times

Smart Touch Learning's asset turnover ratio of 1.20 is much lower than the industry average of 3.52 times, indicating that Smart Touch Learning is generating less net sales revenue for each average dollar of total assets invested. Recall that Smart Touch Learning's gross profit percentage was lower than the industry's also. Normally, companies with high gross profit percentages will have low asset turnover. Companies with low gross profit percentages will have high asset turnover ratios. This is another area in which Smart Touch Learning's management must consider options to increase sales and decrease its average total assets to improve this ratio.

Rate of Return on Common Stockholders' Equity

A popular measure of profitability is **rate of return on common stockholders' equity**, often shortened to *return on equity*. This ratio shows the relationship between net income available to common stockholders and their average common equity invested in the company. The rate of return on common stockholders' equity shows how much income is earned for each \$1 invested by the common shareholders.

To compute this ratio, we first subtract preferred dividends from net income to get net income available to the common stockholders. (Smart Touch Learning does not have any preferred stock issued, so preferred dividends are zero.) Then we divide net income available to common stockholders by average common stockholders' equity during the

Asset Turnover Ratio

Measures how efficiently a business uses its average total assets to generate sales. Net sales revenue / Average total assets.

Rate of Return on Common Stockholders' Equity

Shows the relationship between net income available to common stockholders and their average common equity invested in the company. (Net income – Preferred dividends) / Average common stockholders' equity.



year. Common equity is total stockholders' equity minus preferred equity. Average common stockholders' equity is the average of the beginning and ending common stockholders' equity balances.

The 2020 rate of return on common stockholders' equity for Smart Touch Learning follows:

$$\text{Rate of return on common stockholders' equity} = \frac{\text{Net income} - \text{Preferred dividends}}{\text{Average common stockholders' equity}}$$

$$\text{2020: } \frac{\$48,000 - \$0}{[(\$320,000 + \$356,000) / 2]} = 0.142 = 14.2\%$$

$$\text{Industry average} = 10.5\%$$

Smart Touch Learning's rate of return on common stockholders' equity of 14.2% is higher than its rate of return on total assets of 10.1%. This difference results from borrowing at one rate—say, 8%—and investing the money to earn a higher rate, such as the firm's 14.2% return on equity. This practice is called **trading on the equity**, or using *leverage*. It is directly related to the debt ratio. The higher the debt ratio, the higher the leverage. Companies that finance operations with debt are said to *leverage* their positions.

During good times, leverage increases profitability. But leverage can have a negative impact on profitability as well. Therefore, leverage is a double-edged sword, increasing profits during good times but compounding losses during bad times. Compare Smart Touch Learning's rate of return on common stockholders' equity with the industry average of 10.5%. Once again, Smart Touch Learning is performing much better than the average company in its industry. A rate of return on common stockholders' equity of 15% to 20% year after year is considered good in most industries. At 14.2%, Smart Touch Learning is doing well.

Earnings per Share (EPS)

Earnings per Share (EPS)

Amount of a company's net income (loss) for each share of its outstanding common stock. $(\text{Net income} - \text{Preferred dividends}) / \text{Weighted average number of common shares outstanding}$.

Earnings per share (EPS) is perhaps the most widely quoted of all financial statistics. EPS is the only ratio that must appear on the financial statements. Earnings per share reports the amount of net income (loss) for each share of the company's *outstanding common stock*. Earnings per share is calculated as net income minus preferred dividends divided by the weighted average number of common shares outstanding. Preferred dividends are subtracted from net income because the preferred stockholders have the first claim to dividends. The computation for the weighted average number of common shares outstanding is covered in advanced accounting courses. For simplicity, we will determine earnings per share on the average number of shares outstanding, calculated as the beginning balance plus ending balance divided by two.

FASB requires that earnings per share appear on the income statement. Corporations report a separate EPS figure for each element of income, which was shown in more detail in the stockholders' equity chapter.

Smart Touch Learning's EPS for 2020 and 2019 follow. (Note that Smart Touch Learning had 10,000 shares of common stock outstanding throughout both years.)

$$\text{Earnings per share} = \frac{\text{Net income} - \text{Preferred dividends}}{\text{Weighted average number of common shares outstanding}}$$

$$\text{2020: } \frac{\$48,000 - \$0}{10,000 \text{ shares}} = \$4.80 \text{ per share}$$

$$\text{2019: } \frac{\$26,000 - \$0}{10,000 \text{ shares}} = \$2.60 \text{ per share}$$

$$\text{Industry average} = \$9.76 \text{ per share}$$



Smart Touch Learning's EPS increased significantly in 2020 (by almost 85%). Its stockholders should not expect this big a boost in EPS every year. Most companies strive to increase EPS by 10% to 15% annually, and leading companies do so. But even the most successful companies have an occasional bad year. EPS for the industry at \$9.76 is a little more than twice Smart Touch Learning's 2020 EPS. Therefore, Smart Touch Learning needs to work on continuing to increase EPS by increasing its net income so that it is more competitive with other companies in its industry.

Evaluating Stock as an Investment

Investors purchase stock to earn a return on their investment. This return consists of two parts: (1) gains (or losses) from selling the stock at a price above (or below) purchase price and (2) dividends. The ratios we examine in this section help analysts evaluate stock investments.

Price/Earnings Ratio

The **price/earnings ratio** is the ratio of the market price of a share of common stock to the company's earnings per share. The price/earnings ratio shows the market price of \$1 of earnings. This ratio, abbreviated P/E, appears in many print or online stock listings and measures the value that the stock market places on a company's earnings.

Calculations for the P/E ratios of Smart Touch Learning follow. The market prices of common stock for real companies can be obtained from a financial Web site, a stockbroker, or the company's Web site. The market price for Smart Touch Learning's common stock was \$60 at the end of 2020 and \$35 at the end of 2019. The earnings per share values were calculated immediately before the P/E ratio.

$$\text{Price/earnings ratio} = \frac{\text{Market price per share of common stock}}{\text{Earnings per share}}$$

2020: $\frac{\$60 \text{ per share}}{\$4.80 \text{ per share}} = 12.50$

2019: $\frac{\$35 \text{ per share}}{\$2.60 \text{ per share}} = 13.46$

Industry average = 17.79

Smart Touch Learning's P/E ratio for 2020 of 12.50 means that the company's stock is selling at 12.5 times one year's earnings per share. Smart Touch Learning would like to see this ratio increase in future years in order to be more in line with the industry average P/E of 17.79.

Dividend Yield

Dividend yield is the ratio of annual dividends per share to the stock's market price per share. This ratio measures the percentage of a stock's market value that is returned annually as dividends to shareholders. *Preferred* stockholders, who invest primarily to receive dividends, pay special attention to dividend yield.

Price/Earnings Ratio

The ratio of the market price of a share of common stock to the company's earnings per share. Measures the value that the stock market places on \$1 of a company's earnings. Market price per share of common stock / Earnings per share.

Dividend Yield

Ratio of annual dividends per share of stock to the stock's market price per share. Measures the percentage of a stock's market value that is returned annually as dividends to stockholders. Annual dividend per share / Market price per share.



Assume Smart Touch Learning paid annual cash dividends of \$1.20 per share of common stock in 2020 and \$1.00 in 2019. As noted previously, market prices of the company's common stock were \$60 in 2020 and \$35 in 2019. The firm's dividend yields on common stock follow:

$$\text{Dividend yield} = \frac{\text{Annual dividend per share}}{\text{Market price per share}}$$

2020: $\frac{\$1.20 \text{ per share}}{\$60 \text{ per share}} = 0.020 = 2.0\%$

2019: $\frac{\$1.00 \text{ per share}}{\$35 \text{ per share}} = 0.029 = 2.9\%$

Industry average = 3.6%

In this calculation, we are determining the dividend yield for common stock. Dividend yield can also be calculated for preferred stock.

An investor who buys Smart Touch Learning's common stock for \$60 can expect to receive 2.0% of the investment annually in the form of cash dividends. The industry, however, is paying out 3.6% annually. An investor might be willing to accept lower dividends (cash now) if the stock's market price is growing (cash later when the stock is sold).

Dividend Payout

Dividend Payout

The ratio of dividends declared per common share relative to the earnings per share of the company. Annual dividend per share / Earnings per share.

Dividend payout is the ratio of annual dividends declared per common share relative to the earnings per share of the company. This ratio measures the percentage of earnings paid annually to common shareholders as cash dividends.

Recall that Smart Touch Learning paid annual cash dividends of \$1.20 per share of common stock in 2020 and \$1.00 in 2019. Earnings per share were calculated as \$4.80 per share for 2020 and \$2.60 for 2019. So, Smart Touch Learning's dividend payout yields are as follows:

$$\text{Dividend payout} = \frac{\text{Annual dividend per share}}{\text{Earnings per share}}$$

2020: $\frac{\$1.20 \text{ per share}}{\$4.80 \text{ per share}} = 0.25 = 25\%$

2019: $\frac{\$1.00 \text{ per share}}{\$2.60 \text{ per share}} = 0.38 = 38\%$

Industry average = 63%

Smart Touch Learning's dividend payout ratios of 25% in 2020 and 38% in 2019 are less than the industry average of 63%. Smart Touch Learning, being a fairly new company, might be retaining more of its earnings for growth and expansion. An investor who buys Smart Touch Learning's common stock may predict annual cash dividends to be about 25% of earnings, based on the 2020 dividend payout ratio. This investor would want to see higher market prices and higher asset turnover for Smart Touch Learning in the future for Smart Touch Learning to stay competitive.



Red Flags in Financial Statement Analyses

Analysts look for *red flags* in financial statements that may signal financial trouble. Recent accounting scandals highlight the importance of these red flags. The following conditions may reveal that the company is too risky:

- **Movement of sales, merchandise inventory, and receivables.** Sales, merchandise inventory, and receivables generally move together. Increased sales lead to higher receivables and may require more merchandise inventory (or higher inventory turnover) to meet demand. Unexpected or inconsistent movements among sales, merchandise inventory, and receivables make the financial statements look suspect.
- **Earnings problems.** Has net income decreased significantly for several years in a row? Did the company report net income in previous years but now is reporting a net loss? Most companies cannot survive losses year after year.
- **Decreased cash flow.** Cash flow validates net income. Is net cash flow from operating activities consistently lower than net income? If so, the company is in trouble. Are the sales of plant assets a major source of cash? If so, the company may face a cash shortage.
- **Too much debt.** How does the company's debt ratio compare to that of major competitors? If the debt ratio is too high, the company may be unable to pay its debts.
- **Inability to collect receivables.** Are days' sales in receivables growing faster than for competitors? If so, a cash shortage may be looming.
- **Buildup of merchandise inventories.** Is inventory turnover too slow? If so, the company may be unable to sell goods, or it may be overstating merchandise inventory.

Do any of these red flags apply to Smart Touch Learning from the analyses we did in the chapter? Although the financial statements depict a strong and growing company, the analysis pointed out several areas of weakness for Smart Touch Learning that include low inventory turnover, low accounts receivable turnover, low gross profit margin, low times interest earned, low asset turnover, and low earnings per share. Smart Touch Learning should continue to carefully monitor its financial statements as it continues to grow. Exhibit 15-8 summarizes the financial ratios that you have learned in this chapter.

Exhibit 15-8 | Using Ratios in Financial Statement Analysis

Ratio	Computation	Information Provided
<u>Evaluating the ability to pay current liabilities:</u>		
Working capital	Current assets – Current liabilities	A business's ability to meet its short-term obligations with its current assets.
Cash ratio	$\frac{\text{Cash} + \text{Cash equivalents}}{\text{Total current liabilities}}$	The company's ability to pay current liabilities from cash and cash equivalents.
Acid-test ratio	$\frac{\text{Cash including cash equivalents} + \text{Short-term investments} + \text{Net current receivables}}{\text{Total current liabilities}}$	The company's ability to pay all its current liabilities if they came due immediately.
Current ratio	$\frac{\text{Total current assets}}{\text{Total current liabilities}}$	The company's ability to pay current liabilities from current assets.

(Continued in next page)


Exhibit 15-8 | Using Ratios in Financial Statement Analysis (Continued)

Ratio	Computation	Information Provided
<u>Evaluating the ability to sell merchandise inventory and collect receivables:</u>		
Inventory turnover	$\frac{\text{Cost of goods sold}}{\text{Average merchandise inventory}}$	The number of times a company sells its average level of merchandise inventory during a period.
Days' sales in inventory	$\frac{365 \text{ days}}{\text{Inventory turnover}}$	The average number of days that inventory is held by a company.
Gross profit percentage	$\frac{\text{Gross profit}}{\text{Net sales revenue}}$	The profitability of each sales dollar above the cost of goods sold.
Accounts receivable turnover ratio	$\frac{\text{Net credit sales}}{\text{Average net accounts receivable}}$	The number of times the company collects the average receivables balance in a year.
Days' sales in receivables	$\frac{365 \text{ days}}{\text{Accounts receivable turnover ratio}}$	The number of days it takes to collect the average level of receivables.
<u>Evaluating the ability to pay long-term debt:</u>		
Debt ratio	$\frac{\text{Total liabilities}}{\text{Total assets}}$	The proportion of assets financed with debt.
Debt to equity ratio	$\frac{\text{Total liabilities}}{\text{Total equity}}$	The proportion of total liabilities relative to total equity.
Times-interest-earned ratio	$\frac{\text{Net income} + \text{Income tax expense} + \text{Interest expense}}{\text{Interest expense}}$	A business's ability to pay interest expense.
<u>Evaluating profitability:</u>		
Profit margin ratio	$\frac{\text{Net income}}{\text{Net sales revenue}}$	How much net income is earned on every dollar of net sales revenue.
Rate of return on total assets	$\frac{\text{Net income} + \text{Interest expense}}{\text{Average total assets}}$	The success a company has in using its assets to earn income.
Asset turnover ratio	$\frac{\text{Net sales revenue}}{\text{Average total assets}}$	How efficiently a business uses its average total assets to generate sales.
Rate of return on common stockholders' equity	$\frac{\text{Net income} - \text{Preferred dividends}}{\text{Average common stockholders' equity}}$	The relationship between net income available to common stockholders and their average common equity invested in the company.
Earnings per share	$\frac{\text{Net income} - \text{Preferred dividends}}{\text{Weighted average number of common shares outstanding}}$	Amount of a company's net income (loss) for each share of its outstanding common stock.
<u>Evaluating stock as an investment:</u>		
Price/earnings ratio	$\frac{\text{Market price per share of common stock}}{\text{Earnings per share}}$	The value the stock market places on \$1 of a company's earnings.
Dividend yield	$\frac{\text{Annual dividend per share}}{\text{Market price per share}}$	The percentage of a stock's market value that is returned annually as dividends to stockholders.
Dividend payout	$\frac{\text{Annual dividend per share}}{\text{Earnings per share}}$	Ratio of dividends declared per common share relative to the earnings per share of the company.



Try It!

The financial statements of Ion Corporation include the following items:

	Current Year	Preceding Year
Balance Sheet:		
Cash	\$ 6,000	\$ 8,000
Short-term Investments	4,400	10,700
Net Accounts Receivable	21,600	29,200
Merchandise Inventory	30,800	27,600
Prepaid Expenses	6,000	3,600
Total Current Assets	68,800	79,100
Total Current Liabilities	53,200	37,200
Income Statement:		
Net Sales Revenue	\$ 184,800	
Cost of Goods Sold	126,000	

Compute the following ratios for the current year:

7. Current ratio
8. Acid-test ratio
9. Inventory turnover
10. Gross profit percentage

Check your answers online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercises S15-6 through S15-12. **Pearson MyLab Accounting**

REVIEW

> Things You Should Know

1. How are financial statements used to analyze a business?

- There are three main ways to analyze financial statements:
 - Horizontal analysis
 - Vertical analysis
 - Ratio analysis
- Annual reports provide information about a company's financial condition and include the following:
 - Business overview
 - Management's discussion and analysis of financial condition and results of operations (MD&A)

- Report of independent registered public accounting firm
- Financial statements
- Notes to the financial statements

2. How do we use horizontal analysis to analyze a business?

- Horizontal analysis is the study of percentage changes in line items from comparative financial statements. It compares one year to the next.
$$(\text{Dollar amount of change} / \text{Base period amount}) \times 100.$$
- Trend analysis is a form of horizontal analysis in which percentages are computed by selecting a base year as 100% and expressing the amounts for following periods as a percentage of the base period amount.
$$(\text{Any period amount} / \text{Base period amount}) \times 100.$$

3. How do we use vertical analysis to analyze a business?

- Vertical analysis reveals the relationship of each statement item to its base amount, which is the 100% figure.
$$(\text{Specific item} / \text{Base amount}) \times 100.$$
 - For the income statement, net sales revenue is the base.
 - For the balance sheet, total assets is the base.
- Common-size statements are financial statements that report only percentages—the same percentages that appear in vertical analysis.
- Benchmarking is the practice of comparing a company's performance with its prior performance or with best practices from other companies.

4. How do we use ratios to analyze a business?

- Ratios can be used to evaluate a company's:
 - ability to pay current liabilities
 - ability to sell merchandise inventory and collect receivables
 - ability to pay long-term debt
 - profitability
 - stock as an investment
- Exhibit 15-8 summarizes common ratios that can be used to analyze a business.

> Check Your Understanding 15-1

Check your understanding of the chapter by completing this problem and then looking at the solution. Use this practice to help identify which sections of the chapter you need to study more.

Kimball Corporation makes cell phone covers and has the following comparative income statement for the years ended December 31, 2019 and 2018:

KIMBALL CORPORATION Income Statement Years Ended December 31, 2019 and 2018		
	2019	2018
Revenues:		
Net Sales Revenue	\$ 300,000	\$ 250,000
Other Revenues	0	1,000
Total Revenues	300,000	251,000
Expenses:		
Cost of Goods Sold	214,200	170,000
Engineering, Selling, and Administrative Expenses	54,000	48,000
Interest Expense	6,000	5,000
Income Tax Expense	9,000	3,000
Other Expenses	2,700	0
Total Expenses	285,900	226,000
Net Income	\$ 14,100	\$ 25,000

Requirement

Perform a horizontal analysis and a vertical analysis of Kimball Corporation. State whether 2019 was a good year or a bad year, and give your reasons. (See Learning Objectives 2 and 3)

> Solution

KIMBALL CORPORATION Income Statement Years Ended December 31, 2019 and 2018			Increase (Decrease)	
	2019	2018	Amount	Percentage
Revenues:				
Net Sales Revenue	\$ 300,000	\$ 250,000	\$ 50,000	20.0%
Other Revenues	0	1,000	(1,000)	—
Total Revenues	300,000	251,000	49,000	19.5
Expenses:				
Cost of Goods Sold	214,200	170,000	44,200	26.0
Engineering, Selling, and Administrative Expenses	54,000	48,000	6,000	12.5
Interest Expense	6,000	5,000	1,000	20.0
Income Tax Expense	9,000	3,000	6,000	200.0
Other Expenses	2,700	0	2,700	—
Total Expenses	285,900	226,000	59,900	26.5
Net Income	\$ 14,100	\$ 25,000	\$ (10,900)	(43.6)%

The horizontal analysis shows that net sales revenue increased 20.0%. Total expenses increased by 26.5%, and net income decreased 43.6%. So, even though Kimball's net sales revenue increased, the company's expenses increased by a larger percentage, netting an overall 43.6% reduction in net income between the years. That indicates that 2019 was a bad year in comparison to 2018. This analysis identifies areas in which management should review more data. For example, cost of goods sold increased 26.0%. Managers would want to know why this increase occurred to determine whether the company can implement cost-saving strategies (such as purchasing from other, lower-cost vendors).

KIMBALL CORPORATION Income Statement Years Ended December 31, 2019 and 2018				
	2019	Percent	2018	Percent
Revenues:				
Net Sales Revenue	\$ 300,000	100.0%	\$ 250,000	100.0%
Other Revenues	0	0.0	1,000	0.4
Total Revenues	300,000	100.0	251,000	100.4
Expenses:				
Cost of Goods Sold	214,200	71.4	170,000	68.0
Engineering, Selling, and Administrative Expenses	54,000	18.0	48,000	19.2
Interest Expense	6,000	2.0	5,000	2.0
Income Tax Expense	9,000	3.0	3,000	1.2
Other Expenses	2,700	0.9	0	0
Total Expenses	285,900	95.3	226,000	90.4
Net Income	\$ 14,100	4.7%	\$ 25,000	10.0%

The vertical analysis shows changes in the line items as percentages of net sales revenue. A few notable items are:

- Cost of Goods Sold increased from 68.0% to 71.4%;
- Engineering, Selling, and Administrative Expenses decreased from 19.2% to 18.0%.

These two items are Kimball's largest dollar expenses, so their percentage changes are important. This indicates that cost controls need to be improved, especially for COGS.

The 2019 net income declined to 4.7% of sales, compared with 10.0% the preceding year. Kimball's increase in cost of goods sold is the biggest factor in the overall decrease in net income as a percentage of sales.

> Check Your Understanding 15-2

Check your understanding of the chapter by completing this problem and then looking at the solution. Use this practice to help identify which sections of the chapter you need to study more.

JAVA, INC.				
Four-Year Selected Financial Data				
Years Ended January 31, 2019–2016				
Operating Results:	2019	2018	2017	2016
Net Sales Revenue	\$ 13,848	\$ 13,673	\$ 11,635	\$ 9,054
Cost of Goods Sold	9,704	8,599	6,775	5,318
Interest Expense	109	75	45	46
Income from Operations	338	1,455	1,817	1,333
Income Tax Expense	100	263	338	247
Net Income (Net Loss)	(8)	877	1,127	824
Cash Dividends on Common Stock	76	75	76	77
Financial Position:				
Merchandise Inventory	1,677	1,904	1,462	1,056
Total Assets	7,591	7,012	5,189	3,963
Current Ratio	1.48:1	0.95:1	1.25:1	1.20:1
Stockholders' Equity	3,010	2,928	2,630	1,574
Average Number of Shares of Common Stock Outstanding	860	879	895	576

Requirements

Using the financial data presented above, compute the following ratios and evaluate Java's results for 2019–2017 (See Learning Objective 4):

1. Profit margin ratio
2. Earnings per share
3. Inventory turnover
4. Times-interest-earned ratio
5. Rate of return on common stockholders' equity
6. Gross profit percentage

> Solution

	2019	2018	2017
1. Profit margin ratio	$\frac{-(\$8)}{\$13,848} = (0.06\%)$	$\frac{\$877}{\$13,673} = 6.4\%$	$\frac{\$1,127}{\$11,635} = 9.7\%$
2. Earnings per share	$\frac{\$(8)}{860 \text{ shares}} = \$(0.01) \text{ per share}$	$\frac{\$877}{879 \text{ shares}} = \1.00 per share	$\frac{\$1,127}{895 \text{ shares}} = \1.26 per share
3. Inventory turnover	$\frac{\$9,704}{(\$1,904 + \$1,677)/2} = 5.4 \text{ times}$	$\frac{\$8,599}{(\$1,462 + \$1,904)/2} = 5.1 \text{ times}$	$\frac{\$6,775}{(\$1,056 + \$1,462)/2} = 5.4 \text{ times}$
4. Times-interest-earned ratio	$\frac{[\$(8) + \$100 + \$109]}{\$109} = 1.8 \text{ times}$	$\frac{(\$877 + \$263 + \$75)}{\$75} = 16.2 \text{ times}$	$\frac{(\$1,127 + \$338 + \$45)}{\$45} = 33.6 \text{ times}$
5. Rate of return on common stockholders' equity	$\frac{\$(8)}{(\$2,928 + \$3,010)/2} = (0.3\%)$	$\frac{\$877}{(\$2,630 + \$2,928)/2} = 31.6\%$	$\frac{\$1,127}{(\$1,574 + \$2,630)/2} = 53.6\%$
6. Gross profit percentage	$\frac{(\$13,848 - \$9,704)}{\$13,848} = 29.9\%$	$\frac{(\$13,673 - \$8,599)}{\$13,673} = 37.1\%$	$\frac{(\$11,635 - \$6,775)}{\$11,635} = 41.8\%$

Evaluation: During this period, Java's operating results deteriorated on all these measures except inventory turnover. The times-interest-earned ratio and rate of return on common stockholders' equity percentages are down sharply. From these data, it is clear that Java could sell its coffee, but not at the markups the company enjoyed in the past. The final result, in 2019, was a net loss for the year.

> Key Terms

- | | | |
|--|--|--|
| Accounts Receivable Turnover Ratio (p. 843)
Acid-Test Ratio (p. 840)
Annual Report (p. 828)
Asset Turnover Ratio (p. 847)
Benchmarking (p. 837)
Cash Ratio (p. 840)
Common-Size Statement (p. 836)
Current Ratio (p. 841)
Days' Sales in Inventory (p. 842)
Days' Sales in Receivables (p. 844)
Debt Ratio (p. 844) | Debt to Equity Ratio (p. 845)
Dividend Payout (p. 850)
Dividend Yield (p. 849)
Dollar Value Bias (p. 836)
Earnings per Share (EPS) (p. 848)
Gross Profit Percentage (p. 843)
Horizontal Analysis (p. 830)
Inventory Turnover (p. 842)
Management's Discussion and Analysis of Financial Condition and Results of Operations (MD&A) (p. 828) | Price/Earnings Ratio (p. 849)
Profit Margin Ratio (p. 846)
Rate of Return on Common Stockholders' Equity (p. 847)
Rate of Return on Total Assets (p. 846)
Times-Interest-Earned Ratio (p. 845)
Trading on the Equity (p. 848)
Trend Analysis (p. 832)
Vertical Analysis (p. 834)
Working Capital (p. 839) |
|--|--|--|

> Quick Check

Liberty Corporation reported the following financial statements:

LIBERTY CORPORATION		
Comparative Balance Sheet		
December 31, 2019 and 2018		
	2019	2018
Assets		
Current Assets:		
Cash and Cash Equivalents	\$ 2,450	\$ 2,094
Accounts Receivable	1,813	1,611
Merchandise Inventory	1,324	1,060
Prepaid Expenses	1,709	2,120
Total Current Assets	<u>7,296</u>	<u>6,885</u>
Other Assets	18,500	15,737
Total Assets	<u><u>\$ 25,796</u></u>	<u><u>\$ 22,622</u></u>
Liabilities		
Current Liabilities	\$ 7,230	\$ 8,467
Long-term Liabilities	4,798	3,792
Total Liabilities	<u>12,028</u>	<u>12,259</u>
Stockholders' Equity		
Common Stock, no par	6,568	4,363
Retained Earnings	7,200	6,000
Total Stockholders' Equity	<u>13,768</u>	<u>10,363</u>
Total Liabilities and Stockholders' Equity	<u><u>\$ 25,796</u></u>	<u><u>\$ 22,622</u></u>

LIBERTY CORPORATION	
Income Statement	
Year Ended December 31, 2019	
Net Sales Revenue	\$ 20,941
Cost of Goods Sold	7,055
Gross Profit	<u>13,886</u>
Operating Expenses	7,065
Operating Income	<u>6,821</u>
Interest Expense	210
Income Before Income Taxes	6,611
Income Tax Expense	2,563
Net Income	<u><u>\$ 4,048</u></u>

Learning Objective 1

1. What part of the Liberty's annual report is written by the company and could present a biased view of financial conditions and results?
 - a. Balance Sheet
 - b. Management's Discussion and Analysis of Financial Condition and Results of Operations (MD&A)
 - c. Auditor's Report
 - d. Income Statement

Learning Objective 2

2. Horizontal analysis of Liberty's balance sheet for 2019 would report
 - a. Cash as 9.50% of total assets.
 - b. a 17% increase in Cash and Cash Equivalents.
 - c. a current ratio of 1.01.
 - d. inventory turnover of 6 times.

Learning Objective 3

3. Vertical analysis of Liberty's balance sheet for 2019 would report
 - a. Cash as 9.50% of total assets.
 - b. inventory turnover of 6 times.
 - c. a current ratio of 1.01.
 - d. a 17% increase in Cash.

Learning Objective 4

4. Which statement best describes Liberty's acid-test ratio for 2019?
 - a. Greater than 1
 - b. Equal to 1
 - c. Less than 1
 - d. None of the above

Learning Objective 4

5. Liberty's inventory turnover during 2019 was (amounts rounded)
 - a. 6 times.
 - b. 7 times.
 - c. 8 times.
 - d. not determinable from the data given.

Learning Objective 4

6. Assume all sales are on credit. During 2019, Liberty's days' sales in receivables ratio was (amounts rounded)
 - a. 34 days.
 - b. 30 days.
 - c. 32 days.
 - d. 28 days.

Learning Objective 4

7. Which measure expresses Liberty's times-interest-earned ratio? (amounts rounded)
 - a. 54.7%
 - b. 19 times
 - c. 34.5%
 - d. 32 times

Learning Objective 4

8. Liberty's rate of return on common stockholders' equity can be described as
 - a. weak.
 - b. normal.
 - c. strong.
 - d. average.

Learning Objective 4

9. The company has 2,500 shares of common stock outstanding. What is Liberty's earnings per share?
 - a. \$1.62
 - b. \$1.75
 - c. \$2.73
 - d. 2.63 times

Learning Objective 4

10. The company has 2,500 shares of common stock outstanding and the market price is \$20 per share. What is Liberty's price/earnings ratio?
 - a. 0.08
 - b. \$0.08
 - c. 12.35
 - d. 12.35 times

Check your answers at the end of the chapter.

ASSESS YOUR PROGRESS

> Review Questions

1. What are the three main ways to analyze financial statements?
2. What is an annual report? Briefly describe the key parts of the annual report.
3. What is horizontal analysis, and how is a percentage change computed?
4. What is trend analysis, and how does it differ from horizontal analysis?
5. What is vertical analysis? What item is used as the base for the income statement? What item is used as the base for the balance sheet?
6. Describe a common-size statement and how it might be helpful in evaluating a company.
7. What is benchmarking, and what are the two main types of benchmarks in financial statement analysis?
8. Briefly describe the ratios that can be used to evaluate a company's ability to pay current liabilities.
9. Briefly describe the ratios that can be used to evaluate a company's ability to sell merchandise inventory and collect receivables.
10. Briefly describe the ratios that can be used to evaluate a company's ability to pay long-term debt.
11. Briefly describe the ratios that can be used to evaluate a company's profitability.
12. Briefly describe the ratios that can be used to evaluate a company's stock as an investment.
13. What are some common red flags in financial statement analysis?

> Short Exercises

S15-1 Explaining financial statements

Golden Coffee has idle cash and is considering investing in other companies. One of the targets is Silver Coffee. What type of information should Golden Coffee gather before making the investment decision?

Learning Objective 1

S15-2 Performing horizontal analysis

Verifine Corp. reported the following on its comparative income statement:

Learning Objective 2

<i>(In millions)</i>	2019	2018	2017
Revenue	\$ 9,890	\$ 9,690	\$ 9,135
Cost of Goods Sold	6,250	6,000	5,890

Prepare a horizontal analysis of revenues and gross profit—both in dollar amounts and in percentages—for 2019 and 2018.

S15-3 Calculating trend analysis

Learning Objective 2

Muscateer Corp. reported the following revenues and net income amounts:

<i>(In millions)</i>	2019	2018	2017	2016
Revenue	\$ 9,610	\$ 9,355	\$ 9,050	\$ 8,950
Net Income	7,290	6,790	5,020	4,300

Requirements

1. Calculate Muscateer's trend analysis for revenues and net income. Use 2016 as the base year, and round to the nearest percent.
2. Which measure increased at a higher rate during 2017–2019?

Learning Objective 3

S15-4 Performing vertical analysis

Great Value Optical Company reported the following amounts on its balance sheet at December 31, 2018 and 2017:

	2018	2017
Cash and Receivables	\$ 80,640	\$ 80,575
Merchandise Inventory	56,840	54,450
Property, Plant, and Equipment, Net	142,520	139,975
Total Assets	<u>\$ 280,000</u>	<u>\$ 275,000</u>

Prepare a vertical analysis of Great Value's assets for 2018 and 2017.

Learning Objective 3

S15-5 Preparing common-size income statement

Data for Connor, Inc. and Alto Corp. follow:

	Connor	Alto
Net Sales Revenue	\$ 13,000	\$ 22,000
Cost of Goods Sold	7,917	15,730
Other Expenses	4,342	5,170
Net Income	<u>\$ 741</u>	<u>\$ 1,100</u>

Requirements

1. Prepare common-size income statements.
2. Which company earns more net income?
3. Which company's net income is a higher percentage of its net sales revenue?

Use the following information for Short Exercises S15-6 through S15-10.

Accel's Companies, a home improvement store chain, reported the following summarized figures:

ACCEL'S COMPANIES		
Income Statement		
Years Ended May 31, 2018 and 2017		
	2018	2017
Net Sales Revenue	\$ 40,600	\$ 40,500
Cost of Goods Sold	28,400	30,600
Interest Expense	600	570
All Other Expenses	4,300	8,200
Net Income	<u>\$ 7,300</u>	<u>\$ 1,130</u>

ACCEL'S COMPANIES					
Balance Sheet					
May 31, 2018 and 2017					
Assets				Liabilities	
	2018		2017		2018
Cash	\$ 2,400		\$ 900	Total Current Liabilities	\$ 28,000
Short-term Investments	28,000		9,000	Long-term Liabilities	13,900
Accounts Receivable	7,500		5,200	Total Liabilities	23,500
Merchandise Inventory	6,900		8,600	Stockholders' Equity	
Other Current Assets	8,000		1,500	Common Stock	11,000
Total Current Assets	52,800		25,200	Retained Earnings	29,900
All Other Assets	30,000		29,000	Total Equity	30,700
Total Assets	\$ 82,800		\$ 54,200	Total Liabilities and Equity	\$ 82,800

Accel's has 10,000 common shares outstanding during 2018.

S15-6 Evaluating current ratio

Requirements

1. Compute Accel's Companies' current ratio at May 31, 2018 and 2017.
2. Did Accel's Companies' current ratio improve, deteriorate, or hold steady during 2018?

Learning Objective 4

S15-7 Computing inventory, gross profit, and receivables ratios

Requirements

1. Compute the inventory turnover, days' sales in inventory, and gross profit percentage for Accel's Companies for 2018.
2. Compute days' sales in receivables during 2018. Round intermediate calculations to three decimal places. Assume all sales were on account.
3. What do these ratios say about Accel's Companies' ability to sell inventory and collect receivables?

Learning Objective 4

S15-8 Measuring ability to pay liabilities

Requirements

1. Compute the debt ratio and the debt to equity ratio at May 31, 2018, for Accel's Companies.
2. Is Accel's ability to pay its liabilities strong or weak? Explain your reasoning.

Learning Objective 4

S15-9 Measuring profitability

Requirements

1. Compute the profit margin ratio for Accel's Companies for 2018.
2. Compute the rate of return on total assets for 2018.
3. Compute the asset turnover ratio for 2018.
4. Compute the rate of return on common stockholders' equity for 2018.
5. Are these rates of return strong or weak? Explain your reasoning.

Learning Objective 4

Learning Objective 4**S15-10 Computing EPS and P/E ratio****Requirements**

1. Compute earnings per share (EPS) for 2018 for Accel's. Round to the nearest cent.
2. Compute Accel's Companies' price/earnings ratio for 2018. The market price per share of Accel's stock is \$12.50.
3. What do these results mean when evaluating Accel's Companies' profitability?

Learning Objective 4**S15-11 Using ratios to reconstruct an income statement**

Modern Machine's income statement appears as follows (amounts in thousands):

MODERN MACHINE Income Statement Year Ended December 31, 2018	
Net Sales Revenue	\$ 3,200
Cost of Goods Sold	(a)
Selling and Administrative Expenses	1,230
Interest Expense	(b)
Other Expenses	230
Income Before Income Taxes	500
Income Tax Expense	(c)
Net Income	(d)

Use the following ratio data to complete Modern Machine's income statement:

1. Inventory turnover is 2.8 (beginning Merchandise Inventory was \$420; ending Merchandise Inventory was \$380).
2. Profit margin ratio is 12%.

Learning Objective 4**S15-12 Using ratios to reconstruct a balance sheet**

Ultra Machine's balance sheet appears as follows (amounts in thousands):

ULTRA MACHINE Balance Sheet December 31, 2018		
Assets		Liabilities
Cash	\$ 1,520	Total Current Liabilities
Accounts Receivables	(a)	Long-term Note Payable
Merchandise Inventory	250	Other Long-term Liabilities
Prepaid Expenses	(b)	Total Liabilities
Total Current Assets	(c)	
Plant Assets, Net	(d)	
Other Assets	2,520	
Total Assets	\$ 9,000	
Stockholders' Equity		
		Stockholders' Equity
		3,250
		Total Liabilities and Stockholders' Equity
		\$ (g)

Use the following ratio data to complete Ultra Machine's balance sheet.

1. Current ratio is 0.9.
2. Acid-test ratio is 0.7.

> Exercises

E15-13 Performing horizontal analysis—income statement

Data for Mulberry Designs, Inc. follow:

MULBERRY DESIGNS, INC. Comparative Income Statement Years Ended December 31, 2018 and 2017		
	2018	2017
Net Sales Revenue	\$ 431,000	\$ 372,350
Expenses:		
Cost of Goods Sold	203,850	186,000
Selling and Administrative Expenses	99,000	93,250
Other Expenses	9,000	4,650
Total Expenses	<u>311,850</u>	<u>283,900</u>
Net Income	<u><u>\$ 119,150</u></u>	<u><u>\$ 88,450</u></u>

Learning Objective 2

1. Net Income 34.7%

Requirements

1. Prepare a horizontal analysis of the comparative income statement of Mulberry Designs, Inc. Round percentage changes to one decimal place.
2. Why did 2018 net income increase by a higher percentage than net sales revenue?

E15-14 Computing trend analysis

Grand Oaks Realty's net revenue and net income for the following five-year period, using 2015 as the base year, follow:

	2019	2018	2017	2016	2015
Net Revenue	\$ 1,360,000	\$ 1,180,000	\$ 1,147,000	\$ 1,008,000	\$ 1,044,000
Net Income	127,000	120,000	87,000	75,000	83,000

Learning Objective 2

1. 2019 Net Income 153%

Requirements

1. Compute a trend analysis for net revenue and net income. Round to the nearest full percent.
2. Which grew faster during the period, net revenue or net income?

Learning Objective 3

2018 Current Assets: 12.5%

E15-15 Performing vertical analysis of a balance sheet

Speedy Motor has the following data:

SPEEDY MOTOR Comparative Balance Sheet December 21, 2018 and 2017		
	2018	2017
Assets		
Total Current Assets	\$ 52,000	\$ 84,800
Property, Plant, and Equipment, Net	227,800	245,200
Other Assets	32,200	73,000
Total Assets	\$ 312,000	\$ 403,000
Liabilities		
Total Current Liabilities	\$ 32,000	\$ 52,000
Long-term Debt	140,000	220,000
Total Liabilities	172,000	272,000
Stockholders' Equity		
Total Stockholders' Equity	140,000	131,000
Total Liabilities and Stockholders' Equity	\$ 312,000	\$ 403,000

Perform a vertical analysis of Speedy Motor's balance sheet for each year.

Learning Objective 3

1. 2018 Net Income 27.6%

E15-16 Preparing common-size income statements

Refer to the data presented for Mulberry Designs, Inc. in Exercise E15-13.

Requirements

1. Prepare a comparative common-size income statement for Mulberry Designs, Inc. using the 2018 and 2017 data. Round percentages to one-tenth percent (three decimal places).
2. To an investor, how does 2018 compare with 2017? Explain your reasoning.

Learning Objective 4

2019 Working Capital \$255,000

E15-17 Computing working capital changes

Data for Magical Music follows:

	2019	2018	2017
Total Current Assets	\$ 480,000	\$ 523,000	\$ 650,000
Total Current Liabilities	398,400	387,000	450,000

Compute the dollar amount of change and the percentage of change in Magical Music's working capital each year during 2019 and 2018. What do the calculated changes indicate?

E15-18 Computing key ratios

The financial statements of Valerie's Natural Foods include the following items:

	Current Year	Preceding Year
Balance Sheet:		
Cash	\$ 16,000	\$ 26,000
Short-term Investments	19,000	28,000
Net Accounts Receivable	60,000	92,000
Merchandise Inventory	78,000	74,000
Prepaid Expenses	17,000	6,000
Total Current Assets	190,000	226,000
Total Current Liabilities	136,000	82,000
Income Statement:		
Net Credit Sales	\$ 476,000	
Cost of Goods Sold	312,000	

Compute the following ratios for the current year:

- a. Current ratio
- b. Cash ratio
- c. Acid-test ratio
- d. Inventory turnover
- e. Days' sales in inventory
- f. Days' sales in receivables
- g. Gross profit percentage

E15-19 Analyzing the ability to pay liabilities

Big Beautiful Photo Shop has asked you to determine whether the company's ability to pay current liabilities and total liabilities improved or deteriorated during 2018. To answer this question, you gather the following data:

	2018	2017
Cash	\$ 58,000	\$ 47,000
Short-term Investments	34,000	0
Net Accounts Receivable	140,000	124,000
Merchandise Inventory	217,000	272,000
Total Assets	530,000	565,000
Total Current Liabilities	288,000	205,000
Long-term Notes Payable	40,000	50,000
Income from Operations	165,000	158,000
Interest Expense	55,000	41,000

Compute the following ratios for 2018 and 2017, and evaluate the company's ability to pay its current liabilities and total liabilities:

- a. Current ratio
- b. Cash ratio
- c. Acid-test ratio
- d. Debt ratio
- e. Debt to equity ratio

Learning Objective 4

e. 89 days

Learning Objective 4

d. 2018: 61.9%

Learning Objective 4

1. 2019: 13.0%

E15-20 Analyzing profitability

Nancy Cookery's comparative income statement follows. The 2017 data are given as needed.

Dollars in thousands	2019	2018	2017
Net Sales Revenue	\$ 240,000	\$ 200,000	
Cost of Goods Sold	120,000	110,000	
Selling and Administrative Expenses	72,000	60,000	
Interest Expense	4,000	5,000	
Income Tax Expense	8,000	4,000	
Net Income	\$ 36,000	\$ 21,000	
<i>Additional data:</i>			
Total Assets	\$ 260,000	\$ 220,000	\$ 210,000
Common Stockholders' Equity	157,000	121,000	100,000
Preferred Dividends	3,000	1,000	0
Common Shares Outstanding During the Year	20,000	20,000	19,000

Requirements

1. Calculate the profit margin ratio for 2019 and 2018.
 2. Calculate the rate of return on total assets for 2019 and 2018.
 3. Calculate the asset turnover ratio for 2019 and 2018.
 4. Calculate the rate of return on common stockholders' equity for 2019 and 2018.
 5. Calculate the earnings per share for 2019 and 2018.
 6. Calculate the 2019 dividend payout on common stock. Assume dividends per share for common stock are equal to \$0.99 per share.
 7. Did the company's operating performance improve or deteriorate during 2019?
- Round all ratios to two decimal places.

Learning Objective 4

Dividend Yield 2018: 1.4%

E15-21 Evaluating a stock as an investment

Data for Oxford State Bank follow:

	2018	2017
Net Income	\$ 71,900	\$ 64,300
Dividends—Common	22,000	22,000
Dividends—Preferred	16,800	16,800
Total Stockholders' Equity at Year-End (includes 95,000 shares of common stock)	770,000	610,000
Preferred Stock	200,000	200,000
Market Price per Share of Common Stock	\$ 16.50	\$ 10.00

Evaluate the common stock of Oxford State Bank as an investment. Specifically, use the three stock ratios to determine whether the common stock has increased or decreased in attractiveness during the past year. Round to two decimal places.

E15-22 Using ratios to reconstruct a balance sheet

The following data are adapted from the financial statements of Nelson Retail Ltd.:

Total Current Assets	\$ 1,800,000
Accumulated Depreciation	1,200,000
Total Liabilities	1,500,000
Preferred Stock	0
Debt Ratio	60%
Current Ratio	1.80

Learning Objective 4

Total Assets \$2,800,000

Prepare Nelson Retail Ltd.'s condensed balance sheet as of December 31, 2018.

> Problems Group A**P15-23A Computing trend analysis and return on common equity**

Net sales revenue, net income, and common stockholders' equity for Eyesight Mission Corporation, a manufacturer of contact lenses, follow for a four-year period.

	2019	2018	2017	2016
Net Sales Revenue	\$ 766,000	\$ 708,00	\$ 644,000	\$ 664,000
Net Income	60,000	38,000	36,000	44,000
Ending Common Stockholders' Equity	368,000	352,000	326,000	296,000

Requirements

1. Compute trend analyses for each item for 2017–2019. Use 2016 as the base year, and round to the nearest whole percent.
2. Compute the rate of return on common stockholders' equity for 2017–2019, rounding to three decimal places.

P15-24A Performing vertical analysis

The Klein Department Stores, Inc. chief executive officer (CEO) has asked you to compare the company's profit performance and financial position with the averages for the industry. The CEO has given you the company's income statement and balance sheet as well as the industry average data for retailers.

KLEIN DEPARTMENT STORES, INC.		
Income Statement Compared with Industry Average		
Year Ended December 31, 2018		
	Klein	Industry Average
Net Sales Revenue	\$ 778,000	100.0%
Cost of Goods Sold	524,372	65.8
Gross Profit	253,628	34.2
Operating Expenses	159,490	19.7
Operating Income	94,138	14.5
Other Expenses	6,224	0.4
Net Income	\$ 87,914	14.1%

KLEIN DEPARTMENT STORES, INC.		
Balance Sheet Compared with Industry Average		
December 31, 2018		
	Klein	Industry Average
Current Assets	\$ 339,000	70.9%
Property, Plant, and Equipment, Net	130,000	23.6
Intangible Assets, Net	7,000	0.8
Other Assets	24,000	4.7
Total Assets	\$ 500,000	100.0%
Current Liabilities	\$ 232,000	48.1%
Long-term Liabilities	111,000	16.6
Total Liabilities	343,000	64.7
Stockholders' Equity	157,000	35.3
Total Liabilities and Stockholders' Equity	\$ 500,000	100.0%

Learning Objectives 2, 4

2. 2019: 16.7%

Learning Objective 3

1. Net Income 11.3%

Requirements

1. Prepare a vertical analysis for Klein for both its income statement and balance sheet.
2. Compare the company's profit performance and financial position with the average for the industry.

Note: Problem P15-24A must be completed before attempting Problem P15-25A.

Learning Objectives 3, 4

2. Gross Profit Percentage 32.6%

P15-25A Preparing common-size statements, analysis of profitability and financial position, comparison with the industry, and using ratios to evaluate a company

Consider the data for Klein Department Stores presented in Problem P15-24A.

Requirements

1. Prepare a common-size income statement and balance sheet for Klein. The first column of each statement should present Klein's common-size statement, and the second column, the industry averages.
2. For the profitability analysis, compute Klein's (a) gross profit percentage and (b) profit margin ratio. Compare these figures with the industry averages. Is Klein's profit performance better or worse than the industry average?
3. For the analysis of financial position, compute Klein's (a) current ratio and (b) debt to equity ratio. Compare these ratios with the industry averages. Assume the current ratio industry average is 1.47, and the debt to equity industry average is 1.83. Is Klein's financial position better or worse than the industry averages?

Learning Objective 4

1. Current Ratio 1.55

P15-26A Determining the effects of business transactions on selected ratios

Financial statement data of *Oriental Sports Equipment* include the following items:

Cash	\$ 53,900
Accounts Receivable, Net	70,300
Merchandise Inventory	231,000
Total Assets	825,000
Accounts Payable	87,300
Accrued Liabilities	72,700
Short-term Notes Payable	62,000
Long-term Liabilities	231,750
Net Income	72,000
Common Shares Outstanding	36,000 shares

Requirements

1. Compute *Oriental Sports'* current ratio, debt ratio, and earnings per share. Round all ratios to two decimal places, and use the following format for your answer:

Current Ratio	Debt Ratio	Earnings per Share
---------------	------------	--------------------

2. Compute the three ratios after evaluating the effect of each transaction that follows. Consider each transaction *separately*.
 - a. Purchased merchandise inventory of \$52,000 on account.
 - b. Borrowed \$130,000 on a long-term note payable.

- c. Issued 1,500 shares of common stock, receiving cash of \$160,000.
- d. Received cash on account, \$8,000.

P15-27A Using ratios to evaluate a stock investment

Comparative financial statement data of Sanfield, Inc. follow:

Learning Objective 4

1. 2018: e. 48.9%

SANFIELD, INC.		
Comparative Income Statement		
Years Ended December 31, 2018 and 2017		
	2018	2017
Net Sales Revenue	\$ 462,000	\$ 430,000
Cost of Goods Sold	236,000	213,000
Gross Profit	226,000	217,000
Operating Expenses	135,000	133,000
Income from Operations	91,000	84,000
Interest Expense	8,000	12,000
Income Before Income Tax	83,000	72,000
Income Tax Expense	18,000	22,000
Net Income	\$ 65,000	\$ 50,000

SANFIELD, INC.		
Comparative Balance Sheet		
December 31, 2018 and 2017		
	2018	2017
Assets		
Current Assets:		
Cash	\$ 99,000	\$ 97,000
Accounts Receivable, Net	109,000	117,000
Merchandise Inventory	142,000	164,000
Prepaid Expenses	15,000	5,000
Total Current Assets	365,000	383,000
Property, Plant, and Equipment, Net	215,000	177,000
Total Assets	\$ 580,000	\$ 560,000
Liabilities		
Total Current Liabilities	\$ 222,000	\$ 244,000
Long-term Liabilities	113,000	92,000
Total Liabilities	335,000	336,000
Stockholders' Equity		
Preferred Stock, 4%	92,000	92,000
Common Stockholders' Equity, no par	153,000	132,000
Total Liabilities and Stockholders' Equity	\$ 580,000	\$ 560,000

* Selected 2016 amounts

1. Market price of Sanfield's common stock: \$51.48 at December 31, 2018, and \$37.08 at December 31, 2017.
2. Common shares outstanding: 16,000 on December 31, 2018 and 15,000 on December 31, 2017 and 2016.
3. All sales are on credit.

Requirements

1. Compute the following ratios for 2018 and 2017:

a. Current ratio	f. Debt to equity ratio
b. Cash ratio	g. Rate of return on common stockholders' equity
c. Times-interest-earned ratio	h. Earnings per share of common stock
d. Inventory turnover	i. Price/earnings ratio
e. Gross profit percentage	

2. Decide (a) whether Sanfield's ability to pay debts and to sell inventory improved or deteriorated during 2018 and (b) whether the investment attractiveness of its common stock appears to have increased or decreased.

Learning Objective 4

1. Digitalized e. \$4.25

P15-28A Using ratios to decide between two stock investments

Assume that you are purchasing an investment and have decided to invest in a company in the digital phone business. You have narrowed the choice to Digitalized Corp. and Every Zone, Inc. and have assembled the following data.

Selected income statement data for the current year:

	Digitalized	Every Zone
Net Sales Revenue (all on credit)	\$ 423,035	\$ 493,845
Cost of Goods Sold	210,000	260,000
Interest Expense	0	19,000
Net Income	51,000	72,000

Selected balance sheet and market price data at the *end* of the current year:

	Digitalized	Every Zone
Current Assets:		
Cash	\$ 24,000	\$ 17,000
Short-term Investments	40,000	14,000
Accounts Receivable, Net	40,000	48,000
Merchandise Inventory	66,000	97,000
Prepaid Expenses	23,000	12,000
Total Current Assets	<u>\$ 193,000</u>	<u>\$ 188,000</u>
Total Assets	\$ 266,000	\$ 323,000
Total Current Liabilities	105,000	96,000
Total Liabilities	105,000	128,000
Common Stock:		
\$1 par (12,000 shares)	12,000	
\$1 par (17,000 shares)		17,000
Total Stockholders' Equity	161,000	195,000
Market Price per Share of Common Stock	76.50	114.48
Dividends Paid per Common Share	1.10	1.00

Selected balance sheet data at the *beginning* of the current year:

	Digitalized	Every Zone
Balance Sheet:		
Accounts Receivable, net	\$ 41,000	\$ 54,000
Merchandise Inventory	81,000	87,000
Total Assets	261,000	272,000
Common Stock:		
\$1 par (12,000 shares)	12,000	
\$1 par (17,000 shares)		17,000

Your strategy is to invest in companies that have low price/earnings ratios but appear to be in good shape financially. Assume that you have analyzed all other factors and that your decision depends on the results of ratio analysis.

Requirements

1. Compute the following ratios for both companies for the current year:

a. Acid-test ratio	e. Earnings per share of common stock
b. Inventory turnover	f. Price/earnings ratio
c. Days' sales in receivables	g. Dividend payout
d. Debt ratio	
2. Decide which company's stock better fits your investment strategy.

P15-29A Completing a comprehensive financial statement analysis

In its annual report, ABC Athletic Supply, Inc. includes the following five-year financial summary:

Learning Objectives 2, 4

3. 2018: Inventory turnover 8.04

ABC ATHLETIC SUPPLY, INC.						
Five-Year Financial Summary (Partial; adapted)						
<i>(Dollar amounts in thousands except per share data)</i>	2018	2017	2016	2015	2014	2013
Net Sales Revenue	\$ 250,000	\$ 216,000	\$ 191,000	\$ 161,000	\$ 134,000	
Net Sales Revenue Increase	16%	13%	19%	20%	17%	
Domestic Comparative Store Sales Increase	5%	6%	4%	7%	9%	
Other Income—Net	2,110	1,840	1,760	1,690	1,330	
Cost of Goods Sold	189,250	164,592	148,216	126,385	106,396	
Selling and Administrative Expenses	41,210	36,330	31,620	27,440	22,540	
Interest:						
Interest Expense	(1,080)	(1,380)	(1,400)	(1,020)	(830)	
Interest Income	125	165	155	235	190	
Income Tax Expense	4,470	3,900	3,700	3,320	2,700	
Net Income	16,225	11,803	7,979	4,760	3,054	
Per Share of Common Stock:						
Net Income	1.60	1.30	1.20	1.00	0.78	
Dividends	0.40	0.38	0.34	0.30	0.26	
Financial Position						
Current Assets, Excluding Merchandise Inventory	\$ 30,700	\$ 27,200	\$ 26,700	\$ 24,400	\$ 21,500	
Merchandise Inventory	24,500	22,600	21,700	19,000	17,500	\$ 16,700
Property, Plant, and Equipment, Net	51,400	45,200	40,000	35,100	25,600	
Total Assets	106,600	95,000	88,400	78,500	64,600	
Current Liabilities	32,300	28,000	28,300	25,000	16,500	
Long-term Debt	23,000	21,500	17,600	19,100	12,000	
Stockholders' Equity	51,300	45,500	42,500	34,400	36,100	
Financial Ratios						
Acid-Test Ratio	1.0	1.0	0.9	1.0	1.3	
Rate of Return on Total Assets	17.2%	14.4%	11.2%	8.1%	7.1%	
Rate of Return on Common Stockholders' Equity	33.5%	26.8%	20.8%	13.5%	13.0%	

Requirements

Analyze the company's financial summary for the fiscal years 2014–2018 to decide whether to invest in the common stock of ABC. Include the following sections in your analysis.

1. Trend analysis for net sales revenue and net income (use 2014 as the base year).
2. Profitability analysis.
3. Evaluation of the ability to sell merchandise inventory.
4. Evaluation of the ability to pay debts.
5. Evaluation of dividends.
6. Should you invest in the common stock of ABC Athletic Supply, Inc.? Fully explain your final decision

> Problems Group B

Learning Objectives 2, 4

2. 2018: 11.9%

P15-30B Computing trend analysis and return on common equity

Net sales revenue, net income, and common stockholders' equity for Azbel Mission Corporation, a manufacturer of contact lenses, follow for a four-year period.

	2019	2018	2017	2016
Net Sales Revenue	\$ 758,000	\$ 701,000	\$ 639,000	\$ 659,000
Net Income	59,000	40,000	39,000	42,000
Ending Common Stockholders' Equity	360,000	346,000	324,000	302,000

Requirements

1. Compute trend analyses for each item for 2017–2019. Use 2016 as the base year, and round to the nearest whole percent.
2. Compute the rate of return on common stockholders' equity for 2017–2019, rounding to three decimal places.

Learning Objective 3

1. Net Income 10.9%

P15-31B Performing vertical analysis

The Randall Department Stores, Inc. chief executive officer (CEO) has asked you to compare the company's profit performance and financial position with the averages for the industry. The CEO has given you the company's income statement and balance sheet as well as the industry average data for retailers.

RANDALL DEPARTMENT STORES, INC. Income Statement Compared with Industry Average Year Ended December 31, 2018		
	Randall	Industry Average
Net Sales Revenue	\$ 783,000	100.0%
Cost of Goods Sold	527,742	65.8
Gross Profit	255,258	34.2
Operating Expenses	163,647	19.7
Operating Income	91,611	14.5
Other Expenses	6,264	0.4
Net Income	\$ 85,347	14.1%

RANDALL DEPARTMENT STORES, INC. Balance Sheet Compared with Industry Average December 31, 2018		
	Randall	Industry Average
Current Assets	\$ 310,040	70.9%
Property, Plant, and Equipment, Net	119,600	23.6
Intangible Assets, Net	7,360	0.8
Other Assets	23,000	4.7
Total Assets	\$ 460,000	100.0%
Current Liabilities	\$ 210,680	48.1%
Long-term Liabilities	103,960	16.6
Total Liabilities	314,640	64.7
Stockholders' Equity	145,360	35.3
Total Liabilities and Stockholders' Equity	\$ 460,000	100.0%

Requirements

1. Prepare a vertical analysis for Randall for both its income statement and balance sheet.
2. Compare the company's profit performance and financial position with the average for the industry.

Note: Problem P15-31B must be completed before attempting Problem P15-32B.

P15-32B Preparing common-size statements, analysis of profitability and financial position, comparison with the industry, and using ratios to evaluate a company

Consider the data for Randall Department Stores presented in Problem P15-31B.

Requirements

1. Prepare a common-size income statement and balance sheet for Randall. The first column of each statement should present Randall's common-size statement, and the second column, the industry averages.
2. For the profitability analysis, compute Randall's (a) gross profit percentage and (b) profit margin ratio. Compare these figures with the industry averages. Is Randall's profit performance better or worse than the industry average?
3. For the analysis of financial position, compute Randall's (a) current ratio and (b) debt to equity ratio. Compare these ratios with the industry averages. Assume the current ratio industry average is 1.47, and the debt to equity industry average is 1.83. Is Randall's financial position better or worse than the industry averages?

P15-33B Determining the effects of business transactions on selected ratios

Financial statement data of *Modern Traveler's Magazine* include the following items:

Cash	\$ 19,000
Accounts Receivable, Net	82,000
Merchandise Inventory	183,000
Total Assets	638,000
Accounts Payable	102,000
Accrued Liabilities	35,000
Short-term Notes Payable	50,000
Long-term Liabilities	221,000
Net Income	69,000
Common Shares Outstanding	50,000 shares

Requirements

1. Compute *Modern Traveler's* current ratio, debt ratio, and earnings per share. Round all ratios to two decimal places, and use the following format for your answer:

Current Ratio	Debt Ratio	Earnings per Share
---------------	------------	--------------------

2. Compute the three ratios after evaluating the effect of each transaction that follows. Consider each transaction *separately*.
 - a. Purchased merchandise inventory of \$42,000 on account.
 - b. Borrowed \$121,000 on a long-term note payable.
 - c. Issued 5,000 shares of common stock, receiving cash of \$103,000.
 - d. Received cash on account, \$5,000.

Learning Objectives 3, 4

1. Current Assets 67.4%

Learning Objective 4

1. Earnings per Share \$1.38

Learning Objective 4**P15-34B Using ratios to evaluate a stock investment**

Comparative financial statement data of Garfield, Inc. follow:

1. 2017: e. 50.2%

GARFIELD, INC. Comparative Income Statement Years Ended December 31, 2018 and 2017		
	2018	2017
Net Sales Revenue	\$ 461,000	\$ 424,000
Cost of Goods Sold	241,000	211,000
Gross Profit	220,000	213,000
Operating Expenses	137,000	135,000
Income from Operations	83,000	78,000
Interest Expense	9,000	13,000
Income Before Income Tax	74,000	65,000
Income Tax Expense	18,000	24,000
Net Income	\$ 56,000	\$ 41,000

GARFIELD, INC. Comparative Balance Sheet December 31, 2018 and 2017		
	2018	2017
Assets		
Current Assets:		
Cash	\$ 99,000	\$ 98,000
Accounts Receivable, Net	108,000	114,000
Merchandise Inventory	146,000	164,000
Prepaid Expenses	20,000	9,000
Total Current Assets	373,000	385,000
Property, Plant, and Equipment, Net	211,000	181,000
Total Assets	\$ 584,000	\$ 566,000
Liabilities		
Total Current Liabilities	\$ 227,000	\$ 246,000
Long-term Liabilities	117,000	100,000
Total Liabilities	344,000	346,000
Stockholders' Equity		
Preferred Stock, 3%	98,000	98,000
Common Stockholders' Equity, no par	142,000	122,000
Total Liabilities and Stockholders' Equity	\$ 584,000	\$ 566,000

* Selected 2016 amounts

1. Market price of Garfield's common stock: \$69.36 at December 31, 2018, and \$38.04 at December 31, 2017.
2. Common shares outstanding: 14,000 on December 31, 2018 and 12,000 on December 31, 2017 and 2016.
3. All sales are on credit.

Requirements

1. Compute the following ratios for 2018 and 2017:
 - a. Current ratio
 - b. Cash ratio
 - c. Times-interest-earned ratio
 - d. Inventory turnover
 - e. Gross profit percentage
 - f. Debt to equity ratio
 - g. Rate of return on common stockholders' equity
 - h. Earnings per share of common stock
 - i. Price/earnings ratio
2. Decide (a) whether Garfield's ability to pay debts and to sell inventory improved or deteriorated during 2018 and (b) whether the investment attractiveness of its common stock appears to have increased or decreased.

P15-35B Using ratios to decide between two stock investments

Assume that you are purchasing an investment and have decided to invest in a company in the digital phone business. You have narrowed the choice to All Digital Corp. and Green Zone, Inc. and have assembled the following data.

Selected income statement data for the current year:

	All Digital	Green Zone
Net Sales Revenue (all on credit)	\$ 417,925	\$ 493,115
Cost of Goods Sold	209,000	258,000
Interest Expense	0	14,000
Net Income	58,000	72,000

Learning Objective 4

1c. Green Zone 38 days

Selected balance sheet and market price data at the *end* of the current year:

	All Digital	Green Zone
Current Assets:		
Cash	\$ 23,000	\$ 18,000
Short-term Investments	37,000	17,000
Accounts Receivable, Net	39,000	49,000
Merchandise Inventory	64,000	102,000
Prepaid Expenses	21,000	17,000
Total Current Assets	\$ 184,000	\$ 203,000
Total Assets	\$ 263,000	\$ 326,000
Total Current Liabilities	105,000	99,000
Total Liabilities	105,000	134,000
Common Stock:		
\$1 par (10,000 shares)	10,000	
\$2 par (14,000 shares)		28,000
Total Stockholders' Equity	158,000	192,000
Market Price per Share of Common Stock	92.80	128.50
Dividends Paid per Common Share	1.20	0.90

Selected balance sheet data at the *beginning* of the current year:

	All Digital	Green Zone
Balance Sheet:		
Accounts Receivable, Net	\$ 41,000	\$ 54,000
Merchandise Inventory	81,000	89,000
Total Assets	258,000	277,000
Common Stock:		
\$1 par (10,000 shares)	10,000	
\$2 par (14,000 shares)		28,000

Your strategy is to invest in companies that have low price/earnings ratios but appear to be in good shape financially. Assume that you have analyzed all other factors and that your decision depends on the results of ratio analysis.

Requirements

1. Compute the following ratios for both companies for the current year:
 - a. Acid-test ratio
 - b. Inventory turnover
 - c. Days' sales in receivables
 - d. Debt ratio
 - e. Earnings per share of common stock
 - f. Price/earnings ratio
 - g. Dividend payout
2. Decide which company's stock better fits your investment strategy.

P15-36B Completing a comprehensive financial statement analysis

In its annual report, XYZ Athletic Supply, Inc. includes the following five-year financial summary:

Learning Objectives 2, 4

3. 2018: Inventory turnover 8.86

XYZ ATHLETIC SUPPLY, INC.						
Five-Year Financial Summary (Partial; adapted)						
<i>(Dollar amounts in thousands except per share data)</i>	2018	2017	2016	2015	2014	2013
Net Sales Revenue	\$ 275,000	\$ 222,000	\$ 199,000	\$ 171,000	\$ 131,000	
Net Sales Revenue Increase	24%	12%	16%	31%	17%	
Domestic Comparative Store Sales Increase	6%	6%	5%	8%	10%	
Other Income—Net	2,090	1,780	1,770	1,700	1,310	
Cost of Goods Sold	208,725	169,386	154,822	134,235	103,883	
Selling and Administrative Expenses	41,280	36,340	31,670	27,450	22,540	
Interest:						
Interest Expense	(1,070)	(1,370)	(1,330)	(1,100)	(800)	
Interest Income	140	155	150	230	140	
Income Tax Expense	4,420	3,900	3,610	3,390	2,730	
Net Income	21,735	12,939	9,488	6,755	2,497	
Per Share of Common Stock:						
Net Income	1.10	0.80	0.70	0.50	0.28	
Dividends	0.45	0.43	0.39	0.35	0.31	
Financial Position						
Current Assets, Excluding Merchandise Inventory	\$ 30,900	\$ 27,200	\$ 26,800	\$ 24,400	\$ 21,800	
Merchandise Inventory	24,700	22,400	21,600	19,300	17,000	\$ 16,800
Property, Plant, and Equipment, Net	51,600	46,200	40,500	35,000	25,200	
Total Assets	107,200	95,800	88,900	78,700	64,000	
Current Liabilities	32,600	27,800	28,800	25,600	17,000	
Long-term Debt	23,000	21,200	16,800	18,600	12,900	
Stockholders' Equity	51,600	46,800	43,300	35,500	34,100	
Financial Ratios						
Acid-Test Ratio	0.9	1.0	0.9	1.0	1.3	
Rate of Return on Total Assets	22.5%	15.5%	12.8%	10.9%	9.9%	
Rate of Return on Common Stockholders' Equity	44.2%	28.7%	24.1%	19.4%	18.9%	

Requirements

Analyze the company's financial summary for the fiscal years 2014–2018 to decide whether to invest in the common stock of XYZ. Include the following sections in your analysis.

1. Trend analysis for net sales revenue and net income (use 2014 as the base year).
2. Profitability analysis.
3. Evaluation of the ability to sell merchandise inventory.
4. Evaluation of the ability to pay debts.
5. Evaluation of dividends.
6. Should you invest in the common stock of XYZ Athletic Supply, Inc.? Fully explain your final decision

CRITICAL THINKING

> Using Excel

P15-37 Using Excel for financial statement analysis

Download an Excel template for this problem online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

Riverside Sweets, a retail candy store chain, reported the following figures:

RIVERSIDE SWEETS		
Balance Sheet		
June 30, 2018 and 2019		
	2019	2018
Assets		
Current Assets:		
Cash	\$ 125,000	\$ 119,000
Short-term Investments	685,000	650,000
Accounts Receivable	225,000	198,000
Merchandise Inventory	65,000	70,000
Other Current Assets	195,000	191,000
Total Current Assets	<u>1,295,000</u>	<u>1,228,000</u>
Property, Plant, and Equipment, Net	875,000	832,000
Total Assets	\$ 2,170,000	\$ 2,060,000
Liabilities		
Current Liabilities:		
Accounts Payable	\$ 265,000	\$ 251,750
Accrued Liabilities	641,000	725,523
Total Current Liabilities	<u>906,000</u>	<u>977,273</u>
Long-term Liabilities		
Bonds Payable	250,000	150,000
Mortgage Payable	150,000	175,000
Total Long-term Liabilities	<u>400,000</u>	<u>325,000</u>
Total Liabilities	1,306,000	1,302,273
Stockholders' Equity		
Common Stock, \$1 par, 225,000 shares		
issued and outstanding	225,000	225,000
Paid-In Capital in Excess of Par	58,000	58,000
Retained Earnings	581,000	474,727
Total Stockholders' Equity	864,000	757,727
Total Liabilities and Stockholders' Equity	\$ 2,170,000	\$ 2,060,000

RIVERSIDE SWEETS	
Income Statement	
Year Ended June 30, 2019	
Net Sales Revenue	\$ 2,800,000
Cost of Goods Sold	1,551,600
Gross Profit	1,248,400
Operating Expenses	450,540
Operating Income	797,860
Other Income and (Expenses):	
Interest Expense	(15,000)
Income Before Income Taxes	782,860
Income Tax Expense	153,529
Net Income	\$ 629,331

Additional financial information:

- a. 75% of net sales revenue are on account.
- b. Market price of stock is \$36 per share on June 30, 2019.
- c. Annual dividend for 2019 was \$1.50 per share.
- d. All short-term investments are cash equivalents.

Requirements

1. Perform a horizontal analysis on the balance sheet for 2018 and 2019.
2. Perform a vertical analysis on the income statement.
3. Compute the following ratios:

a. Working Capital	k. Debt to Equity Ratio
b. Current Ratio	l. Times-Interest-Earned Ratio
c. Acid-Test (Quick) Ratio	m. Profit Margin Ratio
d. Cash Ratio	n. Rate of Return on Total Assets
e. Accounts Receivable Turnover	o. Asset Turnover Ratio
f. Days' Sales in Receivables	p. Rate of Return on Common Stockholders' Equity
g. Inventory Turnover	q. Earnings per Share (EPS)
h. Days' Sales in Inventory	r. Price/Earnings Ratio
i. Gross Profit Percentage	s. Dividend Yield
j. Debt Ratio	t. Dividend Payout

> Continuing Problem

P15-38 Using ratios to evaluate a stock investment

This problem continues the Let's Bike Company situation from Chapter 14. The company wants to invest some of its excess cash in trading securities and is considering two investments, The Workout Company (WC) and Cardio Equipment Company (CEC). The income statement, balance sheet, and other data for both companies follow for 2020 and 2019, as well as selected data for 2018:

	THE WORKOUT COMPANY Comparative Financial Statements Years Ended December 31			CARDIO EQUIPEMENT COMPANY Comparative Financial Statements Years Ended December 31		
	2020	2019	2018	2020	2019	2018
Income Statement						
Net Sales Revenue	\$ 520,800	\$ 503,280		\$ 482,600	\$ 453,020	
Cost of Goods Sold	302,064	294,419		326,720	308,054	
Gross Profit	218,736	208,861		155,880	144,966	
Operating Expenses	198,230	190,461		113,230	106,420	
Operating Income	20,506	18,400		42,650	38,546	
Interest Expense	1,020	972		3,820	4,080	
Income before Income Tax	19,486	17,428		38,830	34,466	
Income Tax Expense	4,383	3,840		7,943	6,153	
Net Income	\$ 15,103	\$ 13,588		\$ 30,887	\$ 28,313	
Balance Sheet						
Assets						
Cash & Cash Equivalents	\$ 89,167	\$ 84,231		\$ 73,560	\$ 64,925	
Accounts Receivable	50,428	49,980	\$ 49,350	41,020	39,210	\$ 37,900
Merchandise Inventory	84,120	77,200	79,170	62,380	59,520	54,970
Other Current Assets	12,400	10,200		23,450	23,980	
Total Current Assets	236,115	221,611		200,410	187,635	
Long-term Assets	92,105	93,289		153,200	158,305	
Total Assets	\$ 328,220	\$ 314,900	293,000	\$ 353,610	\$ 345,940	337,520
Liabilities						
Current Liabilities	\$ 72,651	\$ 65,180		\$ 80,164	\$ 75,689	
Long-term Liabilities	32,054	31,070		139,164	148,992	
Total Liabilities	104,705	96,250		219,328	224,681	
Stockholders' Equity						
Common Stock	94,762	100,000		91,579	99,230	
Retained Earnings	128,753	118,650		42,703	22,029	
Total Stockholders' Equity	223,515	218,650	223,000	134,282	121,259	102,930
Total Liabilities and Stockholder's Equity	\$ 328,220	\$ 314,900		\$ 353,610	\$ 345,940	
Other Data						
Market price per share	\$ 23.62	\$ 32.98		\$ 52.52	\$ 55.55	
Annual dividend per share	0.50	0.48		0.95	0.79	
Weighted average number of shares outstanding	10,000	9,250		10,750	9,750	

Requirements

1. Using the financial statements given, compute the following ratios for both companies for 2020 and 2019. Assume all sales are credit sales. Round all ratios to two decimal places.
 - a. Current ratio
 - b. Cash ratio
 - c. Inventory turnover
 - d. Accounts receivable turnover
 - e. Gross profit percentage
 - f. Debt ratio
 - g. Debt to equity ratio
 - h. Profit margin ratio
 - i. Asset turnover ratio
 - j. Rate of return on common stockholders' equity
 - k. Earnings per share
 - l. Price/earnings ratio
 - m. Dividend yield
 - n. Dividend payout
2. Compare the companies' performance for 2020 and 2019. Make a recommendation to Let's Bike Company about investing in these companies. Which company would be a better investment, The Workout Company or Cardio Equipment Company? Base your answer on ability to pay current liabilities, ability to sell merchandise and collect receivables, ability to pay long-term debt, profitability, and attractiveness as an investment.

> Decision Case 15-1

Lance Berkman is the controller of Saturn, a dance club whose year-end is December 31. Berkman prepares checks for suppliers in December, makes the proper journal entries, and posts them to the appropriate accounts in that month. However, he holds on to the checks and mails them to the suppliers in January.

Requirements

1. What financial ratio(s) is(are) most affected by the action to hold onto the checks until January?
2. What is Berkman's purpose in undertaking this activity?

> Ethical Issue 15-1

Ross's Lipstick Company's long-term debt agreements make certain demands on the business. For example, Ross may not purchase treasury stock in excess of the balance of retained earnings. Also, long-term debt may not exceed stockholders' equity, and the current ratio may not fall below 1.50. If Ross fails to meet any of these requirements, the company's lenders have the authority to take over management of the company.

Changes in consumer demand have made it hard for Ross to attract customers. Current liabilities have mounted faster than current assets, causing the current ratio to fall to 1.47. Before releasing financial statements, Ross's management is scrambling to improve the current ratio. The controller points out that an investment can be classified as either long-term or short-term, depending on management's intention. By deciding to convert an investment to cash within one year, Ross can classify the investment as short-term—a current asset. On the controller's recommendation, Ross's board of directors votes to reclassify long-term investments as short-term.

Requirements

1. What effect will reclassifying the investments have on the current ratio? Is Ross's true financial position stronger as a result of reclassifying the investments?
2. Shortly after the financial statements are released, sales improve; so, too, does the current ratio. As a result, Ross's management decides not to sell the investments it had reclassified as short-term. Accordingly, the company reclassifies the investments as long-term. Has management behaved unethically? Give the reasoning underlying your answer.

> Financial Statement Case 15-1

Use **Target Corporation**'s Fiscal 2015 Annual Report to answer the following questions. Visit <http://www.pearsonglobaleditions.com/Sitemap/Horngren/> to view a link to the Target Corporation Annual Report.

Requirements

1. Compute trend analyses for Sales and Net earnings / (loss). Use 2013 as the base year. What is the most notable aspect of these data?
2. Perform a vertical analysis for Target Corporation's balance sheet as of January 31, 2016 (fiscal year 2015), and January 31, 2015 (fiscal year 2014). Include only these main categories:

Assets:

- Total current assets
- Property and equipment, net
- Noncurrent assets of discontinued operations
- Other noncurrent assets
- Total assets

Liabilities and shareholders' investment:

- Total current liabilities
- Total noncurrent liabilities
- Total shareholders' investment
- Total liabilities and shareholders' investment

> Team Projects

Team Project 15-1

Select an industry you are interested in, and pick any company in that industry to use as the benchmark. Then select two other companies in the same industry. For each category of ratios, compute all the ratios for the three companies. Write a two-page report that compares the two companies with the benchmark company.

Team Project 15-2

Select a company and obtain its financial statements. Convert the income statement and the balance sheet to common size, and compare the company you selected to the industry average. The Risk Management Association's *Annual Statement Studies* and Dun & Bradstreet's *Industry Norms & Key Business Ratios* publish common-size statements for most industries.

Pearson MyLab Accounting

For a wealth of online resources, including exercises, problems, media, and immediate tutorial help, please visit <http://www.myaccountinglab.com>.

Quick Check Answers

1. b 2. b 3. a 4. c 5. a 6. b 7. d 8. c 9. a 10. c

Present Value Tables

Table A-1 | Present Value of \$1

Periods	Present Value									
	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%
1	0.990	0.980	0.971	0.962	0.952	0.943	0.935	0.926	0.917	0.909
2	0.980	0.961	0.943	0.925	0.907	0.890	0.873	0.857	0.842	0.826
3	0.971	0.942	0.915	0.889	0.864	0.840	0.816	0.794	0.772	0.751
4	0.961	0.924	0.888	0.855	0.823	0.792	0.763	0.735	0.708	0.683
5	0.951	0.906	0.863	0.822	0.784	0.747	0.713	0.681	0.650	0.621
6	0.942	0.888	0.837	0.790	0.746	0.705	0.666	0.630	0.596	0.564
7	0.933	0.871	0.813	0.760	0.711	0.665	0.623	0.583	0.547	0.513
8	0.923	0.853	0.789	0.731	0.677	0.627	0.582	0.540	0.502	0.467
9	0.914	0.837	0.766	0.703	0.645	0.592	0.544	0.500	0.460	0.424
10	0.905	0.820	0.744	0.676	0.614	0.558	0.508	0.463	0.422	0.386
11	0.896	0.804	0.722	0.650	0.585	0.527	0.475	0.429	0.388	0.350
12	0.887	0.788	0.701	0.625	0.557	0.497	0.444	0.397	0.356	0.319
13	0.879	0.773	0.681	0.601	0.530	0.469	0.415	0.368	0.326	0.290
14	0.870	0.758	0.661	0.577	0.505	0.442	0.388	0.340	0.299	0.263
15	0.861	0.743	0.642	0.555	0.481	0.417	0.362	0.315	0.275	0.239
16	0.853	0.728	0.623	0.534	0.458	0.394	0.339	0.292	0.252	0.218
17	0.844	0.714	0.605	0.513	0.436	0.371	0.317	0.270	0.231	0.198
18	0.836	0.700	0.587	0.494	0.416	0.350	0.296	0.250	0.212	0.180
19	0.828	0.686	0.570	0.475	0.396	0.331	0.277	0.232	0.194	0.164
20	0.820	0.673	0.554	0.456	0.377	0.312	0.258	0.215	0.178	0.149
21	0.811	0.660	0.538	0.439	0.359	0.294	0.242	0.199	0.164	0.135
22	0.803	0.647	0.522	0.422	0.342	0.278	0.226	0.184	0.150	0.123
23	0.795	0.634	0.507	0.406	0.326	0.262	0.211	0.170	0.138	0.112
24	0.788	0.622	0.492	0.390	0.310	0.247	0.197	0.158	0.126	0.102
25	0.780	0.610	0.478	0.375	0.295	0.233	0.184	0.146	0.116	0.092
26	0.772	0.598	0.464	0.361	0.281	0.220	0.172	0.135	0.106	0.084
27	0.764	0.586	0.450	0.347	0.268	0.207	0.161	0.125	0.098	0.076
28	0.757	0.574	0.437	0.333	0.255	0.196	0.150	0.116	0.090	0.069
29	0.749	0.563	0.424	0.321	0.243	0.185	0.141	0.107	0.082	0.063
30	0.742	0.552	0.412	0.308	0.231	0.174	0.131	0.099	0.075	0.057
40	0.672	0.453	0.307	0.208	0.142	0.097	0.067	0.046	0.032	0.022
50	0.608	0.372	0.228	0.141	0.087	0.054	0.034	0.021	0.013	0.009

Table A-2 | Present Value of Ordinary Annuity of \$1

Periods	Present Value									
	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%
1	0.990	0.980	0.971	0.962	0.952	0.943	0.935	0.926	0.917	0.909
2	1.970	1.942	1.913	1.886	1.859	1.833	1.808	1.783	1.759	1.736
3	2.941	2.884	2.829	2.775	2.723	2.673	2.624	2.577	2.531	2.487
4	3.902	3.808	3.717	3.630	3.546	3.465	3.387	3.312	3.240	3.170
5	4.853	4.713	4.580	4.452	4.329	4.212	4.100	3.993	3.890	3.791
6	5.795	5.601	5.417	5.242	5.076	4.917	4.767	4.623	4.486	4.355
7	6.728	6.472	6.230	6.002	5.786	5.582	5.389	5.206	5.033	4.868
8	7.652	7.325	7.020	6.733	6.463	6.210	5.971	5.747	5.535	5.335
9	8.566	8.162	7.786	7.435	7.108	6.802	6.515	6.247	5.995	5.759
10	9.471	8.983	8.530	8.111	7.722	7.360	7.024	6.710	6.418	6.145
11	10.368	9.787	9.253	8.760	8.306	7.887	7.499	7.139	6.805	6.495
12	11.255	10.575	9.954	9.385	8.863	8.384	7.943	7.536	7.161	6.814
13	12.134	11.348	10.635	9.986	9.394	8.853	8.358	7.904	7.487	7.103
14	13.004	12.106	11.296	10.563	9.899	9.295	8.745	8.244	7.786	7.367
15	13.865	12.849	11.938	11.118	10.380	9.712	9.108	8.559	8.061	7.606
16	14.718	13.578	12.561	11.652	10.838	10.106	9.447	8.851	8.313	7.824
17	15.562	14.292	13.166	12.166	11.274	10.477	9.763	9.122	8.544	8.022
18	16.398	14.992	13.754	12.659	11.690	10.828	10.059	9.372	8.756	8.201
19	17.226	15.678	14.324	13.134	12.085	11.158	10.336	9.604	8.950	8.365
20	18.046	16.351	14.877	13.590	12.462	11.470	10.594	9.818	9.129	8.514
21	18.857	17.011	15.415	14.029	12.821	11.764	10.836	10.017	9.292	8.649
22	19.660	17.658	15.937	14.451	13.163	12.042	11.061	10.201	9.442	8.772
23	20.456	18.292	16.444	14.857	13.489	12.303	11.272	10.371	9.580	8.883
24	21.243	18.914	16.936	15.247	13.799	12.550	11.469	10.529	9.707	9.085
25	22.023	19.523	17.413	15.622	14.094	12.783	11.654	10.675	9.823	9.077
26	22.795	20.121	17.877	15.983	14.375	13.003	11.826	10.810	9.929	9.161
27	23.560	20.707	18.327	16.330	14.643	13.211	11.987	10.935	10.027	9.237
28	24.316	21.281	18.764	16.663	14.898	13.406	12.137	11.051	10.116	9.307
29	25.066	21.844	19.188	16.984	15.141	13.591	12.278	11.158	10.198	9.370
30	25.808	22.396	19.600	17.292	15.372	13.765	12.409	11.258	10.274	9.427
40	32.835	27.355	23.115	19.793	17.159	15.046	13.332	11.925	10.757	9.779
50	39.196	31.424	25.730	21.482	18.256	15.762	13.801	12.233	10.962	9.915

Future Value Tables

Table A-3 | Future Value of \$1

Periods	Future Value							10%	12%	14%	15%	
	1%	2%	3%	4%	5%	6%	7%					
1	1.010	1.020	1.030	1.040	1.050	1.060	1.070	1.080	1.090	1.100	1.120	1.140
2	1.020	1.040	1.061	1.082	1.103	1.124	1.145	1.166	1.188	1.210	1.254	1.300
3	1.030	1.061	1.093	1.125	1.158	1.191	1.225	1.260	1.295	1.331	1.405	1.482
4	1.041	1.082	1.126	1.170	1.216	1.262	1.311	1.360	1.412	1.464	1.574	1.689
5	1.051	1.104	1.159	1.217	1.276	1.338	1.403	1.469	1.539	1.611	1.762	1.925
6	1.062	1.126	1.194	1.265	1.340	1.419	1.501	1.587	1.677	1.772	1.974	2.195
7	1.072	1.149	1.230	1.316	1.407	1.504	1.606	1.714	1.828	1.949	2.211	2.502
8	1.083	1.172	1.267	1.369	1.477	1.594	1.718	1.851	1.993	2.144	2.476	2.853
9	1.094	1.195	1.305	1.423	1.551	1.689	1.838	1.999	2.172	2.358	2.773	3.252
10	1.105	1.219	1.344	1.480	1.629	1.791	1.967	2.159	2.367	2.594	3.106	3.707
11	1.116	1.243	1.384	1.539	1.710	1.898	2.105	2.332	2.580	2.853	3.479	4.226
12	1.127	1.268	1.426	1.601	1.796	2.012	2.252	2.518	2.813	3.138	3.896	4.818
13	1.138	1.294	1.469	1.665	1.886	2.133	2.410	2.720	3.066	3.452	4.363	5.492
14	1.149	1.319	1.513	1.732	1.980	2.261	2.579	2.937	3.342	3.798	4.887	6.261
15	1.161	1.346	1.558	1.801	2.079	2.397	2.759	3.172	3.642	4.177	5.474	7.138
16	1.173	1.373	1.605	1.873	2.183	2.540	2.952	3.426	3.970	4.595	6.130	8.137
17	1.184	1.400	1.653	1.948	2.292	2.693	3.159	3.700	4.328	5.054	6.866	9.276
18	1.196	1.428	1.702	2.026	2.407	2.854	3.380	3.996	4.717	5.560	7.690	10.58
19	1.208	1.457	1.754	2.107	2.527	3.026	3.617	4.316	5.142	6.116	8.613	12.06
20	1.220	1.486	1.806	2.191	2.653	3.207	3.870	4.661	5.604	6.728	9.646	13.74
21	1.232	1.516	1.860	2.279	2.786	3.400	4.141	5.034	6.109	7.400	10.80	15.67
22	1.245	1.546	1.916	2.370	2.925	3.604	4.430	5.437	6.659	8.140	12.10	17.86
23	1.257	1.577	1.974	2.465	3.072	3.820	4.741	5.871	7.258	8.954	13.55	20.36
24	1.270	1.608	2.033	2.563	3.225	4.049	5.072	6.341	7.911	9.850	15.18	23.21
25	1.282	1.641	2.094	2.666	3.386	4.292	5.427	6.848	8.623	10.83	17.00	26.46
26	1.295	1.673	2.157	2.772	3.556	4.549	5.807	7.396	9.399	11.92	19.04	30.17
27	1.308	1.707	2.221	2.883	3.733	4.822	6.214	7.988	10.25	13.11	21.32	34.39
28	1.321	1.741	2.288	2.999	3.920	5.112	6.649	8.627	11.17	14.42	23.88	39.20
29	1.335	1.776	2.357	3.119	4.116	5.418	7.114	9.317	12.17	15.86	26.75	44.69
30	1.348	1.811	2.427	3.243	4.322	5.743	7.612	10.06	13.27	17.45	29.96	50.95
40	1.489	2.208	3.262	4.801	7.040	10.29	14.97	21.72	31.41	45.26	93.05	188.9
50	1.645	2.692	4.384	7.107	11.47	18.42	29.46	46.90	74.36	117.4	289.0	700.2

Table A-4 | Future Value of Ordinary Annuity of \$1

Periods	Future Value								
	1%	2%	3%	4%	5%	6%	7%	8%	9%
1	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2	2.010	2.030	2.040	2.050	2.060	2.070	2.080	2.090	2.100
3	3.030	3.091	3.122	3.153	3.184	3.215	3.246	3.278	3.310
4	4.060	4.122	4.184	4.246	4.310	4.375	4.440	4.506	4.573
5	5.101	5.204	5.309	5.416	5.526	5.637	5.751	5.867	5.985
6	6.152	6.308	6.468	6.633	6.802	6.975	7.153	7.336	7.523
7	7.214	7.434	7.662	7.898	8.142	8.394	8.654	8.923	9.193
8	8.286	8.583	8.892	9.214	9.549	9.897	10.26	10.64	11.03
9	9.369	9.755	10.16	10.58	11.03	11.49	11.98	12.49	13.02
10	10.46	10.95	11.46	12.01	12.58	13.18	13.82	14.49	15.19
11	11.57	12.17	12.81	13.49	14.21	14.97	15.78	16.65	17.56
12	12.68	13.41	14.19	15.03	15.92	16.87	17.89	18.98	20.14
13	13.81	14.68	15.62	16.63	17.71	18.88	20.14	21.50	22.95
14	14.95	15.97	17.09	18.29	19.60	21.02	22.55	24.21	26.02
15	16.10	17.29	18.60	20.02	21.58	23.28	25.13	27.15	29.36
16	17.26	18.64	20.16	21.82	23.66	25.67	27.89	30.32	33.00
17	18.43	20.01	21.76	23.70	25.84	28.21	30.84	33.75	36.97
18	19.61	21.41	23.41	25.65	28.13	30.91	34.00	37.45	41.30
19	20.81	22.84	25.12	27.67	30.54	33.76	37.38	41.45	46.02
20	22.02	24.30	26.87	29.78	33.07	36.79	41.00	45.76	51.16
21	23.24	25.78	28.68	31.97	35.72	39.99	44.87	50.42	56.76
22	24.47	27.30	30.54	34.25	38.51	43.39	49.01	55.46	62.87
23	25.72	28.85	32.45	36.62	41.43	47.00	53.44	60.89	69.53
24	26.97	30.42	34.43	39.08	44.50	50.82	58.18	66.76	76.79
25	28.24	32.03	36.46	41.65	47.73	54.86	63.25	73.11	84.70
26	29.53	33.67	38.55	44.31	51.11	59.16	68.68	79.95	93.32
27	30.82	35.34	40.71	47.08	54.67	63.71	74.48	87.35	102.7
28	32.13	37.05	42.93	49.97	58.40	68.53	80.70	95.34	113.0
29	33.45	38.79	45.22	52.97	62.32	73.64	87.35	104.0	124.1
30	34.78	40.57	47.58	56.08	66.44	79.06	94.46	113.3	136.3
40	48.89	60.40	75.40	95.03	120.8	154.8	199.6	259.1	337.9
50	64.46	84.58	112.8	152.7	209.3	290.3	406.5	573.8	815.1

Appendix B

Accounting Information Systems



What Should I Do with All This Paperwork?

Sara Faraday stared at the stack of papers on her desk. It was early January, and her accountant had called to remind her that she needed to submit the business's accounting information so that the tax return could be prepared. Sara is a stockholder and manager of a successful gourmet kitchen store that sells specialty food and kitchen products and also offers cooking classes and workshops. Sara loves interacting with her customers, whether she's helping them find the perfect kitchen product or teaching them a new technique. What she doesn't like about her business is the overwhelming amount of paperwork required to keep the business records. When she first started her business, she kept track of sales to customers and bills paid in a notebook. Now, though, her business has grown so much that it is no longer

efficient to keep track of her accounting records in this manner.

Sara is considering asking her accountant to help her set up a more efficient accounting information system. She wants a system that will save her time and make the recordkeeping process easier. In addition, she would like to find a way to record all of her transactions on the computer so that her business's information is easily accessible. Sara also wants a system that will produce reports, such as financial statements, that can help her make business decisions. She knows that there has to be an easier way to record the transactions than what she is currently doing.



Is There a More Efficient Way?

Before the invention of computers, businesses had to handle all of their accounting transactions manually—that is, one journal entry at a time using paper and pencil. As computer technology progressed, more and more accounting information was processed using an automated system. Now, most businesses use some form of computerized accounting software. It might be a very basic system that handles only accounting information, or it might be a very advanced system that stores not only accounting information, but also information about human resources, production, and customer services. For example, **McCormick & Company, Incorporated** started with a desire to be the global leader in flavor. The company manufactures, markets, and distributes spices, seasoning mixes, condiments, and other flavorful products. In 1889, founder Willoughby M. McCormick sold flavors and extracts door to door. As the business has grown into the multinational company, McCormick & Company had to find a way to keep track of all of the business's accounting information. The company uses a specialized computerized system that integrates all of its lines of business. In this appendix, we explore how accounting information systems, such as the one that McCormick & Company uses, can help a business run more efficiently and effectively.





Appendix B Learning Objectives



- | | |
|---|---|
| <p>1 Describe an effective accounting information system</p> <p>2 Journalize and post sales and cash receipts in a manual accounting information system using special journals and subsidiary ledgers</p> | <p>3 Journalize and post purchases, cash payments, and other transactions in a manual accounting information system using special journals and subsidiary ledgers</p> <p>4 Describe how transactions are recorded in a computerized accounting information system</p> |
|---|---|

WHAT IS AN ACCOUNTING INFORMATION SYSTEM?

Learning Objective 1

Describe an effective accounting information system

Accounting Information System (AIS)

A system that collects, records, stores, and processes accounting data to produce information that is useful for decision makers.

An **accounting information system (AIS)** collects, records, stores, and processes accounting data to produce information that is useful for decision makers. Businesses must have a way to collect and store data for a large number of transactions and then use that data to produce reports that investors, creditors, and managers can use to make decisions. Exhibit B-1 shows examples of business transactions and activities that are completed when using an accounting information system.

Exhibit B-1 | Business Transactions and AIS Activities

Business Transactions	AIS Activities
Sell merchandise inventory	Receipt of customer order Approval of credit sale Check availability of merchandise inventory Shipment of inventory to customer Processing of sales invoice Receipt of customer payment
Purchase of goods or services	Request for purchase of goods or services Approval of vendor Receipt of goods or services Processing of vendor invoice Payment for goods or services
Payroll	Approval of new employees Collection of time records Preparation and payment of payroll Preparation and payment of payroll taxes

Effective Accounting Information Systems

An effective accounting information system provides the following:

- Control
- Compatibility
- Flexibility
- Relevance
- Positive cost/benefit relationship



Control

An accounting information system must provide adequate controls of the business's assets and data. Internal controls can safeguard a business's assets and reduce the likelihood of fraud and errors. For example, a business needs procedures for making cash payments. An accounting information system creates the structure to encourage adherence to management's procedures.

Compatibility

A compatible system works smoothly with the business's employees and organizational structure. A small business doesn't need a big accounting information system. It could handle its accounting with an entry-level software package such as QuickBooks® or Sage® 50 Accounting (formerly called *Peachtree*). But a large company needs a different system—one that can manage multiple branches and track revenues and expenses in all divisions of the business.

Flexibility

An accounting information system must be flexible to accommodate changes in a business over time. Businesses might start selling some new products, or they might expand to new locations. This will require a more complicated accounting information system.

Relevance

An effective accounting information system provides information that is relevant. In other words, it improves decision making and reduces uncertainty. The information produced must be useful to the business in achieving its overall goals.

Positive Cost/Benefit Relationship

Control, compatibility, flexibility, and relevance can be expensive. A business needs a system that gives the most benefit for the least cost. A relatively inexpensive system, such as QuickBooks, may be the most economical way for a business to do its accounting. Or it may be necessary for a business to invest a large amount of cash in a more complicated system. In addition, the business must consider the cost of training employees to use the system and time spent on entering data into the system. The business must invest only in an accounting information system in which the benefits received outweigh the cost of the system.

An accounting information system can be either manual (completed using paper and pencil) or computerized. All the previously discussed features are needed whether the accounting information system is computerized or manual.

Components of an Accounting Information System

An accounting information system has three basic components:

- Source documents and input devices
- Processing and storage
- Outputs

Source Documents and Input Devices

All data must come from **source documents**, which provide the evidence for accounting transactions. Examples of source documents include purchase invoices, bank checks, and sales invoices. Many businesses have paper source documents that require employees to transfer data from the paper source document into the accounting information system. This can be done either by data entry procedures using a keyboard and computer or by using computerized scanning equipment.

Source Document

Provides the evidence and data for accounting transactions.



Most businesses now are using computerized accounting information systems to create electronic source documents and capture the data in electronic format. Examples include an electronic invoice and an electronic receiving report.

Source documents also provide control and reliability in an accounting information system. Standardized source documents that require specific data to be input ensure that each transaction is recorded accurately and completely. In addition, prenumbered source documents provide necessary control in a system by automatically assigning a sequential number to each new transaction.

Processing and Storage

Once data has been input into the system, it must be processed. In a manual accounting information system, processing includes journalizing transactions and posting to the accounts. A computerized system, on the other hand, uses software to process transactions. This software reads and edits transaction data. It allows businesses to process transactions without actually requiring employees to journalize and post to the accounts.

A business's data must also be stored. In a manual system, data are contained in paper documents that are often stored in filing cabinets and off-site document warehouses. Computerized systems now allow businesses to keep data on a main computer, called a **server**, that often allows employees to access information from anywhere in the world. The protection and security of a business's data have become increasingly important. Businesses must be aware of threats to their data such as hacking (unauthorized access) and malware (viruses and spyware). Companies are spending increasingly large amounts of cash to ensure that their data and information are secure.

Server

The main computer where data are stored, which can be accessed from many different computers.

Outputs

Outputs are the reports used for decision making, including the financial statements. In a manual system, reports and financial statements must be created using Word documents, Excel spreadsheets, PowerPoint presentations, or other software applications. In a computerized system, the accounting software can generate reports instantaneously that can be easily formatted and used to make business decisions.

TYING IT ALL TOGETHER

McCormick & Company, Incorporated is a global leader in flavor that manufactures, markets, and distributes spices, seasoning mixes, condiments, and other flavorful products. The company's brands include McCormick, Lawry's, and Club House. In addition, the company also markets authentic ethnic brands, such as Zatarain's, Thai Kitchen, and Simply Asia. (You can find McCormick & Company's annual report at http://phx.corporate-ir.net/phoenix.zhtml?c=65454&p=irol-sec&control_symbol=#14157537.)

How do companies, such as McCormick & Company, rely on information technology systems?

In the annual report, McCormick & Company state that the company relies on its information technology systems to operate its

business efficiently. Information technology systems allow companies to manage their business data, communications, supply chain, order entry and fulfillment, and other business processes.

What would happen if McCormick & Company's information technology systems fail to perform adequately?

McCormick & Company state, in its annual report, that a failure in its information technology system could disrupt its business and could result in transaction errors, processing inefficiencies, and the loss of sales and customers. Ultimately, the failure could cause McCormick & Company's business and results of operations to suffer.



Try It!

Match the benefit of an effective accounting information system with the definition.

Benefit	Definition
1. Control	a. Works smoothly with the business's employees and organization structure
2. Relevance	b. Can accommodate changes in the business over time
3. Flexibility	c. Provides safeguards for a business's assets and reduces the likelihood of fraud and errors
4. Compatibility	d. Benefits received outweigh the cost of the system
5. Positive cost/benefit relationship	e. Provides information that will improve decision making and reduce uncertainty

Check your answers online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercises SB-1 and SB-2.

Pearson MyLab Accounting

HOW ARE SALES AND CASH RECEIPTS RECORDED IN A MANUAL ACCOUNTING INFORMATION SYSTEM?

We will begin by reviewing how transactions are recorded in a manual accounting information system. You may be wondering why we cover manual accounting information systems when many businesses have computerized systems. There are three main reasons:

1. Learning a manual system equips you to work with both manual and computerized systems. The accounting is the same regardless of the system.
2. Few small businesses have computerized all their accounting. Even companies that use QuickBooks or Sage 50 Accounting, two popular entry-level accounting information systems, keep some manual accounting records.
3. Learning a manual system helps you master accounting.

Special Journals

In a manual system, transactions are classified by type. It is inefficient to record all transactions in the general journal, so businesses use special journals. A **special journal** is an accounting journal designed to record a specific type of transaction. Sales on account, cash receipts, purchases on account, and cash payments are treated as four separate categories and, therefore, create the four special journals. For example:

- Sales on account are recorded in a *sales journal*.
- Cash receipts are recorded in a *cash receipts journal*.
- Purchases of inventory and other assets on account are recorded in a *purchases journal*.
- Cash payments are recorded in a *cash payments journal*.
- Transactions that do not fit in any of the special journals, such as adjusting entries, are recorded in the *general journal*, which serves as the “journal of last resort.”

Learning Objective 2

Journalize and post sales and cash receipts in a manual accounting information system using special journals and subsidiary ledgers

Special Journal

An accounting journal designed to record one specific type of transaction.



The five types of transactions, the related journal, and the posting abbreviations used in a manual system are summarized in Exhibit B-2.

Exhibit B-2 | Manual Accounting Information System

Transaction	Journal	Posting Abbreviation
Sale on account	Sales journal	S
Cash receipt	Cash receipts journal	CR
Purchase on account	Purchases journal	P
Cash payment	Cash payments journal	CP
All others	General journal	J

Subsidiary Ledgers

Subsidiary Ledger

Record of accounts that provides supporting details on individual balances, the total of which appears in a general ledger account.

Accounts Receivable Subsidiary Ledger

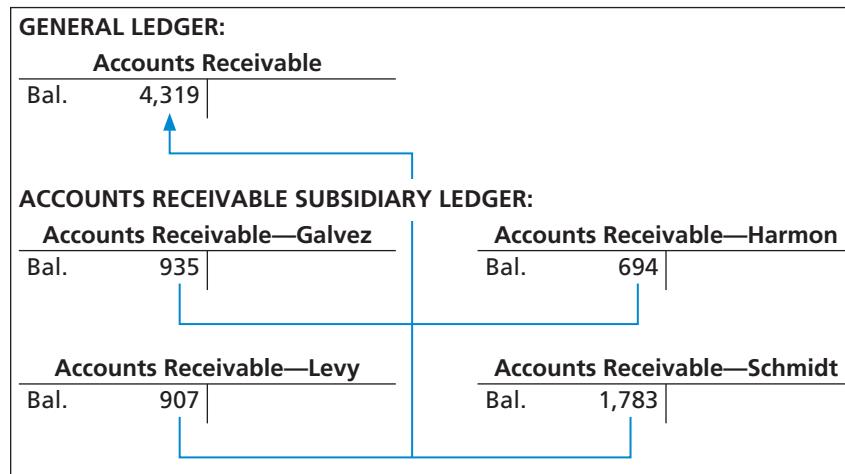
A subsidiary ledger that includes an accounts receivable account for each customer that contains detailed information such as the amount sold, received, and owed.

In addition to special journals, an accounting information system also uses subsidiary ledgers. A **subsidiary ledger** holds individual accounts that support a general ledger account. There are two common subsidiary ledgers: accounts receivable subsidiary ledger and accounts payable subsidiary ledger.

Accounts Receivable Subsidiary Ledger

The **accounts receivable subsidiary ledger** includes a receivable account for each customer. The customer name and account balance is detailed in the subsidiary ledger. In addition, the subsidiary ledger contains detailed information such as the amount sold, received, and still due for each customer. The total of the accounts in the accounts receivable subsidiary ledger must equal the Accounts Receivable balance in the general ledger. This is demonstrated in Exhibit B-3. The Accounts Receivable balance of \$4,319 in the general ledger equals the sum of the accounts in the accounts receivable subsidiary ledger ($\$935 + \$907 + \$694 + \$1,783$).

Exhibit B-3 | Accounts Receivable Subsidiary Ledger





The Accounts Receivable account in the general ledger is called a **control account**. A control account's balance equals the sum of the balances of the accounts in a subsidiary ledger.

Accounts Payable Subsidiary Ledger

To pay debts on time, a company must know how much it owes each supplier. Accounts Payable in the general ledger shows only a single total for the amount owed on account. It does not indicate the amount owed to each vendor. Companies keep an accounts payable subsidiary ledger that is similar to the accounts receivable subsidiary ledger.

The **accounts payable subsidiary ledger** lists vendors in alphabetical order, along with amounts purchased from the vendors, amounts paid to the vendors, and the remaining amounts owed to them. The total of the individual balances in the subsidiary ledger equals the Accounts Payable (control account) balance in the general ledger.

*Don't confuse the terms **customers** and **vendors**. Remember that a company sells to customers and purchases from vendors.*

Control Account

An account whose balance equals the sum of the balances in a group of related accounts in a subsidiary ledger.

Accounts Payable Subsidiary Ledger

A subsidiary ledger that includes an accounts payable account for each vendor that contains detailed information such as the amount purchased, paid, and owed.

The Sales Journal

Most merchandisers sell merchandise inventory on account. These credit sales are entered in the **sales journal**. The sales journal is used when recording the sale of merchandise inventory *on account*. The sale of merchandise inventory for cash is not recorded in the sales journal, but instead, it is recorded in the cash receipts journal. In addition, credit sales of assets other than merchandise inventory—for example, buildings—occur infrequently and are not recorded in the sales journal. They are, instead, recorded in the general journal.

Recording Transactions

Exhibit B-4 (on the next page) illustrates a sales journal (Panel A) and the related posting to the ledgers (Panel B). When a business completes a sale, the accountant enters the following information in the sales journal:

- Date
- Invoice number
- Customer name
- Transaction amount

Sales Journal

Special journal used to record credit sales.

**Exhibit B-4 | Sales Journal with Posting****PANEL A—Sales Journal:**

Sales Journal						Page 3
Date	Invoice No.	Customer Account Debited	Post. Ref.	Accounts Receivable DR Sales Revenue CR	Cost of Goods Sold DR Merchandise Inventory CR	
2018						
Nov. 2	422	Maria Galvez	✓	935	505	
13	423	Brent Harmon	✓	694	361	
18	424	Susan Levy	✓	907	517	
27	425	Clay Schmidt	✓	1,783	431	
Nov. 30		Total		4,319	1,814	
				(115/410)	(511/131)	

Individual accounts receivable are posted daily.

Totals are posted at the end of the month.

Totals are posted at the end of the month.

PANEL B—Posting to the Ledgers:**Accounts Receivable Subsidiary Ledger**

Maria Galvez					
				Balance	
Date	Post. Ref.	Debit	Credit	Debit	Credit
Nov. 2	S.3	935		935	

Brent Harmon					
				Balance	
Date	Post. Ref.	Debit	Credit	Debit	Credit
Nov. 13	S.3	694		694	

Susan Levy					
				Balance	
Date	Post. Ref.	Debit	Credit	Debit	Credit
Nov. 18	S.3	907		907	

Clay Schmidt					
				Balance	
Date	Post. Ref.	Debit	Credit	Debit	Credit
Nov. 27	S.3	1,783		1,783	

General Ledger

Accounts Receivable No. 115					
				Balance	
Date	Post. Ref.	Debit	Credit	Debit	Credit
Nov. 30	S.3	4,319		4,319	

Merchandise Inventory No. 131					
				Balance	
Date	Post. Ref.	Debit	Credit	Debit	Credit
Nov. 1	Bal.			3,885	
30	S.3		1,814	2,071	

Sales Revenue No. 410					
				Balance	
Date	Post. Ref.	Debit	Credit	Debit	Credit
Nov. 30	S.3		4,319		4,319

Cost of Goods Sold No. 511					
				Balance	
Date	Post. Ref.	Debit	Credit	Debit	Credit
Nov. 30	S.3	1,814		1,814	



Consider the first transaction in Panel A. On November 2, the business sold merchandise inventory on account, terms 15/20, n/30, to Maria Galvez for \$1,100 with a cost of \$505. The invoice number is 422. In Chapter 5, you learned that this transaction was recorded as follows when using the general journal:

Date	Accounts and Explanation	Debit	Credit
Nov. 2	Accounts Receivable Sales Revenue (\$1,100 – (\$1,100 × 0.15)) <i>Sale on account less discount.</i>	935	935
2	Cost of Goods Sold Merchandise Inventory <i>Recorded the cost of goods sold.</i>	505	505

$$\frac{A \uparrow}{\text{Accounts Receivable} \uparrow} = \left\{ \begin{array}{l} L + E \uparrow \\ \text{Sales Revenue} \uparrow \end{array} \right.$$

$$\frac{A \downarrow}{\text{Merchandise Inventory} \downarrow} = \left\{ \begin{array}{l} L + E \downarrow \\ \text{Cost of Goods Sold} \downarrow \end{array} \right.$$

When using special journals, instead of recording this transaction in the general journal, the business records the transaction in the sales journal. All of the information related to the sale appears on a single line in the sales journal as follows:

Sales Journal						Page 3
Date	Invoice No.	Customer Account Debited	Post. Ref.	Accounts Receivable DR Sales Revenue CR	Cost of Goods Sold DR Merchandise Inventory CR	
2018						
Nov. 2	422	Maria Galvez		935	505	

The Post. Ref. column is not used until the transaction is posted.

This part of the journal records the sales revenue and associated receivable.

This part of the journal records the expense and the reduction of merchandise inventory.

The entry records the sales revenue and associated accounts receivable by entering the net amount of the sale, \$935, in the Accounts Receivable DR, Sales Revenue CR column. The entry also records the expense of the sale and the reduction of merchandise inventory by recording the cost of the sale, \$505, in the Cost of Goods Sold DR, Merchandise Inventory CR column. By using a sales journal, the recording of sales is streamlined, thus saving a significant amount of time.

It's important to remember that a transaction is recorded in either the general journal or a special journal, but not in both. We are illustrating the general journal entry as a teaching tool to help you understand how the entry is recorded in the special journal. Transactions are not recorded in both journals. To do so would be to record the entry twice.

This business, like most other companies, uses a perpetual inventory system. Throughout this appendix, we illustrate the perpetual inventory system. When recording a sale, the business must record the Cost of Goods Sold and the decrease in Merchandise Inventory. If the business, instead, used a periodic inventory system, the sales journal would not need the last column (Cost of Goods Sold DR, Merchandise Inventory CR) because there is no entry recorded to Cost of Goods Sold and Merchandise Inventory at the time of the sale.



In the sales journal that we are using in this example, there are only two columns used for dollar amounts. One column records the sales revenue and accounts receivable, and the other column records the expense of the sale. Businesses that collect sales tax would need to modify the sales journal shown to include an additional column for Sales Taxes Payable. The modified sales journal would have the following headings:

Sales Journal								Page 3
Date	Invoice No.	Customer Account Debited	Post. Ref.	Accounts Receivable DR	Sales Taxes Payable CR	Sales Revenue CR	Cost of Goods Sold DR Merchandise Inventory CR	

Each business will modify its sales journal to fit the types of sales it makes. Remember, though, that only sales on account are recorded in the sales journal.

Posting

Entries in the sales journal are posted to both the accounts receivable subsidiary ledger and the general ledger.

Posting to the Accounts Receivable Subsidiary Ledger Individual accounts receivable are posted daily from the sales journal to the accounts receivable subsidiary ledger. For example, on November 2, the accountant posts the \$935 receivable to the individual accounts receivable for Maria Galvez. Entries in the Accounts Receivable DR, Sales Revenue CR column in the sales journal are posted daily to the subsidiary ledger to keep a current record of the amount receivable from each customer.

After posting to the subsidiary ledger, the accountant enters a check mark in the posting reference column of the sales journal (see Exhibit B-4). That lets the business know that the transaction was posted to Galvez's account.

Posting to the General Ledger At the end of the month, the accountant totals (commonly called *footing*) the Accounts Receivable DR, Sales Revenue CR, and Cost of Goods Sold DR, Merchandise Inventory CR columns. The totals of these columns are posted from the sales journal to the general ledger.

In Exhibit B-4 (Panel A), November's credit sales total \$4,319. The \$4,319 is posted to the Accounts Receivable and Sales Revenue accounts in the general ledger. The account numbers of each account are then printed beneath the total in the sales journal. In Panel B of Exhibit B-4, the account number for Accounts Receivable is 115 and the account number for Sales Revenue is 410. Entering these account numbers in the sales journal shows that the \$4,319 has been posted to the two accounts.

The debit to Cost of Goods Sold and the credit to Merchandise Inventory for the monthly total of \$1,814 are also posted at the end of the month. After posting, these accounts' numbers are entered beneath the total to show that Cost of Goods Sold and Merchandise Inventory have been updated.

As the accountant posts to the ledgers, the journal page number and journal name abbreviation are entered in the ledger account to show the source of the data. All transaction data in Exhibit B-4 originated on page 3 of the sales journal, so all posting references are S.3. "S" indicates sales journal. After posting, the Accounts Receivable balance in the general ledger should equal the sum of the individual customer balances in the subsidiary ledger.

Trace all the postings in Exhibit B-4. The way to learn an accounting information system is to study the flow of data. The arrows indicate the direction of the information.

The Cash Receipts Journal

Cash Receipts Journal

Special journal used to record cash receipts.

All businesses have lots of cash transactions, and therefore a **cash receipts journal** comes in handy. The cash receipts journal is a special journal that is used to record cash receipts.

Exhibit B-5 illustrates the cash receipts journal. Every transaction recorded in this journal is a cash receipt.


Exhibit B-5 | Cash Receipts Journal with Posting
PANEL A—Cash Receipts Journal:

Cash Receipts Journal									Page 5
Date	Account Credited		Post Ref.	Cash DR	Accounts Receivable CR	Sales Revenue CR	Sales Discounts Forfeited CR	Other Accounts CR	Cost of Goods Sold DR Merchandise Inventory CR
2018									
Nov. 6				517					
11	Note Payable to First Bank		221	1,000		517			290
14	Maria Galvez		✓	935	935				
19				853					
22	Brent Harmon		✓	700	694	853			426
25	Interest Revenue		460	762		1,802	6	762	991
28				1,802					
Nov. 30	Totals			6,569	1,629	3,172	6	1,762	1,707
				(101)	(115)	(410)	(420)	(X)	(511/131)

Totals are posted at the end of the month.
 Individual accounts receivable are posted daily.
 Total is not posted.
 Total is posted at the end of the month.

PANEL B—Posting to the Ledgers:

Accounts Receivable Subsidiary Ledger

Maria Galvez					
Balance					
Date	Post. Ref.	Debit	Credit	Debit	Credit
Nov. 2	S.3	935		935	
14	CR.5		935	0	

Brent Harmon					
Balance					
Date	Post. Ref.	Debit	Credit	Debit	Credit
Nov. 13	S.3	694		694	
22	CR.5		694	0	

Susan Levy					
Balance					
Date	Post. Ref.	Debit	Credit	Debit	Credit
Nov. 18	S.3	907		907	

Clay Schmidt					
Balance					
Date	Post. Ref.	Debit	Credit	Debit	Credit
Nov. 27	S.3	1,783		1,783	

General Ledger

Cash No. 101					
Balance					
Date	Post. Ref.	Debit	Credit	Debit	Credit
Nov. 30	CR.5	6,569		6,569	

Accounts Receivable No. 115					
Balance					
Date	Post. Ref.	Debit	Credit	Debit	Credit
Nov. 30	S.3	4,319		4,319	
30	CR.5		1,629	2,690	

Merchandise Inventory No. 131					
Balance					
Date	Post. Ref.	Debit	Credit	Debit	Credit
Nov. 1	Bal.			3,885	
30	S.3			1,814	2,071
30	CR.5	1,707		364	

Note Payable to First Bank No. 221					
Balance					
Date	Post. Ref.	Debit	Credit	Debit	Credit
Nov. 11	CR.5		1,000		1,000

Sales Revenue No. 410					
Balance					
Date	Post. Ref.	Debit	Credit	Debit	Credit
Nov. 30	S.3			4,319	
30	CR.5		3,172		7,491

Sales Discounts Forfeited No. 420					
Balance					
Date	Post. Ref.	Debit	Credit	Debit	Credit
Nov. 30	CR.5		6		6

Interest Revenue No. 460					
Balance					
Date	Post. Ref.	Debit	Credit	Debit	Credit
Nov. 25	CR.5		762		762

Cost of Goods Sold No. 511					
Balance					
Date	Post. Ref.	Debit	Credit	Debit	Credit
Nov. 30	S.3	1,814		1,814	
30	CR.5	1,707		3,521	



The main sources of cash are collections on account and cash sales. Collections on account are recorded in the Accounts Receivable CR column and the Cash DR column. Cash sales are recorded in the Sales Revenue CR column, the Cash DR column, and Cost of Goods Sold DR, Merchandise Inventory CR column. The cash receipts journal also has an Other Accounts CR column that is used to record miscellaneous cash receipt transactions and a Sales Discounts Forfeited CR column used to record sales discounts forfeited.

Recording Transactions

In Exhibit B-5, the first cash receipt occurred on November 6 and was a cash sale for \$517 (cost of goods sold, \$290). If the transaction had been recorded in the general journal, the following entries would have been recorded:

$A \uparrow$	$Cash \uparrow$	L	$E \uparrow$
			Sales Revenue \uparrow
$A \downarrow$	$Merchandise Inventory \downarrow$	L	$E \downarrow$
			Cost of Goods Sold \uparrow

Date	Accounts and Explanation	Debit	Credit
Nov. 6	Cash	517	
	Sales Revenue		517
	<i>Cash sale.</i>		
6	Cost of Goods Sold	290	
	Merchandise Inventory		290
	<i>Recorded the cost of goods sold.</i>		

By recording the transaction in the cash receipts journal instead, the entries can be recorded on one line. Observe the debit to Cash and the credit to Sales Revenue (\$517) and the debit to Cost of Goods Sold and credit to Merchandise Inventory (\$290) for the cost of the merchandise sold.

On November 11, the business borrowed \$1,000 from First Bank. If the transaction had been recorded in the general journal, the following entry would have been made:

$A \uparrow$	$Cash \uparrow$	$L \uparrow$	E
		Notes Payable \uparrow	

Date	Accounts and Explanation	Debit	Credit
Nov. 11	Cash	1,000	
	Note Payable to First Bank		1,000
	<i>Received cash in exchange for note.</i>		

By recording it in the cash receipts journal instead, the accountant would record the \$1,000 in the Cash DR column. The Other Accounts CR column is used for the Notes Payable credit because there is no specific credit column for borrowings. For this transaction, the account title, Note Payable to First Bank, is entered in the Account Credited column. The Other Accounts CR column is used when a transaction involves a credit entry that is not listed in the headings (columns) of the cash receipts journal. The entry on November 25 is another example. On November 25, the business received \$762 cash of interest revenue. The cash receipts journal does not include a column for credits to interest revenue; therefore, the Other Accounts CR column must be used and the credit account must be written in the Account Credited column.

On November 14, the business collected \$935 from Maria Galvez. Back on November 2, the business sold \$1,100 of merchandise to Galvez, terms 15/20, n/30 and recorded the net sale in the sales journal. This credit sale allowed a \$165 discount for prompt payment, and Galvez paid within the discount period. The business records this cash receipt in the cash receipts journal by debiting Cash for \$935 and by crediting Accounts Receivable for \$935. The customer's name appears in the Account Credited column.



The business does not have to deal with the sales discount associated with the Galvez sale because the sale was recorded net of discount at the time of sale. Only when a customer does not take advantage of the discount will the business use the Sales Discounts Forfeited CR column. Let's look at Brent Harmon as an example. On November 22, the business collected \$700 from Brent Harmon representing the \$694 he owed plus \$6 sales discounts forfeited. Because Harmon did not pay within the discount period, he must pay more than the amount of the receivable. The transaction is recorded in the cash receipts journal as a \$700 Cash DR, \$694 Accounts Receivable CR, and \$6 Sales Discounts Forfeited CR.

Posting

As with the sales journal, entries in the cash receipts journal are posted daily to the accounts receivable subsidiary ledger and monthly to the general ledger.

Posting to the Accounts Receivable Subsidiary Ledger Amounts from the cash receipts journal are posted to the accounts receivable subsidiary ledger daily. The postings are credits. Trace the \$935 credit to Maria Galvez's account. It reduces her balance to zero. The receipt from Brent Harmon reduces his balance to \$0. After posting, the accountant enters a check mark in the posting reference column of the cash receipts journal and shows the CR.5 posting reference in the subsidiary ledger. CR.5 signifies that the posting is transferred from the cash receipts journal, page 5.

The posting reference CR.5 should not be confused with the abbreviation for credit, CR. The posting reference for the cash receipts journal always includes a page reference while the abbreviation for credit does not.

Posting to the General Ledger At the end of the month, each column in the cash receipts journal is totaled. The equality of the debits and credits is verified by comparing the sum of all debit columns to the sum of all credit columns.

Debit Columns	Credit Columns	
Cash	\$ 6,569	Accounts Receivable
Cost of Goods Sold	1,707	Sales Revenue
		Sales Discounts Forfeited
		6
		Other Accounts
		1,762
		Merchandise Inventory
		1,707
Total	<u><u>\$ 8,276</u></u>	<u><u>\$ 8,276</u></u>

All columns, except for the Other Accounts CR column, are posted in total to the general ledger. For example, the total for Cash (\$6,569) is posted as a debit in the Cash account in the general ledger. After posting, the account number is printed below the column total in the cash receipts journal. The account number for Cash (101) appears below the column total, and likewise for the other column totals. The journal reference (CR) and page number (5) are shown in the general ledger as reference of the posting. Follow the arrows in Exhibit B-5, which track the posted amounts.

The column total for Other Accounts CR is *not* posted. Instead, these credits are posted individually. In Exhibit B-5, the November 11 transaction reads "Note Payable to First Bank." This \$1,000 credit entry will need to be posted individually to the Note Payable to First Bank account in the general ledger. The account number (221) in the Post. Ref. column shows that the transaction amount was posted individually. The letter X below the column means that the column total was *not* posted.



After posting, the sum of the individual ending balances in the accounts receivable subsidiary ledger equals the ending balance of Accounts Receivable in the general ledger, as follows:

GENERAL LEDGER		
Accounts Receivable debit balance		\$ 2,690
SUBSIDIARY LEDGER: CUSTOMER ACCOUNTS RECEIVABLE		
Customer		Balance
Maria Galvez		\$ 0
Brent Harmon		0
Susan Levy		907
Clay Schmidt		1,783
Total Accounts Receivable		\$ 2,690

These should be equal.

Try It!

6. Evenson Co. sold merchandise inventory on account, terms n/30, to Brain Crain, \$300. The cost of the goods sold was \$240. What special journal should the transaction be recorded in, and what is the column used for the \$300?

Check your answer online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercises SB-3 through SB-7. [Pearson MyLab Accounting](#)

HOW ARE PURCHASES, CASH PAYMENTS, AND OTHER TRANSACTIONS RECORDED IN A MANUAL ACCOUNTING INFORMATION SYSTEM?

Learning Objective 3

Journalize and post purchases, cash payments, and other transactions in a manual accounting information system using special journals and subsidiary ledgers

Purchases Journal

Special journal used to record all purchases of merchandise inventory, office supplies, and other assets on account.

In the previous section, you learned that when using a manual accounting information system, sales on account are recorded in the sales journal and cash receipts are recorded in the cash receipts journal. We now turn our attention to purchases and cash payments.

The Purchases Journal

A merchandising business purchases merchandise inventory and other items, such as office supplies, equipment, and furniture, on account. The **purchases journal** handles these transactions plus other purchases incurred *on account*. Cash purchases are not recorded in the purchases journal; instead, they are recorded in the cash payments journal.

Exhibit B-6 illustrates a purchases journal (Panel A) and posting to the ledgers (Panel B). The purchases journal has special columns for:

- Credits to Accounts Payable
- Debits to Merchandise Inventory, Office Supplies, and Other Accounts

The Other Accounts DR columns are used for purchases on account of items other than merchandise inventory and office supplies. This business uses a perpetual inventory system. In a periodic inventory system, the Merchandise Inventory DR column would be replaced with a column titled Purchases DR.



Exhibit B-6 | Purchases Journal with Posting

PANEL A—Purchases Journal:

Date	Vendor Account Credited	Terms	Post. Ref.	Accounts Payable CR	Merchandise Inventory DR	Office Supplies DR	Other Accounts DR			Page 8
							Account Title	Post. Ref.	Amount	
2018										
Nov. 2	Hanes Textiles	3/15, n/30		✓	700					
5	Pioneer Plastics	n/30		✓	319					
9	City Office Supply	2/10, n/30		✓	440					
12	Advanced Printing	n/30		✓	236					
13	Hanes Textiles	3/15, n/30		✓	451					
19	City Office Supply	2/10, n/30		✓	103					
23	O'Leary Furniture	n/60		✓	627					
Nov. 30	Totals				2,876	1,706	103		1,067	
					(210)	(131)	(161)		(X)	

Individual accounts payable are posted daily.

Totals are posted at the end of the month.

Total is not posted.

Individual amounts are posted at the end of the month.

PANEL B—Posting to the Ledgers:

Accounts Payable Subsidiary Ledger

Advanced Printing					
Balance					
Date	Post. Ref.	Debit	Credit	Debit	Credit
Nov. 12	P.8		236		236
City Office Supply					
Balance					
Date	Post. Ref.	Debit	Credit	Debit	Credit
Nov. 9	P.8		440		440
19	P.8		103		543
Hanes Textiles					
Balance					
Date	Post. Ref.	Debit	Credit	Debit	Credit
Nov. 2	P.8		700		700
13	P.8		451		1,151
O'Leary Furniture					
Balance					
Date	Post. Ref.	Debit	Credit	Debit	Credit
Nov. 23	P.8		627		627
Pioneer Plastics					
Balance					
Date	Post. Ref.	Debit	Credit	Debit	Credit
Nov. 5	P.8		319		319

General Ledger

Merchandise Inventory No. 131					
Balance					
Date	Post. Ref.	Debit	Credit	Debit	Credit
Nov. 1	Bal.			3,885	
30	S.3			1,814	2,071
30	CR.5			1,707	364
30	P.8	1,706			2,070
Office Supplies No. 161					
Balance					
Date	Post. Ref.	Debit	Credit	Debit	Credit
Nov. 30	P.8	103			103
Furniture No. 181					
Balance					
Date	Post. Ref.	Debit	Credit	Debit	Credit
Nov. 23	P.8	627			627
Equipment No. 191					
Balance					
Date	Post. Ref.	Debit	Credit	Debit	Credit
Nov. 9	P.8	440			440
Accounts Payable No. 210					
Balance					
Date	Post. Ref.	Debit	Credit	Debit	Credit
Nov. 30	P.8		2,876		2,876



Recording Transactions

Let's begin by looking at the first transaction. On November 2, the business purchased merchandise inventory costing \$700 from Hanes Textiles on account. If the transaction had been recorded in the general journal, the following entry would have been recorded:

A↑		L↑	E	Date	Accounts and Explanation	Debit	Credit
Merchandise Inventory↑	=	Accounts Payable↑		Nov. 2	Merchandise Inventory	700	
					Accounts Payable		700
					<i>Purchased inventory on account.</i>		

By recording the entry in the purchases journal, the transaction can be recorded on one line. The vendor's name (Hanes Textiles) is entered in the Vendor Account Credited column. The purchase terms of 3/15, n/30 are also entered to show the due date and the discount available. Accounts Payable is credited for the transaction amount, and Merchandise Inventory is debited.

Note the November 9 purchase of equipment on account from City Office Supply. The purchases journal holds no column for equipment, so the business uses the Other Accounts DR columns. Because this was a credit purchase, the accountant enters the vendor name (City Office Supply) in the Vendor Account Credited column and Equipment in the Account Title column.

Posting

Entries from the purchases journal are posted daily to the accounts payable subsidiary ledger and monthly to the general ledger.

Accounts Payable Subsidiary Ledger Individual accounts payable are posted daily from the purchases journal to the accounts payable subsidiary ledger. This allows the business to always have a current record of the accounts payable for each vendor. For example, on November 2, the business would post the \$700 accounts payable credit to the Hanes Textiles account in the accounts payable subsidiary ledger. After posting, the accountant enters a check mark in the posting reference column of the purchases journal to indicate that the amount was posted in the subsidiary ledger. In addition, the posting reference (P.8) is printed in the subsidiary ledger.

Posting to the General Ledger Posting from the purchases journal is similar to posting from the other special journals. Exhibit B-6, Panel B, illustrates the posting process. At the end of each month, each column in the journal is totaled. All totals, except the Other Accounts DR Amount column, are posted to the general ledger. For example, the \$2,876 Accounts Payable CR total is posted to the Accounts Payable account in the general ledger as a credit. After posting, the account number is listed in the purchases journal and the posting reference is listed in the general ledger. The column total for Other Accounts DR Amount is *not* posted. Instead, these debits are posted individually to the specific accounts, as done in the cash receipts journal. After all posting is complete, the Accounts Payable ending balance in the general ledger should equal the sum of the individual vendor ending balances in the subsidiary ledger.

The Cash Payments Journal

Businesses make most cash payments by check, and all checks (and payments of currency) are recorded in the **cash payments journal**. This special journal is also called the *check register* and the *cash disbursements journal*. Exhibit B-7 shows the cash payments journal, with the ledgers in Panel B.

Cash Payments Journal

Special journal used to record cash payments by check and currency.


Exhibit B-7 | Cash Payments Journal with Posting

PANEL A-Cash Payments Journal:

Cash Payments Journal								Page 6
Date	Ck. No.	Account Debited	Post. Ref.	Other Accounts DR	Accounts Payable DR	Merchandise Inventory CR	Cash CR	
2018								
Nov. 3	101	Rent Expense	541	1,200			1,200	
8	102	Office Supplies	161	61			61	
15	103	Hanes Textiles	✓		700	21	679	
20	104	Pioneer Plastics	✓		119		119	
26	105	Merchandise Inventory	131	2,200			2,200	
Nov. 30			Totals		3,461	819	21	4,259
				(X)	(210)	(131)	(101)	

Total is not posted.

Individual accounts payable are posted daily.

Totals are posted at the end of the month.

PANEL B-Posting to the Ledgers:

Accounts Payable Subsidiary Ledger

Advanced Printing					
				Balance	
Date	Post. Ref.	Debit	Credit	Debit	Credit
Nov. 12	P.8		236		236

Individual accounts are posted at the end of the month.

City Office Supply					
				Balance	
Date	Post. Ref.	Debit	Credit	Debit	Credit
Nov. 9	P.8		440		440
19	P.8		103		543

Hanes Textiles					
				Balance	
Date	Post. Ref.	Debit	Credit	Debit	Credit
Nov. 2	P.8		700	700	
13	P.8		451		1,151
15	CP.6	700			451

O'Leary Furniture Co.					
				Balance	
Date	Post. Ref.	Debit	Credit	Debit	Credit
Nov. 23	P.8		627		627

Pioneer Plastics					
				Balance	
Date	Post. Ref.	Debit	Credit	Debit	Credit
Nov. 5	P.8		319	319	
20	CP.6	119			200

General Ledger

Cash					
No. 101					
				Balance	
Date	Post. Ref.	Debit	Credit	Debit	Credit
Nov. 30	CR. 5	6,569		6,569	
	30 CP. 6		4,259	2,310	

Merchandise Inventory					
No. 131					
				Balance	
Date	Post. Ref.	Debit	Credit	Debit	Credit
Nov. 1	Bal.			3,885	
26	CP.6	2,200		6,085	
30	S.3		1,814	4,271	
30	CR.5		1,707	2,564	
30	P.8	1,706		4,270	
30	CP.6		21	4,249	

Office Supplies					
No. 161					
				Balance	
Date	Post. Ref.	Debit	Credit	Debit	Credit
Nov. 8	CP.6	61		61	
30	P.8	103			164

Accounts Payable					
No. 210					
				Balance	
Date	Post. Ref.	Debit	Credit	Debit	Credit
Nov. 30	P.8		2,876	2,876	
	30 CP.6	819			2,057

Rent Expense					
No. 541					
				Balance	
Date	Post. Ref.	Debit	Credit	Debit	Credit
Nov. 3	CP.6	1,200		1,200	



The cash payments journal has two debit columns—one for Other Accounts and one for Accounts Payable. It has two credit columns—one for Merchandise Inventory (for purchase discounts) and one for Cash. This special journal also has columns for the date and check number of each cash payment and the account debited.

Recording Transactions

Let's review the first transaction listed in the cash payments journal. On November 3, the business paid cash of \$1,200 for rent. This payment of cash is recorded in the cash payments journal by entering \$1,200 in the Cash CR column and the Other Accounts DR column. The Other Accounts DR column is used to record debits to accounts for which no special column exists. The business enters the name of the other account used, Rent Expense, in the Account Debited column. The Other Accounts DR column was also used on November 8 for the purchase of office supplies for cash and on November 26 for the purchase of Merchandise Inventory with cash.

On November 15, the business paid the vendor, Hanes Textiles, on account, with credit terms of 3/15, n/30 (for details, see the first transaction in the purchases journal, Exhibit B-6). Paying within the discount period allowed a 3% discount (\$21), and the business paid the remaining \$679 (\$700 less the \$21 discount). If the business had recorded the transaction in the general journal, the following would have been recorded:

A↓		L↓	E	Date	Accounts and Explanation	Debit	Credit
Cash↓	=	Accounts		Nov. 15	Accounts Payable	700	
Merchandise		Payable↓			Cash		679
Inventory↓					Merchandise Inventory		21
					<i>Paid within discount period.</i>		

Instead, the business will record the transaction in the cash payments journal. The entry will be recorded by entering the \$679 in the Cash CR column. The Accounts Payable DR column will be recorded for \$700, and the discount of \$21 will be entered into the Merchandise Inventory CR column. All transactions involving cash payments are recorded in the cash payments journal.

Posting

Entries in the cash payments journal are posted daily to the accounts payable subsidiary ledger and monthly to the general ledger.

Posting to the Accounts Payable Subsidiary Ledger Posting from the cash payments journal is similar to posting from the cash receipts journal. Individual vendor amounts (accounts payable) are posted daily to the accounts payable subsidiary ledger. The postings are debits and reduce the balance in the individual accounts payable account. Trace the \$700 debit to Hanes Textiles's Accounts Payable. The \$700 reduces the balance in the Hanes's subsidiary account to \$451. After posting, a check mark is entered in the cash payments journal and the posting reference (CP.6) is printed in the subsidiary ledger.

Posting to the General Ledger At the end of the month, each column is totaled. The totals, except for the Other Accounts DR column, are posted to the specific general ledger accounts. After posting, the account number is printed below the column total in the cash payments journal and the posting reference is printed in the general ledger.



Amounts in the Other Accounts DR column are posted individually (for example, Rent Expense—debit \$1,200). When each Other Account DR is posted to the general ledger, the account number is printed in the Post. Ref. column. The letter X below the Other Accounts DR column signifies that the total is *not* posted.

To review accounts payable, companies list individual vendor ending balances in the accounts payable subsidiary ledger. The general ledger and subsidiary ledger totals should agree.

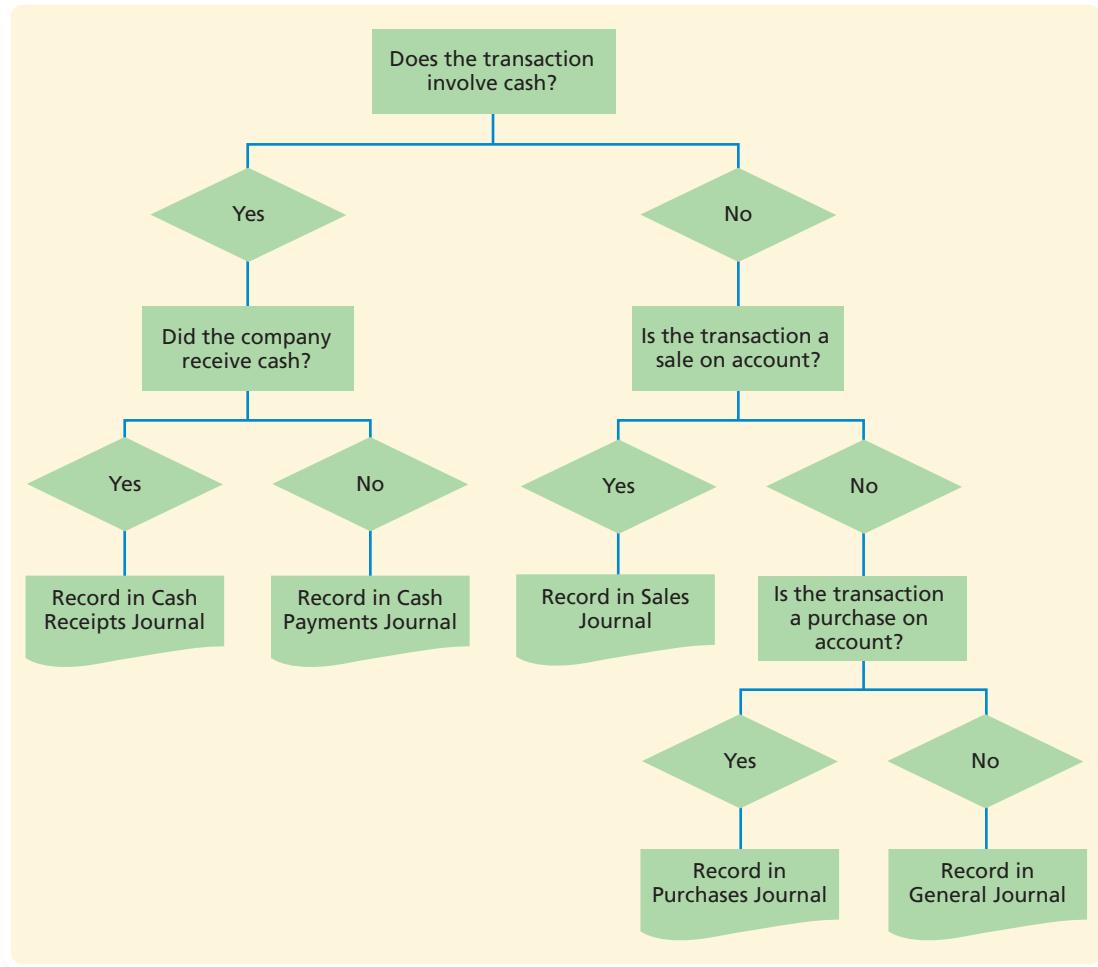
GENERAL LEDGER	
Accounts Payable credit balance	<u>\$ 2,057</u>
SUBSIDIARY LEDGER: ACCOUNTS PAYABLE	
Vendor	Balance
Advanced Printing	\$ 236
City Office Supply	543
Hanes Textiles	451
O'Leary Furniture Co.	627
Pioneer Plastics	200
Total Accounts Payable	<u><u>\$ 2,057</u></u>

These should be equal.

The General Journal

Special journals save time recording repetitive transactions. But some transactions don't fit a special journal. Examples include the adjusting entries for depreciation, the expiration of prepaid insurance, and the accrual of salaries payable at the end of the period. Companies also use the general journal for sales returns and allowances and purchase returns and allowances not involving cash receipts or cash payments. All accounting information systems need a general journal. The adjusting entries and the closing entries are recorded in the general journal, along with other nonroutine transactions.

As we have seen, a manual accounting information system involves five journals: sales journal, cash receipts journal, purchases journal, cash payments journal, and the general journal. It's important to remember that transactions are recorded in either one of the special journals or in the general journal, but not both. Exhibit B-8 (on the next page) provides a summary of all five journals that will help you decide which journal to use when recording transactions in a manual system.


Exhibit B-8 | Recording Transactions in Special Journals


Try It!

7. Fiscella Co. paid monthly rent of \$2,000. What special journal should the transaction be recorded in? What columns will be used?

Check your answer online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercises SB-8 through SB-12.

Pearson MyLab Accounting



HOW ARE TRANSACTIONS RECORDED IN A COMPUTERIZED ACCOUNTING INFORMATION SYSTEM?

A computerized accounting information system has two basic components:

- Hardware
- Software

Hardware is the electronic equipment: computers, monitors, printers, and the network that connects them. Most systems require a **network** to link computers. In a networked system, the server stores the program and the data.

Software is the set of programs that drives the computer. Accounting software reads, edits, and stores transaction data. It also generates the reports that businesses can use to make decisions. Many software packages are flexible. For example, a small cleaning business may be only partly computerized. This small business may use the computer for employee payrolls, but other parts of the accounting information system may be manual.

Entry-Level Software

With increased availability of affordable computerized accounting information systems, more and more businesses are completing all of their accounting on the computer. Two popular entry-level software packages are QuickBooks and Sage 50 Accounting. Both of these programs allow businesses to enter sales of services and merchandise inventory. In addition, these programs can record expenses and produce reports such as financial statements. These computerized accounting information systems are relatively easy to use, often requiring little knowledge of accounting or GAAP. Computerized accounting software allows businesses to organize finances, track sales and expenses, and complete recordkeeping. QuickBooks and Sage 50 Accounting, though, work best for small businesses. As businesses grow and expand, they need a software system that can handle more advanced processes and transactions.

Enterprise Resource Planning (ERP) Systems

Larger companies will often use an **enterprise resource planning (ERP)** system to manage their data. ERP systems such as SAP® and Oracle® can integrate all company data into a single database. ERP feeds the data into software for all company activities—from purchasing to production and customer service.

Advantages of ERP systems include:

- Reduce operating costs.
- Help companies adjust to changes.
- Replace separate software systems, such as sales and payroll.

Disadvantages of ERP systems include:

- ERP is expensive. Major installations can cost millions of dollars.
- Implementation also requires a large commitment of time and people.

Many ERP systems and entry-level systems can be offered in the “cloud.” Cloud computing refers to purchasing software and data storage from a third party. In **cloud computing**, the software and data are stored on the third-party server instead of by the business. Employees access the software and data via the Internet by using a Web browser. Cloud computing can reduce costs by a significant amount for many businesses.

Learning Objective 4

Describe how transactions are recorded in a computerized accounting information system

Hardware

Electronic equipment that includes computers, monitors, printers, and the network that connects them.

Network

The system of electronic linkages that allows different computers to share the same information.

Software

Set of programs or instructions that drives the computer to perform the work desired.

Enterprise Resource Planning (ERP)

Software system that can integrate all of a company's functions, departments, and data into a single system.

Cloud Computing

Software and data are stored on a third-party server instead of by the business and can be accessed by employees via the Internet.



QuickBooks

One way to understand how computerized accounting software works is to view how transactions are handled in this type of system. We are now going to look at a common entry-level system, QuickBooks. Although your instructor might not have you complete any assignments using QuickBooks, it will be helpful to view the way QuickBooks handles common accounting entries.

Most computerized accounting information systems are organized by function or task. A user can select a function, such as creating an invoice, from a menu. (A menu is a list of options for choosing computer functions.) QuickBooks uses a navigation panel located on the left-hand side of the screen that allows users to select from a menu of options such as Customers, Vendors, Employees, Transactions, and Reports. The tabs (Customers, Vendors, Employees, Transactions, and Reports) on the navigation panel handle all transactions that a company would use. Transactions involving customers, including invoices (accounts receivable), receipt of payments, and sales returns, would be recorded on the Customers tab. The Vendors tab handles transactions involving vendors, including entering bills (accounts payable), paying bills, and processing refunds. The financial reports of a business such as the income statement and balance sheet are also accessible from the navigation panel.

ETHICS

Should I change the transaction?

Girmanesh Landin is responsible for recording all of the transactions for Marshall's Home Care. This is Girmanesh's first job as a staff accountant, and she wants to do a good job. Last week, she recorded several cash payments for bills in the computerized accounting information system. She now realizes that she selected the incorrect cash account. She selected the savings account instead of the checking account. Girmanesh knows that she could go back into each transaction and make the correction without anyone knowing that she made the mistake, but she is unsure of what to do. Should Girmanesh make the correction?

Solution

Because Girmanesh is new to the job, she should find out the procedure for making corrections in the accounting

information system before she changes each transaction. Attempting to hide her mistakes could cause her integrity to be questioned because it would appear that she was trying to cover up things rather than ask for clarification and help. Most businesses will prefer that Girmanesh make a separate correcting entry instead of going back in and changing the incorrect transaction. This procedure allows for businesses to have a record of the original transaction and then the correcting entry. It is generally never a good idea to change transactions that have already been recorded, and many software systems will not allow such actions as a method to prevent fraud.

Creating a Sales Invoice

Suppose on June 23, Smart Touch Learning performed \$3,000 of services for Richard Michura on account. To record this transaction in QuickBooks, Smart Touch Learning would need to create an invoice for Richard. Exhibit B-9 shows the invoice the company created. Notice that there are no debits and credits on the invoice. In a computerized accounting information system, the business does not have to record the transaction in debit and credit format. Instead, by creating the invoice, the software knows automatically to record a debit to Accounts Receivable—Michura and a credit to Sales Revenue. After creating the invoice, the software posts the transaction to the appropriate general ledger accounts. There is no need for the business to manually post the transaction; the software takes care of the posting process.


Exhibit B-9 | Invoice

Invoice #1001

Billing address: Richard Michura, 134 Church Street, Round Rock, TX 78681 USA

#	PRODUCT/SERVICE	DESCRIPTION	QTY	RATE	AMOUNT
1	Sales	Online courses	1	3,000	3,000.00
2					

Total: \$3,000.00
Balance due: \$3,000.00

Message displayed on invoice:

Cancel Revert Print or Preview Make recurring Customize More Save Save and send

Quickbooks screenshot. Reprinted with permission © Quicken Inc. All rights reserved.

When Smart Touch Learning receives the \$3,000 from the customer, the accounting clerk will enter the transaction in the Customers tab of QuickBooks by locating the customer's invoice and selecting the "Receive payment" action. By doing this, QuickBooks identifies that the invoice has been paid and that Richard Michura has no further outstanding balance.

Entering Bills

When a business needs to record a bill received, it will use the Vendors tab of QuickBooks. Suppose that on June 25, Smart Touch Learning receives a \$580 bill for utilities. Exhibit B-10 shows the bill that the company will record in QuickBooks. When Smart Touch Learning saves the bill, the software will automatically record a debit to Utilities Expense and credit to Accounts Payable—Smart Energy.

Exhibit B-10 | Bill

Bill #A-45098

Mailing address: Smart Energy, 54 Dandelion Avenue, Denver, CO 80505 USA

#	ACCOUNT	DESCRIPTION	AMOUNT
1	Utilities		580.00
2			

Total: \$580.00

Memo:

Make payment Print or Preview Make recurring More Save and close

Quickbooks screenshot. Reprinted with permission © Quicken Inc. All rights reserved.



On July 5, when Smart Touch Learning makes payment on the bill, it will enter the payment in the Vendors tab of QuickBooks. The accounting clerk will select the bill to be paid and record the payment by selecting the “Make payment” action. Again, the software takes care of recording the journal entry and posting to the ledger accounts.

Viewing Financial Statements

QuickBooks has the ability to produce numerous reports such as the income statement (called *Profit & Loss* in QuickBooks), balance sheet, and statement of cash flows. The software can also be used to create accounts receivable and accounts payable aging schedules. Exhibit B-11 shows an example of an income statement for Smart Touch Learning.

Exhibit B-11 | Income Statement

The screenshot shows the QuickBooks software interface with a dark blue sidebar on the left containing icons for Home, Customers, Vendors, Employees, Transactions, Reports, Taxes, and Apps. The main area is titled "Smart Touch Learning PROFIT AND LOSS November - December, 2018". The report displays a table of financial data:

	TOTAL
Income	
Sales	17,500.00
Total Income	<u>\$17,500.00</u>
Gross Profit	<u>\$17,500.00</u>
Expenses	
Depreciation Expense-Building	250.00
Depreciation Expense-Furniture	300.00
Interest Expense	100.00
Rent Expense	3,000.00
Salaries Expense	4,800.00
Supplies Expense	400.00
Utilities Expense	100.00
Total Expenses	<u>\$8,950.00</u>
Net Operating Income	<u>\$8,550.00</u>
Net Income	<u>\$8,550.00</u>

Quickbooks screenshot. Reprinted with permission © Quicken Inc. All rights reserved.

One of the many benefits of using a computerized accounting information system is the ease with which reports are created. For most reports needed, the software includes prebuilt templates that can be used. In addition, the software automatically transfers the amounts from the general ledger to the financial statements. The only thing the accountant needs to do is set the correct time period and review the financial statements for accuracy.



Try It!

8. Fill in the missing information.

- a. _____ is the set of programs that drives the computer.
- b. Most systems require a(n) _____ to link computers.
- c. _____ is the electronic equipment used in a computerized accounting information system.

Check your answers online in Pearson MyLab Accounting or at <http://www.pearsonglobaleditions.com/Sitemap/Horngren/>.

For more practice, see Short Exercise SB-13. [Pearson MyLab Accounting](#)

REVIEW

> Things You Should Know

1. What is an accounting information system?

- An accounting information system (AIS) collects, records, stores, and processes accounting data to produce information that is useful for decision makers.
- An effective accounting information system provides control, compatibility, flexibility, relevance, and a positive cost/benefit relationship.
- An accounting information system has three basic components:
 - Source documents and input devices
 - Processing and storage
 - Outputs

2. How are sales and cash receipts recorded in a manual accounting information system?

- In a manual system, businesses use special journals that are designed to record a specific type of transaction. The four special journals and their uses are:
 - Sales journal—records sales on account
 - Cash receipts journal—records cash receipts
 - Purchases journal—records purchases on account
 - Cash payments journal—records cash payments
- Subsidiary ledgers are used to hold individual accounts that support a general ledger account. Two common subsidiary ledgers are the accounts receivable subsidiary ledger and accounts payable subsidiary ledger.
- Credit sales are recorded in the sales journal, which uses two columns—Accounts Receivable DR, Sales Revenue CR and Cost of Goods Sold DR, Merchandise Inventory CR.
- Cash receipts are recorded in the cash receipts journal, which includes a Cash DR column and various other debit and credit columns.

3. How are purchases, cash payments, and other transactions recorded in a manual accounting information system?

- Purchases on account are recorded in the purchases journal, which includes an Accounts Payable CR column and various other debit columns.
- Cash payments are recorded in the cash payments journal, which includes a Cash CR column and various other debit and credit columns.
- The general journal is used for transactions that aren't recorded in one of the special journals, such as adjusting and closing entries.

4. How are transactions recorded in a computerized accounting information system?

- A computerized accounting information system has two basic components:
 - Hardware—the electronic equipment
 - Software—the set of programs that drives the computer
- Entry-level software, such as QuickBooks and Sage 50 Accounting, is often used by small businesses.
- Larger companies use an enterprise resource planning (ERP) system to manage their data.

> Check Your Understanding Problem

Check your understanding of the chapter by completing this problem and then looking at the solution. Use this practice to help identify which sections of the chapter you need to study more.

Houlihan Company completed the following selected transactions during March 2019:

-
- | | |
|--------|--|
| Mar. 4 | Received \$500 for a cash sale of merchandise inventory to a customer (cost, \$319). |
| 6 | Received \$65 on account, terms n/30, from Brady Lee. |
| 9 | Received \$1,080 on a note receivable from Beverly Mann. This amount includes the \$1,000 note receivable plus interest revenue. |
| 15 | Received \$800 for a cash sale of merchandise inventory to a customer (cost, \$522). |
| 24 | Borrowed \$2,200 by signing a note payable to Interstate Bank. |
| 27 | Received \$1,200 on account from Lance Albert. Collection was received after the discount period and included \$20 of sales discounts forfeited. |
-

Requirements

The general ledger showed the following balances at February 28: Cash, \$1,117; Accounts Receivable, \$2,790; Note Receivable—Beverly Mann, \$1,000; and Merchandise Inventory, \$1,819. The accounts receivable subsidiary ledger at February 28 contained debit balances as follows: Lance Albert, \$1,840; Melinda Fultz, \$885; Brady Lee, \$65.

1. Record the transactions in the cash receipts journal, page 7. (See Learning Objective 2)
2. Compute column totals at March 31. (See Learning Objective 2)
3. Post from the cash receipts journal to the general ledger and the accounts receivable subsidiary ledger. Use four-column accounts. Use complete posting references, including the following account numbers: Cash, 11; Accounts Receivable, 12; Note Receivable—Beverly Mann, 13; Merchandise Inventory, 14; Note Payable—Interstate Bank,

22; Sales Revenue, 41; Sales Discounts Forfeited, 42; Interest Revenue, 46; and Cost of Goods Sold, 51. Insert a check mark (✓) in the posting reference column for each February 28 account balance. (See Learning Objective 2)

- Balance the Accounts Receivable subsidiary ledger with the Accounts Receivable account in the general ledger. (See Learning Objective 2)

> Solution

Requirements 1 and 2

Cash Receipts Journal								Page 7
Date	Account Credited	Post. Ref.	Cash DR	Accounts Receivable CR	Sales Revenue CR	Sales Discounts Forfeited CR	Other Accounts CR	Cost of Goods Sold DR Merchandise Inventory CR
2019								
Mar. 4			500		500			319
6	Brady Lee	✓	65	65				
9	Note Receivable-Beverly Mann	13	1,080				1,000	
	Interest Revenue	46					80	
15			800		800			522
24	Note Payable-Interstate Bank	22	2,200				2,200	
27	Lance Albert	✓	1,200	1,180		20		
31			5,845	1,245	1,300	20	3,280	841
			(11)	(12)	(41)	(42)	(X)	(51/14)

Requirement 3

ACCOUNTS RECEIVABLE SUBSIDIARY LEDGER

Lance Albert					
				Balance	
Date	Post. Ref.	Debit	Credit	Debit	Credit
Feb. 28	✓			1,840	
Mar. 27	CR.7		1,180	660	

Melinda Fultz					
				Balance	
Date	Post. Ref.	Debit	Credit	Debit	Credit
Feb. 28	✓			885	

Brady Lee					
				Balance	
Date	Post. Ref.	Debit	Credit	Debit	Credit
Feb. 28	✓			65	
Mar. 6	CR.7		65	0	

GENERAL LEDGER

Cash				No. 11	
				Balance	
Date	Post. Ref.	Debit	Credit	Debit	Credit
Feb. 28	✓			1,117	
Mar. 31	CR.7	5,845		6,962	

Note Payable—Interstate Bank				No. 22	
				Balance	
Date	Post. Ref.	Debit	Credit	Debit	Credit
Mar. 24	CR.7			2,200	2,200

Accounts Receivable				No. 12	
				Balance	
Date	Post. Ref.	Debit	Credit	Debit	Credit
Feb. 28	✓			2,790	
Mar. 31	CR.7		1,245	1,545	

Sales Revenue				No. 41	
				Balance	
Date	Post. Ref.	Debit	Credit	Debit	Credit
Mar. 31	CR.7			1,300	1,300

Note Receivable—Beverly Mann				No. 13	
				Balance	
Date	Post. Ref.	Debit	Credit	Debit	Credit
Feb. 28	✓			1,000	
Mar. 9	CR.7		1,000	0	

Sales Discounts Forfeited				No. 42	
				Balance	
Date	Post. Ref.	Debit	Credit	Debit	Credit
Mar. 31	CR.7			20	20

Merchandise Inventory				No. 14	
				Balance	
Date	Post. Ref.	Debit	Credit	Debit	Credit
Feb. 28	✓			1,819	
Mar. 31	CR.7		841	978	

Interest Revenue				No. 46	
				Balance	
Date	Post. Ref.	Debit	Credit	Debit	Credit
Mar. 9	CR.7			80	80

Cost of Goods Sold				No. 51	
				Balance	
Date	Post. Ref.	Debit	Credit	Debit	Credit
Mar. 31	CR.7	841		841	841

Requirement 4

GENERAL LEDGER					
Accounts Receivable debit balance					\$ 1,545
					<u> </u>
Customer	Balance				
Lance Albert	\$ 660				
Melinda Fultz	885				
Brady Lee	0				
Total Accounts Receivable	\$ 1,545				
	<u> </u>				

> Key Terms

Accounting Information System (AIS) (p. B-2)

Accounts Payable Subsidiary Ledger (p. B-7)

Accounts Receivable Subsidiary Ledger (p. B-6)

Cash Payments Journal (p. B-16)

Cash Receipts Journal (p. B-10)

Cloud Computing (p. B-21)

Control Account (p. B-7)

Enterprise Resource Planning (ERP) (p. B-21)

Hardware (p. B-21)

Network (p. B-21)

Purchases Journal (p. B-14)

Sales Journal (p. B-7)

Server (p. B-4)

Software (p. B-21)

Source Document (p. B-3)

Special Journal (p. B-5)

Subsidiary Ledger (p. B-6)

> Quick Check

1. Which of the following benefits of an effective accounting information system provides safeguards for a business's assets and reduces the likelihood of fraud and errors?
 - a. Flexibility
 - b. Relevance
 - c. Control
 - d. Compatibility

2. The outputs of a computerized accounting information system are called
 - a. reports.
 - b. software.
 - c. processing.
 - d. purchase invoices.

3. Which of the following is not a special journal?
 - a. Sales journal
 - b. General journal
 - c. Cash receipts journal
 - d. Purchases journal

4. Mountain Day Spa sold merchandise inventory on credit, terms n/30, to Marvin Smith, \$400. Cost of goods sold was \$250. When using a manual accounting information system, where should Mountain record this transaction, and what is the appropriate column in which to record the \$250?
 - a. Sales journal; Accounts Receivable DR, Sales Revenue CR
 - b. Cash receipts journal; Cash DR, Sales Revenue CR
 - c. Sales journal; Cost of Goods Sold DR, Merchandise Inventory CR
 - d. Cash receipts journal; Cash DR, Accounts Receivable CR

5. Which of the following correctly describes the posting of transactions from the sales journal?
 - a. Individual accounts receivable are posted daily to the general ledger.
 - b. At the end of the month, the totals of the columns are posted to the general ledger.
 - c. Transactions are posted daily to the general ledger.
 - d. The total of the Accounts Receivable DR, Sales Revenue CR column is posted to the accounts receivable subsidiary ledger.

Learning Objective 1

Learning Objective 1

Learning Objective 2

Learning Objective 2

Learning Objective 2

Learning Objective 3

6. Centex Sound Systems purchased merchandise inventory costing \$8,000 from Flower Co. on account. Where should Centex record this transaction, and what account is credited?

- a. Cash payments journal; credit Cash
- b. Sales journal; credit Sales Revenue
- c. Purchases journal; credit Accounts Payable
- d. General journal; credit Merchandise Inventory

Learning Objective 3

7. Every transaction recorded in the cash payments journal includes a

- | | |
|----------------------------------|------------------------------|
| a. credit to Cash. | c. debit to Sales Discounts. |
| b. debit to Accounts Receivable. | d. debit to Cash. |

8. When using a manual accounting information system, which of the following transactions would be recorded in the general journal?

- a. Depreciation of office furniture
- b. Cash payment of rent
- c. Sale of merchandise inventory on account
- d. Purchase of merchandise inventory on account

Learning Objective 4

9. Which is a disadvantage of an enterprise resource planning (ERP) system?

- a. Helps companies adjust to changes
- b. Can replace separate software systems
- c. Can reduce operating costs
- d. Implementation requires a large commitment of time and people

Check your answers at the end of the chapter.

ASSESS YOUR PROGRESS

> Review Questions

1. What is an accounting information system (AIS)?
2. What does an effective accounting information system provide?
3. Explain the three basic components of an accounting information system.
4. What is a special journal?
5. What is the purpose of a subsidiary ledger?
6. What is a control account?
7. List the four special journals often used in a manual accounting information system. What types of transactions are recorded in each of the special journals?
8. Explain the posting process of the sales journal.
9. Provide some examples of transactions that would be recorded in the Other Accounts CR column of the cash receipts journal.
10. What are the columns that are typically used in the purchases journal?
11. Explain the posting process of the cash payments journal.

12. When is the general journal used in a manual accounting information system? Provide some examples of transactions that would be recorded in the general journal.
13. Explain the two components of a computerized accounting information system.
14. What are two common entry-level accounting software systems used by small businesses?
15. What is an enterprise resource planning (ERP) system? What are the advantages and disadvantages of using an ERP?
16. How is QuickBooks organized?
17. How would a business record a sale of services on account in QuickBooks?
18. How would a business record a bill received in QuickBooks?

> Short Exercises

SB-1 Evaluating features of an effective accounting information system

In Vogue, a T-shirt business, is growing fast and needs a better accounting information system. Consider the features of an effective system. Which features are most important? Why? Which feature must you consider if your financial resources are limited?

Learning Objective 1

SB-2 Defining components of an accounting information system

Match each example with a component of a computerized accounting information system. Components may be used more than once.

Learning Objective 1

Example	Component
1. Server	a. Source documents and input devices
2. Bank checks	b. Processing and storage
3. Reports	c. Outputs
4. Keyboard	
5. Software	
6. Financial statements	
7. Bar code scanner	

SB-3 Identifying special journals

Learning Objective 2

Use the following abbreviations to indicate the journal in which you would record transactions a through n.

J = General journal

S = Sales journal

CR = Cash receipts journal

P = Purchases journal

CP = Cash payments journal

Transactions:

- a. Cash purchase of merchandise inventory
- b. Collection of dividend revenue earned on an investment
- c. Prepayment of insurance
- d. Borrowing money on a long-term note payable
- e. Purchase of equipment on account

- f. Cost of goods sold along with a credit sale
- g. Cash sale of merchandise inventory
- h. Payment of rent
- i. Depreciation of computer equipment
- j. Purchase of merchandise inventory on account
- k. Collection of accounts receivable
- l. Expiration of prepaid insurance
- m. Sale on account
- n. Payment on account

Learning Objective 2**SB-4 Recording transactions in a sales journal**

- Jun. 1 Sold merchandise inventory on account to Fran Jack, \$1,220. Cost of goods, \$980. Invoice no. 101.
- 8 Sold merchandise inventory on account to Ireland Frank, \$2,025. Cost of goods, \$1,640. Invoice no. 102.
- 13 Sold merchandise inventory on account to Jake Thompson, \$420. Cost of goods, \$210. Invoice no. 103.
- 28 Sold merchandise inventory on account to Gabe West, \$820. Cost of goods, \$620. Invoice no. 104.

Use the following sales journal to record the preceding transactions. All credit sales are terms of n/30.

Sales Journal						Page 1
Date	Invoice No.	Customer Account Debited	Post. Ref.	Accounts Receivable DR Sales Revenue CR	Cost of Goods Sold DR Merchandise Inventory CR	
2018						

Note: Short Exercise SB-4 must be completed before attempting Short Exercise SB-5.

Learning Objective 2**SB-5 Posting transactions from a sales journal to a subsidiary ledger and general ledger**

Review your results from Short Exercise SB-4.

Requirements

1. Total each column of the sales journal.
2. Open the following four-column accounts in the accounts receivable subsidiary ledger: Accounts Receivable—Frank; Accounts Receivable—Jack; Accounts Receivable—Thompson; Accounts Receivable—West. Post the transactions to the accounts receivable subsidiary ledger.

3. Open the following selected four-column accounts in the general ledger: Accounts Receivable (112); Merchandise Inventory (118), Bal. \$5,000; Sales Revenue (411); Cost of Goods Sold (511). Post the total of each column to the general ledger.
4. Balance the total of the customer ending balances in the accounts receivable subsidiary ledger against Accounts Receivable in the general ledger.

SB-6 Recording transactions in a cash receipts journal**Learning Objective 2**

- Jul. 5 Sold merchandise inventory for cash, \$1,700. Cost of goods, \$1,400.
- 12 Collected interest revenue of \$2,050.
- 18 Received cash from Heidi Next, \$1,200, on account. There was no discount.
- 29 Received \$5,300 from Mitch Dylan in full settlement of his account receivable including sales discounts forfeited of \$20.

Use the following cash receipts journal to record the preceding transactions.

Cash Receipts Journal									Page 3
Date	Account Credited	Post. Ref.	Cash DR	Accounts Receivable CR	Sales Revenue CR	Sales Discounts Forfeited CR	Other Accounts CR	Cost of Goods Sold DR Merchandise Inventory CR	
2018									

Note: Short Exercise SB-6 must be completed before attempting Short Exercise SB-7.

SB-7 Posting transactions from a cash receipts journal to a subsidiary ledger and general ledger**Learning Objective 2**

Review your results from Short Exercise SB-6.

Requirements

1. Total each column of the cash receipts journal.
2. Open the following four-column accounts in the accounts receivable subsidiary ledger: Accounts Receivable—Dylan, Bal. \$5,280; Accounts Receivable—Next, Bal. \$2,250. Post the transactions to the accounts receivable subsidiary ledger.
3. Open the following selected four-column accounts in the general ledger: Cash (111), Bal. \$4,550; Accounts Receivable (112), Bal. \$7,530; Merchandise Inventory (118), Bal. \$3,250; Sales Revenue (411), Bal. \$25,000; Sales Discounts Forfeited (412); Interest Revenue (419); Cost of Goods Sold (511), Bal. \$14,500. Post the total of each column to the general ledger. Also, post the Other Accounts column to the general ledger.
4. Balance the total of the customer ending balances in the accounts receivable subsidiary ledger against Accounts Receivable in the general ledger.

Learning Objective 3**SB-8 Recording transactions in a purchases journal**

- Oct. 1 Purchased merchandise inventory on account with credit terms of 4/10, n/30 from Mayer Co., \$2,200.
- 11 Purchased office supplies on account from Bird Co., \$600. Terms were n/EOM.
- 24 Purchased furniture on account with credit terms of 3/10, n/60 from Silly Co., \$900.

Use the following purchases journal to record the preceding transactions.

Date	Vendor Account Credited	Terms	Post. Ref.	Purchases Journal			Other Accounts DR			Page 6		
				Accounts Payable CR	Merchandise Inventory DR	Office Supplies DR	Account Title	Post Ref.	Amount			
2018												

Note: Short Exercise SB-8 must be completed before attempting Short Exercise SB-9.

Learning Objective 3**SB-9 Posting transactions from a purchases journal to a subsidiary ledger and general ledger**

Review your results from Short Exercise SB-8.

Requirements

1. Total each column of the purchases journal.
2. Open the following four-column accounts in the accounts payable subsidiary ledger: Accounts Payable—Bird Co.; Accounts Payable—Mayer Co.; Accounts Payable—Silly Co. Post the transactions to the accounts payable subsidiary ledger.
3. Open the following selected four-column accounts in the general ledger: Merchandise Inventory (115); Office Supplies (116); Furniture (151); Accounts Payable (211). Post the total of each column to the general ledger. Also, post the Other Accounts column to the general ledger.
4. Balance the total of the vendor ending balances in the accounts payable subsidiary ledger against Accounts Payable in the general ledger.

Learning Objective 3**SB-10 Recording transactions in a cash payments journal**

- Jan. 5 Issued check no. 430 to purchase equipment for cash, \$1,700.
- 7 Purchased merchandise inventory for cash, \$450, issuing check no. 431.
- 18 Paid Kat Co. amount owed, \$775, less \$100 discount. Issued check no. 432.
- 28 Issued check no. 433 to pay utilities, \$260. The bill was just received, and there is no liability recorded.

Use the following cash payments journal to record the preceding transactions.

Cash Payments Journal							Page 8
Date	Ck. No.	Account Debited	Post. Ref.	Other Accounts DR	Accounts Payable DR	Merchandise Inventory CR	Cash CR
2018							

Note: Short Exercise SB-10 must be completed before attempting Short Exercise SB-11.

SB-11 Posting transactions from a cash payments journal to a subsidiary ledger and general ledger

Learning Objective 3

Review your results from Short Exercise SB-10.

Requirements

1. Total each column of the cash payments journal.
2. Open the following four-column accounts in the accounts payable subsidiary ledger: Accounts Payable—Kat Co., Bal. \$1,900. Post the transactions to the accounts payable subsidiary ledger.
3. Open the following selected four-column accounts in the general ledger: Cash (111), Bal. \$5,000; Merchandise Inventory (118), \$2,100; Equipment (150), \$9,900; Accounts Payable (211), \$1,900; Utilities Expense (541). Post the total of each column to the general ledger. Also, post the Other Accounts column to the general ledger.
4. Balance the total of the vendor ending balances in the accounts payable subsidiary ledger against Accounts Payable in the general ledger.

SB-12 Recording transactions in a general journal

Learning Objective 3

- Mar. 2 Sold merchandise inventory on account, terms n/30, to B. Kelp, issuing invoice no. 501 for \$1,000 (cost, \$680).
- 6 Issued credit memo to B. Kelp for \$1,000 for merchandise returned to the business by the customer. Also accounted for receipt of the merchandise inventory at cost.
- 21 Purchased merchandise inventory on credit terms of 3/10, n/30 from Pond Co., \$600.
- 28 Returned damaged merchandise inventory to Pond Co., issuing a debit memo for \$600.

Journalize the above transactions that should be recorded in the general journal.

If a transaction should not be recorded in the general journal, identify the special journal that should be used. Assume the company uses the perpetual inventory system.

Learning Objective 4**SB-13 Understanding components of a computerized accounting information system**

Ned Timmons, engineer, is considering using a computerized accounting system for his professional engineering business. Ned has asked that you help him understand the components of a computerized accounting information system by answering the following questions:

Requirements

1. What are the two basic components of a computerized accounting information system?
2. Provide examples of each component.
3. If Ned were interested in an entry-level software system, what software might you recommend?

> Exercises**Learning Objective 2**

Accounts Receivable DR, Sales Revenue CR column total \$1,550

EB-14 Recording transactions—sales journal

- | | |
|--------|--|
| Feb. 1 | Sold merchandise inventory on account, terms n/30, to Cole Co., \$1,050.
Cost of goods, \$860. Invoice no. 401. |
| 6 | Sold merchandise inventory for cash, \$950 (cost, \$750). |
| 12 | Collected interest revenue of \$170. |
| 15 | Received cash from Cole Co. in full settlement of its account receivable. |
| 20 | Sold merchandise inventory on account, terms n/30, to Dump Co., issuing invoice no. 402 for \$500 (cost, \$325). |
| 22 | Sold merchandise inventory for cash, \$600 (cost \$530). |
| 26 | Sold office supplies to an employee for cash of \$150. |
| 28 | Received \$500 from Dump Co. in full settlement of its account receivable. |

Requirements

1. Prepare headings for a sales journal. Journalize the transactions that should be recorded in the sales journal. Assume the company uses the perpetual inventory system.
2. Total each column of the sales journal.

Learning Objective 2

Accounts Receivable CR column total \$1,550

EB-15 Recording transactions—cash receipts journal

Refer to information in Exercise EB-14.

Requirements

1. Prepare headings for a cash receipts journal. Journalize the transactions that should be recorded in the cash receipts journal.
2. Total each column of the cash receipts journal.

EB-16 Using the sales and cash receipts journals**Learning Objective 2**

The sales and cash receipts journals of Caverly Office Products include the following entries:

Sales Journal						Page 1
Date	Invoice No.	Customer Account Debited	Post. Ref.	Accounts Receivable DR Sales Revenue CR	Cost of Goods Sold DR Merchandise Inventory CR	
2018						
May 7	601	L. Ebert	✓	110	63	
10	602	T. Ross	✓	65	33	
10	603	E. Loop	✓	95	37	
12	604	B. Goebel	✓	120	76	
May 31		Total		390	209	

Cash Receipts Journal								Page 5	
Date	Account Credited	Post. Ref.	Cash DR	Accounts Receivable CR	Sales Revenue CR	Sales Discounts Forfeited CR	Other Accounts CR	Cost of Goods Sold DR Merchandise Inventory CR	
2018									
May 16	L. Ebert	✓							
19	E. Loop	✓							
24			320		320				250
30	T. Ross	✓							
May 31	Total								

Identify the missing information in the cash receipts journal for those transactions listed. All credit sales are terms n/30. Assume all the accounts are paid in full.

Also, total the columns in the cash receipts journal and show that total debits equal total credits.

EB-17 Analyzing postings from the cash receipts journal**Learning Objective 2**

The cash receipts journal of Silver Plastics follows:

Cash Receipts Journal								Page 7	
Date	Account Credited	Post. Ref.	Cash DR	Accounts Receivable CR	Sales Revenue CR	Sales Discounts Forfeited CR	Other Accounts CR	Cost of Goods Sold DR Merchandise Inventory CR	
2018									
Jan. 2	Awesome, Corp.	(g)	830	810		20			
9	King, Inc.	(h)	490	490					
19	Note Receivable	(i)	4,480				4,000		
	Interest Revenue	(j)					480		
30	J. T. Folk	(k)	330	320		10			
31			4,230	4,230					3,500
Jan. 31	Total		10,360	1,620	4,230	30	4,480		3,500
			(a)	(c)	(d)	(b)	(e)		(f)

Silver's general ledger includes the following selected accounts, along with their account numbers:

Number	Account
110	Cash
115	Accounts Receivable
118	Merchandise Inventory
125	Notes Receivable
510	Sales Revenue
512	Sales Discounts Forfeited
520	Interest Revenue
611	Cost of Goods Sold

Indicate whether each posting reference (a) through (k) should be a

- Check mark () for a posting to a customer account in the accounts receivable subsidiary ledger.
- Account number for a posting to an account in the general ledger. If so, give the account number.
- Letter (X) for an amount not posted.

Learning Objective 2

EB-18 Identifying transactions in the accounts receivable subsidiary ledger

A customer account in the accounts receivable subsidiary ledger of Leger Old Company follows:

JOSH WILLOW					
				Balance	
Date	Post. Ref.	Debit	Credit	Debit	Credit
Nov. 1				400	
9	S.5	1,180		1,580	
18	J.8		190	1,390	
30	CR.9		700	690	

Describe the three posted transactions.

Learning Objective 3

Accounts Payable CR column
total \$4,800

EB-19 Recording transactions—purchases journal

- Apr. 2 Purchased merchandise inventory on credit terms of 3/10, n/60 from Vanderbilt Co., \$2,400.
- 5 Issued check no. 820 to purchase equipment for cash, \$3,600.
- 11 Purchased merchandise inventory for cash, \$750, issuing check no. 821.
- 12 Issued check no. 822 to pay Vanderbilt Co. net amount owed from Apr. 2.
- 19 Purchased office supplies on account from Downing Supplies, \$500. Terms were n/EOM.
- 24 Purchased merchandise inventory on credit terms of net 30 from Wilmington Sales, \$1,900.
- 28 Issued check no. 823 to pay for insurance coverage, debiting Prepaid Insurance for \$1,000.
- 29 Issued check no. 824 to pay rent for the month, \$1,250.

Requirements

1. Prepare headings for a purchases journal. Journalize the transactions that should be recorded in the purchases journal. The company uses the perpetual inventory system.
2. Total each column of the purchases journal.

EB-20 Recording transactions—cash payments journal

Refer to information in Exercise EB-19.

Requirements

1. Prepare headings for a cash payments journal. Journalize the transactions that should be recorded in the cash payments journal.
2. Total each column of the cash payments journal.

EB-21 Posting from the purchases journal; balancing the ledgers

The purchases journal of Southeastern Publishing Company follows:

Learning Objective 3

Cash CR column total \$8,928

Learning Objective 3

Merchandise Inventory DR column total \$2,300

Date	Vendor Account Credited	Terms	Post. Ref.	Accounts Payable CR	Merchandise Inventory DR	Office Supplies DR	Other Accounts DR			Page 7
							Account Title	Post. Ref.	Amount	
2018										
Sep. 2	Leap Tech	n/30		830	830					
5	Jell Supply	n/30		155		155				
13	Leap Tech	5/10, n/30		1,470	1,470					
26	Fallon Equipment	n/30		880			Equipment		880	
Sep. 30	Total									

Requirements

1. Total each column of the purchases journal.
2. Open four-column ledger accounts for Merchandise Inventory (118), Office Supplies (120), Equipment (150), and Accounts Payable (211). Post to these accounts from the purchases journal. Use dates and posting references in the accounts.
3. Open four-column accounts in the accounts payable subsidiary ledger for Fallon Equipment, Jell Supply, and Leap Tech. Post from the purchases journal. Use dates and posting references in the ledger accounts.
4. Balance the Accounts Payable control account in the general ledger with the total of the ending balances in the accounts payable subsidiary ledger.

EB-22 Identifying transactions in the accounts payable subsidiary ledger

A vendor account in the accounts payable subsidiary ledger of Frost Company follows.

LARRY CARPENTER				Balance	
Date	Post. Ref.	Debit	Credit	Debit	Credit
Dec. 1				1,800	
12	P.4		2,340	4,140	
20	J.10	200		3,940	
29	CP.6	1,500		2,440	

Describe the three posted transactions.

Learning Objectives 2, 3
EB-23 Identifying errors in special journals

Transaction	Recording
a. Henry Associates paid \$490 on account for an earlier purchase of merchandise inventory.	Purchases journal
b. Recorded depreciation expense for the month.	Cash payments journal
c. Collected interest revenue.	Cash receipts journal
d. Sold merchandise inventory on account.	Cash receipts journal
e. Issued check no. 535 for purchase of merchandise inventory.	Purchases journal
f. Returned damaged inventory that was purchased on account.	Purchases journal
g. Sold merchandise inventory for cash.	Sales journal

For each transaction listed, identify the recording error and indicate the journal that should have been used.

> Problems Group A

All problems can be completed manually or by using either Pearson MyLab Accounting General Ledger or QuickBooks.

Learning Objectives 2, 3

Cash Receipts Journal, Accounts Receivable CR column total
\$11,600

PB-24A Using the sales, cash receipts, and general journals

Assume Sparkling Springs Glass Company uses the perpetual inventory system. The general ledger of Sparkling Springs Glass Company includes the following selected accounts, along with their account numbers:

Number	Account	Number	Account
11	Cash	18	Equipment
12	Accounts Receivable	19	Land
13	Notes Receivable	41	Sales Revenue
15	Merchandise Inventory	51	Cost of Goods Sold
16	Office Supplies		

Sales and cash receipts transactions in July were as follows:

-
- Jul. 2 Sold merchandise inventory on credit, terms n/30, to Intel, Inc., \$1,500 (cost, \$200).
 - 3 Sold office supplies to an employee at cost, \$80, receiving cash.
 - 7 Cash sales for the week totaled \$2,300 (cost, \$1,500).
 - 9 Sold merchandise inventory on account, terms n/30, to A. B. Miller, \$7,700 (cost, \$5,200).
 - 10 Sold land that cost \$10,000 for cash of the same amount.
 - 11 Sold merchandise inventory on account, terms n/30, to Speedy Electric, \$5,400 (cost, \$3,350).
 - 12 Received cash from Intel in full settlement of its account receivable from July 2.
 - 14 Cash sales for the week were \$2,600 (cost, \$1,700).
 - 15 Sold merchandise inventory on credit, terms n/30, to the partnership of William & Bill, \$3,400 (cost, \$2,400).
 - 20 Sold merchandise inventory on account, terms n/30, to Speedy Electric, \$500 (cost, \$250).
 - 21 Cash sales for the week were \$980 (cost, \$640).
 - 22 Received \$4,000 cash from A. B. Miller in partial settlement of his account receivable.
 - 25 Received cash from William & Bill for its account receivable from July 15.
 - 25 Sold merchandise inventory on account, terms n/30, to Oscar Co., \$1,520 (cost, \$1,000).
 - 27 Collected \$5,000 on a note receivable. There was no interest earned.
 - 28 Cash sales for the week totaled \$3,710 (cost, \$2,450).
 - 29 Sold merchandise inventory on account, terms n/30, to R. O. Bart, \$200 (cost, \$100).
 - 31 Received \$2,700 cash on account from A. B. Miller.
-

Requirements

1. Use the appropriate journal to record the preceding transactions in a sales journal (omit the Invoice No. column) and a cash receipts journal (omit the Sales Discounts Forfeited column).
2. Total each column of the sales journal and the cash receipts journal. Show that total debits equal total credits.
3. Show how postings would be made by writing the account numbers and check marks in the appropriate places in the journals.

Learning Objective 3

Purchases Journal, Accounts Payable CR column total \$19,540

PB-25A Using the purchases, cash payments, and general journals

The general ledger of Shiny Lake Golf Shop includes the following selected accounts, along with their account numbers:

Number	Account	Number	Account
111	Cash	181	Equipment
131	Merchandise Inventory	211	Accounts Payable
161	Prepaid Insurance	564	Rent Expense
171	Office Supplies	583	Utilities Expense

Transactions in December that affected purchases and cash payments follow:

-
- | | |
|--------|--|
| Dec. 2 | Purchased merchandise inventory on credit from Tomas, \$4,500. Terms were 1/10, n/30. |
| 3 | Paid monthly rent, debiting Rent Expense for \$2,300. |
| 5 | Purchased office supplies on credit terms of 1/10, n/30 from Right Supply, \$440. |
| 8 | Received and paid electricity utility bill, \$580. |
| 9 | Purchased equipment on account from Ace Equipment, \$6,600. Payment terms were n/30. |
| 10 | Returned the equipment to Ace Equipment. It was damaged. |
| 11 | Paid Tomas the amount owed on the purchase of December 2. |
| 12 | Purchased merchandise inventory on account from Callahan Golf, \$4,000. Terms were 3/10, n/30. |
| 13 | Purchased merchandise inventory for cash, \$600. |
| 14 | Paid a semiannual insurance premium, debiting Prepaid Insurance, \$1,400. |
| 16 | Paid its account payable to Right Supply from December 5. |
| 18 | Received and paid gas and water utility bills, \$200. |
| 21 | Purchased merchandise inventory on credit terms of 2/10, n/45 from Dormer, Inc., \$3,400. |
| 21 | Paid its account payable to Callahan Golf from December 12. |
| 22 | Purchased office supplies on account from Office World, Inc., \$600. Terms were n/30. |
| 26 | Returned to Dormer, Inc. \$1,000 of the merchandise inventory purchased on December 21. |
| 31 | Paid Dormer, Inc. the net amount owed from December 21 less the return on December 26. |
-

Requirements

1. Shiny Lake Golf Shop records purchase returns in the general journal. Use the appropriate journal to record the transactions in a purchases journal, a cash payments journal (omit the Check No. column), and a general journal. The company uses the perpetual inventory system.
2. Total each column of the special journals. Show that total debits equal total credits in each special journal.
3. Show how postings would be made from the journals by writing the account numbers and check marks in the appropriate places in the journals.

PB-26A Using all journals, posting, and balancing the ledgers

Tulsa Computer Security uses the perpetual inventory system and makes all credit sales on terms of n/30. Tulsa completed the following transactions during May:

-
- May 2 Issued invoice no. 913 for sale on account to K. D. King, \$2,200 (cost, \$1,500).
 - 3 Purchased merchandise inventory on credit terms of 3/10, n/60 from Henderson Co., \$2,900.
 - 5 Sold merchandise inventory for cash, \$1,800 (cost, \$350).
 - 5 Issued check no. 532 to purchase furniture for cash, \$2,950.
 - 8 Collected interest revenue of \$1,350.
 - 9 Issued invoice no. 914 for sale on account to Berkner Co., \$5,700 (cost, \$2,000).
 - 10 Purchased merchandise inventory for cash, \$1,000, issuing check no. 533.
 - 12 Received cash from K. D. King in full settlement of her account receivable from the sale on May 2.
 - 13 Issued check no. 534 to pay Henderson Co. the net amount owed from May 3. Round to the nearest dollar.
 - 13 Purchased office supplies on account from Magyar, Inc., \$500. Terms were n/EOM.
 - 15 Sold merchandise inventory on account to M. O. Small, issuing invoice no. 915 for \$850 (cost, \$400).
 - 18 Issued invoice no. 916 for credit sale to K. D. King, \$300 (cost, \$150).
 - 19 Received cash from Berkner Co. in full settlement of its account receivable from May 9.
 - 20 Purchased merchandise inventory on credit terms of n/30 from Silva Distributing, \$2,100.
 - 22 Purchased furniture on credit terms of 3/10, n/60 from Henderson Co., \$500.
 - 22 Issued check no. 535 to pay for insurance coverage, debiting Prepaid Insurance for \$1,400.
 - 24 Sold office supplies to an employee for cash of \$125, which was Tulsa's cost.
 - 25 Received bill and issued check no. 536 to pay utilities, \$550.
 - 28 Purchased merchandise inventory on credit terms of 2/10, n/30 from Magyar, Inc., \$575.
 - 29 Returned damaged merchandise inventory to Magyar, Inc., issuing a debit memo for \$575.
 - 29 Sold merchandise inventory on account to Berkner Co., issuing invoice no. 917 for \$2,400 (cost, \$1,400).
 - 30 Issued check no. 537 to pay Magyar, Inc. in full for May 13 purchase.
 - 31 Received cash in full from K. D. King on credit sale of May 18.
 - 31 Issued check no. 538 to pay monthly salaries of \$2,250.
-

Learning Objectives 2, 3

Trial balance, total debits \$48,600

Requirements

1. Open four-column general ledger accounts using Tulsa's account numbers and balances as of May 1, 2018, that follow. All accounts have normal balances.

Number	Account	Bal.
111	Cash	\$ 15,000
112	Accounts Receivable	1,700
114	Merchandise Inventory	7,000
116	Office Supplies	600
117	Prepaid Insurance	0
151	Furniture	2,200
211	Accounts Payable	900
311	Common Stock	10,000
314	Retained Earnings	11,400
411	Sales Revenue	7,800
419	Interest Revenue	1,300
511	Cost of Goods Sold	2,800
531	Salaries Expense	1,900
541	Utilities Expense	200

2. Open four-column accounts in the subsidiary ledgers with beginning balances as of May 1, if any. Accounts receivable subsidiary ledger—Balakrishnan Co., \$1,700; Berkner Co., \$0; M. O. Small, \$0; and K. D. King, \$0. Accounts payable subsidiary ledger—Henderson Co., \$0; Magyar, Inc., \$0; Silva Distributing, \$0; and White Co., \$900.
3. Enter the transactions in a sales journal (page 7), a cash receipts journal (page 5, omit Sales Discounts Forfeited column), a purchases journal (page 10), a cash payments journal (page 8), and a general journal (page 6), as appropriate.
4. Post daily to the accounts receivable subsidiary ledger and to the accounts payable subsidiary ledger.
5. Total each column of the special journals. Show that total debits equal total credits in each special journal. On May 31, post to the general ledger.
6. Prepare a trial balance as of May 31, 2018, to verify the equality of the general ledger. Balance the total of the customer account ending balances in the accounts receivable subsidiary ledger against Accounts Receivable in the general ledger. Do the same for the accounts payable subsidiary ledger and Accounts Payable in the general ledger.

> Problems Group B

All problems can be completed manually or by using either Pearson MyLab Accounting General Ledger or QuickBooks.

PB-27B Using the sales, cash receipts, and general journals

Assume Peaceful Spring Company uses the perpetual inventory system. The general ledger of Peaceful Springs Company includes the following selected accounts, along with their account numbers:

Number	Account	Number	Account
11	Cash	18	Equipment
12	Accounts Receivable	19	Land
13	Notes Receivable	41	Sales Revenue
15	Merchandise Inventory	51	Cost of Goods Sold
16	Office Supplies		

Sales and cash receipts transactions in November were as follows:

- Nov. 2 Sold merchandise inventory on credit, terms n/30, to Intelysis, Inc., \$2,200 (cost, \$400).
- 6 Sold office supplies to an employee at cost, \$85, receiving cash.
- 6 Cash sales for the week totaled \$2,400 (cost, \$1,400).
- 8 Sold merchandise inventory on account, terms n/30, to A. Z. Morris, \$7,500 (cost, \$5,000).
- 9 Sold land that cost \$9,000 for cash of the same amount.
- 11 Sold merchandise inventory on account, terms n/30, to Sloan Electric, \$5,000 (cost, \$3,450).
- 11 Received cash from Intelysis in full settlement of its account receivable from November 2.
- 13 Cash sales for the week were \$2,200 (cost, \$1,750).
- 15 Sold merchandise inventory on credit, terms n/30, to West and Michael, \$3,000 (cost, \$2,200).
- 19 Sold merchandise inventory on account, terms n/30, to Sloan Electric, \$700 (cost, \$200).
- 20 Cash sales for the week were \$940 (cost, \$640).
- 21 Received \$4,400 cash from A. Z. Morris in partial settlement of its account receivable.
- 22 Received cash from West and Michael for its account receivable from November 15.
- 22 Sold merchandise inventory on account, terms n/30, to Olivia Co., \$1,510 (cost, \$980).
- 25 Collected \$5,800 on a note receivable. There was no interest earned.
- 27 Cash sales for the week totaled \$3,780 (cost, \$2,430).
- 27 Sold merchandise inventory on account, terms n/30, to R. A. Brown, \$230 (cost, \$110).
- 30 Received \$2,200 cash on account from A. Z. Morris.

Learning Objectives 2, 3

Cash Receipts Journal, Accounts Receivable CR column total
\$11,800

Requirements

1. Use the appropriate journal to record the preceding transactions in a sales journal (omit the Invoice No. column) and a cash receipts journal (omit the Sales Discounts Forfeited column).
2. Total each column of the sales journal and the cash receipts journal. Determine that total debits equal total credits.
3. Show how postings would be made from the journals by writing the account numbers and check marks in the appropriate places in the journals.

Learning Objective 3

Purchases Journal, Accounts Payable CR column total \$19,470

PB-28B Using the purchases, cash payments, and general journals

The general ledger of Finnish Lake Golf Shop includes the following selected accounts, along with their account numbers:

Number	Account	Number	Account
111	Cash	181	Equipment
131	Merchandise Inventory	211	Accounts Payable
161	Prepaid Insurance	564	Rent Expense
171	Office Supplies	583	Utilities Expense

Transactions in December that affected purchases and cash payments were as follows:

- Dec. 2 Purchased merchandise inventory on credit from Tighe, \$4,100. Terms were 3/10, n/30.
- 3 Paid monthly rent, debiting Rent Expense for \$2,200.
- 5 Purchased office supplies on credit terms of 3/10, n/30 from Rapid Supply, \$470.
- 8 Received and paid electricity utility bill, \$510.
- 9 Purchased equipment on account from A-1 Equipment, \$6,900. Payment terms were net 30.
- 10 Returned the equipment to A-1 Equipment. It was damaged.
- 11 Paid Tighe the amount owed on the purchase of December 2.
- 12 Purchased merchandise inventory on account from Crystal Golf, \$4,900. Terms were 1/10, n/30.
- 13 Purchased merchandise inventory for cash, \$660.
- 14 Paid a semiannual insurance premium, debiting Prepaid Insurance, \$1,200.
- 16 Paid its account payable to Rapid Supply from December 5.
- 18 Received and paid gas and water utility bills, \$500.
- 21 Purchased merchandise inventory on credit terms of 1/10, n/45 from Devin, Inc., \$3,000.
- 21 Paid its account payable to Crystal Golf from December 12.
- 22 Purchased office supplies on account from Office Stuff, Inc., \$100. Terms were n/30.
- 26 Returned to Devin, Inc. \$1,000 of the merchandise inventory purchased on December 21.
- 31 Paid Devin, Inc. the net amount owed from December 21 less the return on December 26.

Requirements

1. Use the appropriate journal to record the preceding transactions in a purchases journal, a cash payments journal (omit the Check No. column), and a general journal. Finnish Lake Golf Shop records purchase returns in the general journal. The company uses the perpetual inventory system.
2. Total each column of the special journals. Show that total debits equal total credits in each special journal.
3. Show how postings would be made from the journals by writing the account numbers and check marks in the appropriate places in the journals.

PB-29B Using all journals, posting, and balancing the ledgers

Atlanta Computer Security uses the perpetual inventory system and makes all credit sales on terms of n/30. During March, Atlanta completed these transactions:

- Mar. 2 Issued invoice no. 191 for sale on account to L. E. Kingston, \$3,000 (cost, \$800).
- 3 Purchased merchandise inventory on credit terms of 3/10, n/60 from High, \$2,500.
- 4 Sold merchandise inventory for cash, \$1,100 (cost, \$300).
- 5 Issued check no. 473 to purchase furniture for cash \$2,450.
- 8 Collected interest revenue of \$1,150.
- 9 Issued invoice no. 192 for sale on account to Common Co., \$5,700 (cost, \$2,200).
- 10 Purchased merchandise inventory for cash, \$1,400, issuing check no. 474.
- 12 Received cash from L. E. Kingston in full settlement of her account receivable from the sale of March 2.
- 13 Issued check no. 475 to pay High net amount owed from March 3. Round to the nearest dollar.
- 13 Purchased office supplies on account from Mann Corp., \$350. Terms were n/EOM.
- 15 Sold merchandise inventory on account to Suarez Co., issuing invoice no. 193 for \$700 (cost, \$250).
- 18 Issued invoice no. 194 for credit sale to L. E. Kingston, \$400 (cost, \$200).
- 19 Received cash from Common Co. in full settlement of its account receivable from March 9.
- 20 Purchased merchandise inventory on credit terms of n/30 from James Swenson, \$2,200.
- 22 Purchased furniture on credit terms of 3/10, n/60 from High, \$400.
- 22 Issued check no. 476 to pay for insurance coverage, debiting Prepaid Insurance for \$1,800.
- 24 Sold office supplies to an employee for cash of \$100, which was Atlanta's cost.
- 25 Received bill and issued check no. 477 to pay utilities, \$550.
- 28 Purchased merchandise inventory on credit terms of 2/10, n/30 from Mann Corp., \$550.
- 29 Returned damaged merchandise inventory to Mann Corp., issuing a debit memo for \$550.
- 29 Sold merchandise inventory on account to Common Co., issuing invoice no. 195 for \$2,800 (cost, \$1,400).
- 30 Issued check no. 478 to pay Mann Corp. in full for March 13 purchase.
- 31 Received cash in full from L. E. Kingston on credit sale of March 18.
- 31 Issued check no. 479 to pay monthly salaries of \$1,550.

Learning Objectives 2, 3

Trial balance, total debits \$47,950

Requirements

1. Open four-column general ledger accounts using Atlanta Computer Security's account numbers and balances as of March 1, 2018, that follow. All accounts have normal balances.

Number	Account	Bal.
111	Cash	\$ 15,800
112	Accounts Receivable	1,900
114	Merchandise Inventory	6,500
116	Office Supplies	600
117	Prepaid Insurance	0
151	Furniture	2,000
211	Accounts Payable	900
311	Common Stock	14,000
314	Retained Earnings	6,600
411	Sales Revenue	7,600
419	Interest Revenue	1,400
511	Cost of Goods Sold	2,100
531	Salaries Expense	1,300
541	Utilities Expense	300

2. Open four-column accounts in the subsidiary ledgers with beginning balances as of March 1, if any. Accounts receivable subsidiary ledger: Arrundel Co., \$1,900; Common Co., \$0; L. E. Kingston, \$0; and Suarez, \$0. Accounts payable subsidiary ledger: High, \$0; Mann Corp, \$0; James Swenson, \$0; and Young Co., \$900.
3. Enter the transactions in a sales journal (page 8), a cash receipts journal (page 3, omit Sales Discounts Forfeited column), a purchases journal (page 6), a cash payments journal (page 9), and a general journal (page 4), as appropriate.
4. Post daily to the accounts receivable subsidiary ledger and to the accounts payable subsidiary ledger.
5. Total each column of the special journals. Show that total debits equal total credits in each special journal. On March 31, post to the general ledger.
6. Prepare a trial balance as of March 31, 2018, to verify the equality of the general ledger. Balance the total of the customer account ending balances in the accounts receivable subsidiary ledger against Accounts Receivable in the general ledger. Do the same for the accounts payable subsidiary ledger and Accounts Payable in the general ledger.

CRITICAL THINKING

> Continuing Problem

PB-30 Using all journals

This problem continues the Let's Bike Company situation from Chapter 4. At the beginning of the new year, Let's Bike Company decided to carry and sell cycling backpacks with its logo printed on them. Let's Bike Company uses the perpetual inventory system to account for the inventory. During January 2019, Let's Bike Company completed the following merchandising transactions:

-
- Jan. 1 Purchased 12 backpacks on account at \$30 each. Terms 3/10, n/30.
 - 4 Sold 8 backpacks on account for \$40 each, total cost of \$240.
Terms 5/10, n/45.
 - 5 Purchased 10 backpacks at \$32 each and paid cash.
 - 11 Paid the supplier for the backpacks purchased on January 1.
 - 12 Realized 3 backpacks from the January 5 order were of wrong size and returned them for a cash refund.
 - 13 Received payment for the backpacks sold on account on January 4, less discount.
 - 18 Sold 10 backpacks for \$40 each, total cost of \$312. Received cash.
 - 19 Purchased 40 backpacks on account at \$34 each. Terms 5/10, n/30, FOB shipping point.
 - 20 Realized some of the backpacks from the January 19 order were damaged. Supplier offered a \$120 purchase allowance.
 - 21 Paid freight associated with the January 19 purchase, \$40.
 - 22 Paid the supplier for the backpacks purchased on January 19, less allowance and discount.
 - 23 Sold 21 backpacks on account for \$40 each, total cost of \$641. Terms 5/5, n/30, FOB destination.
 - 24 Paid freight associated with the January 23 sale, \$75.
 - 25 Purchased 20 backpacks at \$35 each and paid cash.
 - 27 Sold 25 backpacks for \$40 each, total cost of \$784. Term 2/15, n/30.
 - 30 Received payment for the backpacks sold on account on January 23.
 - 31 Sold 5 backpacks for \$40 each, total cost of \$175. Received cash.
-

Requirements

1. Enter the transactions in a sales journal (page 2), a cash receipts journal (page 5), a purchases journal (page 7), a cash payments journal (page 6), and a general journal (page 4), as appropriate.
2. Total each column of the special journals. Show that total debits equal total credits in each special journal.

COMPREHENSIVE PROBLEM

> Comprehensive Problem for Appendix B

Completing the Accounting Cycle for a Merchandising Entity—Using Special Journals

Amherst Networking Systems adjusts and closes its books and then prepares financial statements monthly. Amherst uses the perpetual inventory system and all sales on credit have terms of n/30. The company completed the following transactions during August:

-
- Aug. 1 Issued check no. 682 for August office rent of \$1,300.
 - 2 Issued check no. 683 to pay the salaries payable of \$1,300 from July 31.
 - 2 Issued invoice no. 503 for sale on account to R. T. Loeb, \$700. Amherst's cost of this merchandise inventory was \$210.
 - 3 Purchased merchandise inventory on credit terms of 1/15, n/60 from Goldner, Inc., \$1,400.
 - 4 Received cash on account from Friend Company, \$2,400.
 - 4 Sold merchandise inventory for cash, \$370 (cost, \$111).
 - 5 Issued check no. 684 to purchase office supplies for cash, \$730.
 - 7 Issued invoice no. 504 for sale on account to K. D. Sanders, \$2,100 (cost, \$630).
 - 8 Issued check no. 685 to pay Filter Company \$2,500 of the amount owed at July 31. This payment occurred after the end of the discount period.
 - 11 Issued check no. 686 to pay Goldner, Inc. the net amount owed from August 3.
 - 12 Received cash from R. T. Loeb in full settlement of her account receivable from August 2.
 - 16 Issued check no. 687 to pay salaries expense of \$1,290.
 - 19 Purchased merchandise inventory for cash, \$850, issuing check no. 688.
 - 22 Purchased furniture on credit terms of 3/15, n/60 from Bradford Corporation, \$510.
 - 23 Sold merchandise inventory on account to Friend Company, issuing invoice no. 505 for \$9,000 (cost, \$2,700).
 - 24 Received half the July 31 amount receivable from K. D. Sanders.
 - 26 Purchased office supplies on credit terms of 2/10, n/30 from Filter Company, \$240.
 - 30 Returned damaged merchandise inventory to the company from whom Amherst made the cash purchase on August 19, receiving cash of \$850.
 - 31 Purchased merchandise inventory on credit terms of 1/10, n/30 from Seacrest Supply, \$8,000.
 - 31 Issued check no. 689 to stockholders, for dividends, \$600.
-

Requirements

1. Open these four-column accounts with their account numbers and July 31 balances in the various ledgers.

General Ledger

Nbr.	Account Name	Debit	Credit
101	Cash	\$ 5,020	
102	Accounts Receivable	22,490	
105	Merchandise Inventory	41,300	
109	Office Supplies	1,680	
117	Prepaid Insurance	2,600	
160	Furniture	37,000	
161	Accumulated Depreciation—Furniture		\$ 10,000
201	Accounts Payable		12,700
204	Salaries Payable		1,300
220	Note Payable, Long-term		25,000
301	Common Stock		20,000
305	Retained Earnings		41,090
310	Dividends		
400	Income Summary		
401	Sales Revenue		
501	Cost of Goods Sold		
510	Salaries Expense		
513	Rent Expense		
514	Depreciation Expense—Furniture		
516	Insurance Expense		
519	Supplies Expense		

Accounts Receivable Subsidiary Ledger: Friend Company \$2,400; R. T. Loeb, \$0; Parker, Inc., \$11,300; and K. D. Sanders, \$8,790.

Accounts Payable Subsidiary Ledger: Bradford Corporation, \$0; Filter Company, \$12,700; Goldner, Inc., \$0; and Seacrest Supply, \$0.

2. Journalize the August transactions using a sales journal (page 4), a cash receipts journal (page 11, omit Sales Discounts Forfeited column), a purchases journal (page 8), a cash payments journal (page 5), and a general journal (page 9).
3. Post daily to the accounts receivable subsidiary ledger and the accounts payable subsidiary ledger. On August 31, post to the general ledger.
4. Prepare an unadjusted trial balance for the month ended August 31.
5. Journalize and post the following adjusting entries:
 - a. Office supplies on hand, \$1,000.
 - b. Prepaid insurance expired, \$350.
 - c. Depreciation expense on furniture, \$250.
 - d. Accrued salaries expense, \$1,060.
6. Prepare an adjusted trial balance.
7. Prepare a multistep income statement, statement of retained earnings, and classified balance sheet.
8. Journalize closing entries and post.
9. Prepare a post-closing trial balance.

> Tying It All Together Case

Before you begin this assignment, review the *Tying It All Together* feature in the chapter. It will also be helpful if you review McCormick & Company, Incorporated's 2015 annual report (http://phx.corporate-ir.net/phoenix.zhtml?c=65454&p=irol-sec&control_symbol=#14157537).

McCormick & Company Incorporated, is a global leader in flavor that manufactures, markets, and distributes spices, seasoning mixes, condiments, and other flavorful products. The company's brands include McCormick, Lawry's, and Club House. In addition, the company also markets authentic ethnic brands such as Zatarain's, Thai Kitchen, and Simply Asia.

Requirements

1. Review Item 1A (Risk Factors) of the Notes to the Financial Statements. How does McCormick & Company, Incorporated minimize the risks associated with data breaches or cyber attacks?
2. Perform a web search on ways businesses can prevent security breaches. What are some security solutions that McCormick & Company might use?

> Decision Case B-1

A fire destroyed certain accounting records of Green Books. The controller, Marilyn Green, asks your help in reconstructing the records. All of the sales are on account, with credit terms of n/30. The only accounting record preserved from the fire is the accounts receivable subsidiary ledger, which follows.

Requirements

1. Determine the beginning and ending balances of Accounts Receivable.
2. Determine the sales on account in the month of April.
3. Determine total cash receipts on account from customers during April.

Garcia Sales				Balance	
Date	Post. Ref.	Debit	Credit	Debit	Credit
Apr. 1				450	
3	CR.8		450	0	
25	S.6	3,600		3,600	
29	S.6	1,100		4,700	

Leewright, Inc.				Balance	
Date	Post. Ref.	Debit	Credit	Debit	Credit
Apr. 1				2,800	
15	S.6	2,600		5,400	
29	CR.8		1,500	3,900	

Sally Jones				Balance	
Date	Post. Ref.	Debit	Credit	Debit	Credit
Apr. 1				1,100	
5	CR.8		1,100	0	
11	S.6	400		400	
21	CR.8		400	0	
24	S.6	2,000		2,000	

Jacques LeHavre					Balance	
Date	Post. Ref.	Debit	Credit	Debit	Credit	
Apr. 1				0		
8	S.6	2,400		2,400		
16	S.6	900		3,300		
18	CR.8		2,400	900		
19	J.5		200	700		
27	CR.8		700	0		

> Fraud Case B-1

Didrikson Rubin, the auditor of Red Barn Farm Equipment, was verifying cash payments to vendors for the past several months. She noticed that several checks had been paid to a specific vendor, but she couldn't find a record of the transactions in the computerized system. Didrikson suspects that an employee is issuing checks to a fictitious "vendor" and then deleting the transactions from the computerized system. How might Didrikson investigate the suspected fraud?

> Team Project B-1

Ace Moving is considering investing in an entry-level computerized accounting information system. Ace needs a system that can record customer invoices and cash receipts. In addition, it would like to track all of its bills and cash payments. As a team, investigate the two common entry-level accounting software products: QuickBooks and Sage 50 Accounting. Prepare a PowerPoint presentation that summarizes the similarities and differences between the two software systems.

> Communication Activity B-1

In 150 words or fewer, explain what an accounting information system is and describe an effective system.

Pearson MyLab Accounting

For a wealth of online resources, including exercises, problems, media, and immediate tutorial help, please visit <http://www.myaccountinglab.com>.

> Quick Check Answers

1. c 2. a 3. b 4. c 5. b 6. c 7. a 8. a 9. d

Glossary

The following Glossary and Index are for all chapters of *Horngren's Financial & Managerial Accounting (The Financial Chapters and The Managerial Chapters)*, 6/e, Global Edition.

Accelerated Depreciation Method A depreciation method that expenses more of the asset's cost near the start of its useful life and less at the end of its useful life. (p. 524)

Account A detailed record of all increases and decreases that have occurred in an individual asset, liability, or equity during a specific period. (p. 83)

Accounting The information system that measures business activities, processes the information into reports, and communicates the results to decision makers. (p. 28)

Accounting Cycle The process by which companies produce their financial statements for a specific period. (p. 227)

Accounting Equation The basic tool of accounting, measuring the resources of the business (what the business owns or has control of) and the claims to those resources (what the business owes to creditors and to the owners). Assets = Liabilities + Equity (p. 37)

Accounting Information System (AIS) A system that collects, records, stores, and processes accounting data to produce information that is useful for decision makers. (p. 28)

Account Number On a check, the number that identifies the account upon which the payment is drawn. (p. 422)

Accounts Payable A short-term liability that will be paid in the future. (p. 41)

Accounts Payable Subsidiary Ledger A subsidiary ledger that includes an accounts payable account for each vendor that contains detailed information such as the amount purchased, paid, and owed. (p. B-7)

Accounts Receivable Subsidiary Ledger A subsidiary ledger that includes an accounts receivable account for each customer that contains detailed information such as the amount sold, received, and owed. (p. B-6)

Accounts Receivable The right to receive cash in the future from customers for goods sold or for services performed. (pp. 42, 459)

Accounts Receivable Turnover Ratio A ratio that measures the number of times the company collects the average accounts receivable balance in a year. Net credit sales / Average net accounts receivable. (pp. 483, 843)

Accrual Basis Accounting Accounting method that records revenues when earned and expenses when incurred. (p. 146)

Accrued Expense An expense that the business has incurred but has not yet paid. (p. 158)

Accrued Liability A liability for which the business knows the amount owed but the bill has not been paid. (p. 84)

Accrued Revenue A revenue that has been earned but for which the cash has not yet been collected. (p. 162)

Accumulated Depreciation The sum of all the depreciation expense recorded to date for a depreciable asset. (p. 155)

Acid-Test Ratio The ratio of the sum of cash, cash equivalents, short-term investments, and net current receivables to total current liabilities. The ratio tells whether the entity could pay all its current liabilities if they came due immediately. (pp. 482, 840)

Adjunct Account An account that is directly related to another account. Adjunct accounts have the same normal balance as the related account and are added to the related account on the balance sheet. (p. 658)

Adjusted Trial Balance A list of all the accounts with their adjusted balances. (p. 166)

Adjusting Entry An entry made at the end of the accounting period that is used to record revenues to the period in which they are earned and expenses to the period in which they occur. (p. 151)

Administrative Expenses Expenses incurred that are not related to marketing the company's goods and services. (p. 297)

Aging-of-Receivables Method A method of estimating uncollectible receivables by determining the balance of the Allowance for Bad Debts account based on the age of individual accounts receivable. (p. 472)

Allowance for Bad Debts A contra asset account, related to accounts receivable, that holds the estimated amount of uncollectible accounts. (p. 465)

Allowance Method A method of accounting for uncollectible receivables in which the company estimates bad debts expense instead of waiting to see which customers the company will not collect from. (p. 465)

Amortization Schedule A schedule that details each loan payment's allocation between principal and interest and the beginning and ending loan balances. (p. 646)

Amortization The process by which businesses spread the allocation of an intangible asset's cost over its useful life. (p. 538)

Annual Report Provides information about a company's financial condition. (p. 828)

Annuity A stream of equal cash payments made at equal time intervals. (p. 666)

Appropriation of Retained Earnings Restriction of a portion of retained earnings that is recorded by a journal entry. (p. 722)

Assets Economic resources that are expected to benefit the business in the future. Something the business owns or has control of. (p. 38)

Asset Turnover Ratio Measures how efficiently a business uses its average total assets to generate sales. Net sales revenue / Average total assets. (pp. 442, 847)

Audit An examination of a company's financial statements and records. (p. 36)

Authorized Stock The maximum number of shares of stock that the corporate charter allows the corporation to issue. (p. 699)

Available-for-Sale (AFS) Debt Investment A debt security that isn't a trading debt investment or a held-to-maturity debt investment. (p. 574)

Bad Debts Expense The cost to the seller of extending credit. It arises from the failure to collect from some credit customers. (p. 463)

Balance Sheet Reports on the assets, liabilities, and stockholders' equity of the business as of a specific date. (p. 47)

Bank Reconciliation A document explaining the reasons for the difference between a depositor's cash records and the depositor's cash balance in its bank account. (p. 424)

Bank Statement A document from the bank that reports the activity in the customer's account. It shows the bank account's beginning and ending balances and lists the month's cash transactions conducted through the bank account. (p. 423)

Benchmarking The practice of comparing a company's performance with best practices from other companies. (p. 837)

Bond Payable A long-term debt issued to multiple lenders called bondholders, usually in increments of \$1,000 per bond. (p. 649)

Book Value A depreciable asset's cost minus accumulated depreciation. (pp. 156, 522)

Callable Bonds Bonds that the issuer may call and pay off at a specified price whenever the issuer wants. (p. 661)

Canceled Checks Physical or scanned copies of the maker's cashed (paid) checks. (p. 423)

Capital Expenditure An expenditure that increases the capacity or efficiency of a plant asset or extends its useful life. Capital expenditures are debited to an asset account. (p. 519)

Capitalize Recording the acquisition of land, building, or other assets by debiting (increasing) an asset account. (p. 517)

Capital Stock Represents the individual's ownership of the corporation's capital. (p. 699)

Carrying Amount of Bonds A bond payable minus the discount account current balance or plus the premium account current balance. (p. 656)

Cash Basis Accounting Accounting method that records revenues only when cash is received and expenses only when cash is paid. (p. 146)

Cash Equivalent A highly liquid investment that can be converted into cash in three months or less. (p. 429)

Cash Flows Cash receipts and cash payments of a business. (p. 759)

Cash Payments Journal Special journal used to record cash payments by check and currency. (p. B-16)

Cash Ratio A measure of a company's ability to pay current liabilities from cash and cash equivalents. (pp. 429, 840)

Cash Receipts Journal Special journal used to record cash receipts. (p. B-10)

Certified Management Accountants (CMAs) Certified professionals who specialize in accounting and financial management knowledge. They typically work for a single company. (p. 30)

Certified Public Accountants (CPAs) Licensed professional accountants who serve the general public. (p. 30)

Chart of Accounts A list of all of a company's accounts with their account numbers. (p. 85)

Check A document that instructs a bank to pay the designated person or business a specified amount of money. (p. 422)

Classified Balance Sheet A balance sheet that places each asset and each liability into a specific category. (p. 214)

Closing Entries Entries that transfer the revenues, expenses, and Dividends balances to the Retained Earnings account to prepare the company's books for the next period. (p. 220)

Closing Process A step in the accounting cycle that occurs at the end of the period. The closing process consists of journalizing and posting the closing entries to set the balances of the revenues, expenses, Income Summary, and Dividends accounts to zero for the next period. (p. 219)

Cloud Computing Software and data are stored on a third-party server instead of by the business and can be accessed by employees via the Internet. (p. B-21)

Collusion Two or more people working together to circumvent internal controls and defraud a company. (p. 411)

Commercial Substance A characteristic of a transaction that causes a change in future cash flows. (p. 543)

Committee of Sponsoring Organizations (COSO) A committee that provides thought leadership related to enterprise risk management, internal control, and fraud deterrence. (p. 407)

Common-Size Statement A financial statement that reports only percentages (no dollar amounts). (p. 836)

Common Stock Represents the basic ownership of a corporation. (pp. 38, 700)

Compound Interest Interest calculated on the principal and on all previously earned interest. (p. 666)

Compound Journal Entry A journal entry that is characterized by having multiple debits and/or multiple credits. (p. 96)

Comprehensive Income A company's change in total stockholders' equity from all sources other than owners' investments and dividends. (p. 583)

Conservatism A business should report the least favorable figures in the financial statements when two or more possible options are presented. (p. 354)

Consistency Principle A business should use the same accounting methods and procedures from period to period. (p. 353)

Consolidated Statements Financial statements that combine the balance sheets, income statements, and statements of cash flow of the parent company with those of its controlling interest affiliates. (p. 580)

Consolidation Accounting The way to combine the financial statements of two or more companies that have the same owners. (p. 580)

Contingent Liability A potential liability that depends on some future event. (p. 620)

Contra Account An account that is paired with, and is listed immediately after, its related account in the chart of accounts and associated financial statement and whose normal balance is the opposite of the normal balance of the related account. (p. 155)

Contributed Capital Owner contributions to a corporation. (p. 38)

Control Account An account whose balance equals the sum of the balances in a group of related accounts in a subsidiary ledger. (p. B-7)

Controlling Interest Equity Investment An equity security in which the investor owns more than 50% of the investee's voting stock. (p. 574)

Copyright Exclusive right to reproduce and sell a book, musical composition, film, other work of art, or intellectual property. (p. 539)

Corporation A business organized under state law that is a separate legal entity. (p. 33)

Corporation A business organized under state law that is a separate legal entity. (p. 698)

Cost of Goods Available for Sale The total cost spent on inventory that was available to be sold during a period. (p. 358)

Cost of Goods Sold (COGS) The cost of the merchandise inventory that the business has sold to customers. (p. 277)

Cost Principle A principle that states that acquired assets and services should be recorded at their actual cost. (pp. 35, 516)

Credit The right side of a T-account. (p. 87)

Credit Memorandum An increase in a bank account. (p. 425)

Creditor Any person or business to whom a business owes money. (p. 30)

Credit Terms The payment terms of purchase or sale as stated on the invoice. (p. 281)

Cumulative Preferred Stock Preferred stock whose owners must receive all dividends in arrears plus the current year dividend before the corporation pays dividends to the common stockholders. (p. 713)

Current Asset An asset that is expected to be converted to cash, sold, or used up during the next 12 months or within the business's normal operating cycle if the cycle is longer than a year. (p. 215)

Current Liability A liability that must be paid with cash or with goods and services within one year or within the entity's operating cycle if the cycle is longer than a year. (pp. 215, 605)

Current Portion of Notes Payable The amount of the principal that is payable within one year of the balance sheet date. (p. 609)

Current Ratio Measures the company's ability to pay current liabilities from current assets. Total current assets / Total current liabilities. (pp. 229, 841)

Days' Sales in Inventory Measures the average number of days that inventory is held by a company. 365 days / Inventory turnover. (pp. 372, 842)

Days' Sales in Receivables The ratio of average net accounts receivable to one day's sales. The ratio tells how many days it takes to collect the average level of accounts receivable. 365 days / Accounts receivable turnover ratio. (pp. 483, 844)

Debentures Unsecured bonds backed only by the credit worthiness of the bond issuer. (p. 651)

Debit The left side of a T-account. (p. 87)

Debit Memorandum A decrease in a bank account. (p. 425)

Debtor The party to a credit transaction who takes on an obligation/payable. (p. 459)

Debt Ratio Shows the proportion of assets financed with debt. Total liabilities / Total assets. (pp. 107, 844)

Debt Security Investment in notes or bonds payable issued by another company. (p. 572)

Debt to Equity Ratio A ratio that measures the proportion of total liabilities relative to total equity. Total liabilities / Total equity. (pp. 664, 845)

Deferred Expense An asset created when a business makes advance payments of future expenses. (p. 151)

Deferred Revenue A liability created when a business collects cash from customers in advance of completing a service or delivering a product. (p. 157)

Deficit Debit balance in the Retained Earnings account. (p. 721)

Depletion The process by which businesses spread the allocation of a natural resource's cost over its usage. (p. 537)

Deposit in Transit A deposit recorded by the company but not yet by its bank. (p. 424)

Deposit Ticket A bank form that is completed by the customer and shows the amount of each deposit. (p. 422)

Depreciable Cost The cost of a plant asset minus its estimated residual value. (p. 521)

Depreciation The process by which businesses spread the allocation of a plant asset's cost over its useful life. (pp. 153, 515)

Direct Method A format of the operating activities section of the statement of cash flows; lists the operating cash receipts and cash payments. (p. 762)

Direct Write-off Method A method of accounting for uncollectible receivables in which the company records bad debts expense when a customer's account receivable is uncollectible. (p. 463)

Disclosure Principle A business's financial statements must report enough information for outsiders to make knowledgeable decisions about the company. (p. 353)

Discount on Bonds Payable Occurs when a bond's issue price is less than face value. (p. 651)

Dishonor a Note Failure of a note's maker to pay a note receivable at maturity. (p. 480)

Dividend A distribution of a corporation's earnings to stockholders. (pp. 38, 700)

Dividend in Arrears A preferred stock dividend is in arrears if the dividend has not been paid for the year and the preferred stock is cumulative. (p. 713)

Dividend Payout The ratio of dividends declared per common share relative to the earnings per share of the company. Annual dividend per share / Earnings per share. (p. 850)

Dividend Yield Ratio of annual dividends per share of stock to the stock's market price per share. Measures the percentage of a stock's market value that is returned annually as dividends to stockholders. Annual dividend per share / Market price per share. (p. 849)

Dollar Value Bias The bias one sees from comparing numbers in absolute (dollars) rather than relative (percentage) terms. (p. 836)

Double-Declining-Balance Method An accelerated depreciation method that computes annual depreciation by multiplying the depreciable asset's decreasing book value by a constant percent that is two times the straight-line depreciation rate. (p. 524)

Double-Entry System A system of accounting in which every transaction affects at least two accounts. (p. 87)

Earnings per Share (EPS) Amount of a company's net income (loss) for each share of its outstanding common stock. (Net income –

Preferred dividends) / Weighted average number of common shares outstanding. (pp. 720, 848)

Economic Entity Assumption An organization that stands apart as a separate economic unit. (p. 32)

Effective-Interest Amortization Method An amortization model that calculates interest expense based on the current carrying amount of the bond and the market interest rate at issuance, and then amortizes the difference between the cash interest payment and calculated interest expense as a decrease to the discount or premium. (p. 672)

Electronic Data Interchange (EDI) A streamlined process that bypasses paper documents altogether. Computers of customers communicate directly with the computers of suppliers to automate routine business transactions. (p. 415)

Electronic Funds Transfer (EFT) A system that transfers cash by electronic communication rather than by paper documents. (p. 423)

Encryption Rearranging plain-text messages by a mathematical process—the primary method of achieving security in e-commerce. (p. 410)

Enterprise Resource Planning (ERP) Software system that can integrate all of a company's functions, departments, and data into a single system. (p. B-21)

Equity The owners' claims to the assets of the business. (p. 38)

Equity Security Investment in stock ownership in another company that sometimes pays cash dividends or issues stock dividends. (p. 572)

Evaluated Receipts Settlement (ERS) A procedure that compresses the payment approval process into a single step by comparing the receiving report to the purchase order. (p. 415)

Expenses The costs of selling goods or services. (p. 38)

External Auditor An outside accountant, completely independent of the business, who evaluates the controls to ensure that the financial statements are presented fairly in accordance with GAAP. (p. 409)

Extraordinary Repair Repair work that generates a capital expenditure because it extends the asset's life past the normal expected life. (p. 519)

Face Value The amount a borrower must pay back to the bondholders on the maturity date. (p. 650)

Fair Value The price that would be used if the investments were sold on the market. (p. 580)

Faithful Representation Providing information that is complete, neutral, and free from error. (p. 32)

Federal Insurance Contributions Act (FICA)

The federal act that created the Social Security tax that provides retirement, disability, and medical benefits. (p. 611)

Financial Accounting The field of accounting that focuses on providing information for external decision makers. (p. 29)

Financial Accounting Standards Board (FASB) The private organization that oversees the creation and governance of accounting standards in the United States. (p. 32)

Financial Leverage Occurs when a company earns more income on borrowed money than the related interest expense. (p. 654)

Financial Statements Business documents that are used to communicate information needed to make business decisions. (p. 45)

Financing Activities Activities that increase or decrease long-term liabilities and equity; a section of the statement of cash flows. (p. 760)

Firewall A device that enables members of a local network to access the network, while keeping nonmembers out of the network. (p. 410)

First-In, First-Out (FIFO) Method An inventory costing method in which the first costs into inventory are the first costs out to cost of goods sold. Ending inventory is based on the costs of the most recent purchases. (p. 358)

Fiscal Year An accounting year of any 12 consecutive months that may or may not coincide with the calendar year. (p. 148)

FOB Destination Situation in which the buyer takes ownership (title) to the goods at the delivery destination point and the seller typically pays the freight. (p. 284)

FOB Shipping Point Situation in which the buyer takes ownership (title) to the goods after the goods leave the seller's place of business (shipping point) and the buyer typically pays the freight. (p. 284)

Franchise Privilege granted by a business to sell a product or service under specified conditions. (p. 540)

Free Cash Flow The amount of cash available from operating activities after paying for planned investments in long-term assets and after paying dividends to shareholders. Net cash provided by operating payments planned for investments in long-term dividends. (p. 777)

Freight In The transportation cost to ship goods into the purchaser's warehouse; therefore, it is freight on purchased goods. (p. 284)

Freight Out The transportation cost to ship goods out of the seller's warehouse; therefore, it is freight on goods sold to a customer. (p. 284)

Future Value The value of an investment at the end of a specific time frame. (p. 652)

Generally Accepted Accounting Principles (GAAP) Accounting guidelines, currently formulated by the Financial Accounting Standards Board (FASB); the main U.S. accounting rule book. (p. 32)

Going Concern Assumption Assumes that the entity will remain in operation for the foreseeable future. (p. 36)

Goodwill Excess of the cost of an acquired company over the sum of the market values of its net assets (assets minus liabilities). (p. 540)

Gross Pay The total amount of salary, wages, commissions, and any other employee compensation before taxes and other deductions. (p. 610)

Gross Profit Excess of Net Sales Revenue over Cost of Goods Sold. (p. 278)

Gross Profit Percentage Measures the profitability of each sales dollar above the cost of goods sold. Gross profit / Net sales revenue. (pp. 298, 843)

Hardware Electronic equipment that includes computers, monitors, printers, and the network that connects them. (p. B-21)

Held-to-Maturity (HTM) Debt Investment A debt security the investor intends to hold and has the ability to hold until it matures. (p. 573)

Horizontal Analysis The study of percentage changes in line items from comparative financial statements. (p. 830)

Impairment A permanent decline in asset value. (p. 538)

Imprest System A way to account for petty cash by maintaining a constant balance in the petty cash account. At any time, cash plus petty cash tickets must total the amount allocated to the petty cash fund. (p. 417)

Income Statement Reports the *net income* or *net loss* of the business for a specific period. (p. 46)

Income Summary A temporary account into which revenues and expenses are transferred prior to their final transfer into the Retained Earnings account. Summarizes net income (or net loss) for the period. (p. 220)

Income Tax Expense Expense incurred by a corporation related to federal and state income taxes. (p. 297)

Income Tax Withholding Income tax deducted from an employee's gross pay. (p. 611)

Indirect Method A format of the operating activities section of the statement of cash flows; starts with net income and reconciles to net cash provided by operating activities. (p. 762)

Intangible Asset An asset with no physical form that is valuable because of the special rights it carries. (pp. 215, 538)

Interest The revenue to the payee for loaning money—the expense to the debtor. (p. 475)

Interest Period The period of time during which interest is computed. It extends from the original date of the note to the maturity date. (p. 476)

Interest Rate The percentage rate of interest specified by the note. (p. 476)

Internal Auditor An employee of the business who ensures the company's employees are following company policies, that the company meets all legal requirements, and that operations are running efficiently. (p. 409)

Internal Control The organizational plan and all the related measures adopted by an entity to safeguard assets, encourage employees to follow company policies, promote operational efficiency, and ensure accurate and reliable accounting records. (p. 407)

Internal Control Report A report by management describing its responsibility for and the adequacy of internal controls over financial reporting. (p. 408)

International Accounting Standards Board (IASB) The private organization that oversees the creation and governance of International Financial Reporting Standards (IFRS). (p. 36)

International Financial Reporting Standards (IFRS) A set of global accounting guidelines, formulated by the International Accounting Standards Board (IASB). (p. 36)

Inventory Costing Method A method of approximating the flow of inventory costs in a business that is used to determine the amount of cost of goods sold and ending merchandise inventory. (p. 357)

Inventory Shrinkage The loss of inventory that occurs because of theft, damage, and errors. (p. 291)

Inventory Turnover Measures the number of times a company sells its average level of merchandise inventory during a period. Cost of goods sold / Average merchandise inventory. (pp. 372, 842)

Investee The corporation that issued the bond or stock to the investor. (p. 572)

Investing Activities Activities that increase or decrease long-term assets; a section of the statement of cash flows. (p. 760)

Investor The owner of a bond or stock of a corporation. (p. 572)

Invoice A seller's request for payment from the purchaser. (p. 279)

Issued Stock Stock that has been issued but may or may not be held by stockholders. (p. 699)

Issue Price The amount that the corporation receives from issuing stock. (p. 702)

Journal A record of transactions in date order. (p. 91)

Land Improvement A depreciable improvement to land, such as fencing, sprinklers, paving, signs, and lighting. (p. 516)

Large Stock Dividend A stock dividend greater than 20% to 25% of the issued and outstanding stock. (p. 715)

Last-In, First-Out (LIFO) Method An inventory costing method in which the last costs into inventory are the first costs out to cost of goods sold. The method leaves the oldest costs—those of beginning inventory and the earliest purchases of the period—in ending inventory. (p. 359)

Ledger The record holding all the accounts of a business, the changes in those accounts, and their balances.

Legal Capital The portion of stockholders' equity that cannot be used for dividends. (p. 711)

Liabilities Debts that are owed to creditors. (pp. 38, 605)

License Privilege granted by a government to use public property in performing services. (p. 540)

Limited-Liability Company (LLC) A company in which each member is only liable for his or her own actions. (p. 33)

Liquidity A measure of how quickly an item can be converted to cash. (p. 215)

Lock-Box System A system in which customers send their checks to a post office box that belongs to a bank. A bank employee empties the box daily and records the deposits into the company's bank account. (p. 413)

Long-term Asset An asset that will not be converted to cash or used up within the business's operating cycle or one year, whichever is greater. (p. 215)

Long-term Investment Investments in bonds (debt securities) or stocks (equity securities) in which the company intends to hold the investment for longer than one year. (p. 215)

Long-term Investment An investment in debt and equity securities that the investor intends to hold for longer than one year. (p. 573)

Long-term Liability A liability that does not need to be paid within one year or within the entity's operating cycle, whichever is longer. (pp. 215, 605, 646)

Lower-of-Cost-or-Market (LCM) Rule Rule that merchandise inventory should be reported in the financial statements at whichever is lower—its historical cost or its market value. (p. 367)

Maker The party who issues the check. (p. 422)

Management's Discussion and Analysis of Financial Condition and Results of Operations (MD&A) The section of the annual report that is intended to help investors understand the results of operations and the financial condition of the company. (p. 828)

Managerial Accounting The field of accounting that focuses on providing information for internal decision makers. (p. 29)

Market Interest Rate The interest rate that investors demand in order to loan their money. (p. 653)

Matching Principle Guides accounting for expenses, ensures that all expenses are recorded when they are incurred during the period, and matches those expenses against the revenues of the period. (p. 149)

Materiality Concept A company must perform strictly proper accounting only for items that are significant to the business's financial situation. (p. 354)

Maturity Date The date when a note is due. (p. 459)

Maturity Value The sum of the principal plus interest due at maturity. (p. 476)

Memorandum Entry An entry in the journal that notes a significant event, but has no debit or credit amount. (p. 718)

Merchandise Inventory The merchandise that a business sells to customers. (p. 276)

Merchandiser A business that sells merchandise, or goods, to customers. (p. 276)

Modified Accelerated Cost Recovery System (MACRS) A depreciation method that is used for tax purposes. (p. 526)

Monetary Unit Assumption The assumption that requires the items on the financial statements to be measured in terms of a monetary unit. (p. 36)

Mortgages Payable Long-term debts that are backed with a security interest in specific property. (p. 647)

Multi-Step Income Statement Income statement format that contains subtotals to highlight significant relationships. In addition to net income, it reports gross profit and operating income. (p. 296)

Natural Resource An asset that comes from the earth and is consumed. (p. 537)

Net Income The result of operations that occurs when total revenues are greater than total expenses. (p. 39)

Net Loss The result of operations that occurs when total expenses are greater than total revenues. (p. 39)

Net Pay Gross pay minus all deductions. The amount of compensation that the employee actually takes home. (p. 610)

Net Purchases Purchases less purchase returns and allowances less purchase discounts. (p. 302)

Net Realizable Value The net value a company expects to collect from its accounts receivable. Accounts Receivable less Allowance for Bad Debts. (p. 465)

Network The system of electronic linkages that allows different computers to share the same information. (p. B-21)

Non-cash Investing and Financing Activities

Investing and financing activities that do not involve cash. (p. 761)

Noncumulative Preferred Stock Preferred stock whose owners do not receive passed dividends. (p. 713)

Nonsufficient Funds (NSF) Check A check for which the maker's bank account has insufficient money to pay the check. (p. 425)

No-Par Stock Stock that has no amount (par) assigned to it. (p. 701)

Normal Balance The balance that appears on the increase side of an account. (p. 88)

No Significant Influence Equity Investment

An equity security in which the investor lacks the ability to participate in the decisions of the investee company. (p. 574)

Notes Payable A *written* promise made by the business to pay a debt, usually involving *interest*, in the future. (p. 84)

Notes Receivable A written promise that a customer will pay a fixed amount of principal plus interest by a certain date in the future. (pp. 84, 459)

Obsolete An asset is considered obsolete when a newer asset can perform the job more efficiently. (p. 521)

Operating Activities Activities that create revenue or expense in the entity's business; a section of the statement of cash flows. (p. 760)

Operating Cycle The time span during which cash is paid for goods and services, which are then sold to customers from whom the business collects cash. (p. 215)

Operating Expenses Expenses, other than Cost of Goods Sold, that are incurred in the entity's major ongoing operations. (p. 278)

Operating Income Measures the results of the entity's major ongoing activities. Gross profit minus operating expenses. (p. 297)

Other Income and Expenses Revenues or expenses that are outside the normal, day-to-day operations of a business, such as a gain or loss on the sale of plant assets or interest expense. (p. 297)

Outstanding Check A check issued by a company and recorded on its books but not yet paid by its bank. (p. 424)

Outstanding Stock Issued stock in the hands of stockholders. (p. 700)

Paid-In Capital Represents amounts received from the stockholders of a corporation in exchange for stock. (p. 701)

Paid-In Capital in Excess of Par Represents amounts received from stockholders in excess of par value. (p. 703)

Parent Company A company that owns a controlling interest in another company. (p. 580)

Partnership

A business with two or more owners and not organized as a corporation. (p. 33)

Par Value An amount assigned by a company to a share of its stock. (p. 701)

Patent An intangible asset that is a federal government grant conveying an exclusive 20-year right to produce and sell a process, product, or formula. (p. 538)

Payee The individual or business to whom the check is paid. (p. 422)

Payroll Register A schedule that summarizes the earnings, withholdings, and net pay for each employee. (p. 613)

Pension Plan A plan that provides benefits to retired employees. (p. 618)

Percent-of-Receivables Method A method of estimating uncollectible receivables by determining the balance of the Allowance for Bad Debts account based on a percentage of accounts receivable. (p. 469)

Percent-of-Sales Method A method of estimating uncollectible receivables that calculates bad debts expense based on a percentage of net credit sales. (p. 468)

Periodic Inventory System An inventory system that requires businesses to obtain a physical count of inventory to determine quantities on hand. (p. 278)

Permanent Account An account that is *not* closed at the end of the period—the asset, liability, Common Stock, and Retained Earnings accounts. (p. 219)

Perpetual Inventory System An inventory system that keeps a running computerized record of merchandise inventory. (p. 278)

Petty Cash A fund containing a small amount of cash that is used to pay for minor expenditures. (p. 416)

Post-Closing Trial Balance A list of the accounts and their balances at the end of the period after journalizing and posting the closing entries. It should include only permanent accounts. (p. 226)

Posting Transferring data from the journal to the ledger. (p. 91)

Preemptive Right Stockholder's right to maintain his or her proportionate ownership in the corporation. (p. 700)

Preferred Stock Stock that gives its owners certain advantages over common stockholders, such as the right to receive dividends before the common stockholders and the right to receive assets before the common stockholders if the corporation liquidates. (p. 701)

Premium on Bonds Payable Occurs when a bond's issue price is more than face value. (p. 651)

Premium The amount above par at which a stock is issued. (p. 703)

- Prepaid Expense** A payment of an expense in advance. (p. 84)
- Present Value** The value of an investment today. (p. 652)
- Price/Earnings Ratio** The ratio of the market price of a share of common stock to the company's earnings per share. Measures the value that the stock market places on \$1 of a company's earnings. Market price per share of common stock / Earnings per share. (pp. 724, 849)
- Principal** The amount loaned out by the payee and borrowed by the maker of the note. (p. 475)
- Prior-Period Adjustment** A correction to Retained Earnings for an error of an earlier period. (p. 722)
- Profit Margin Ratio** A profitability measure that shows how much net income is earned on every dollar of net sales. Net income / Net sales revenue. (p. 846)
- Property, Plant, and Equipment** Long-lived, tangible assets, such as land, buildings, and equipment, used in the operation of a business. (p. 153)
- Property, Plant, and Equipment** Long-lived, tangible assets, such as land, buildings, and equipment, used in the operation of a business. (p. 215)
- Property, Plant, and Equipment (PP&E)** Long-lived, tangible assets, such as land, buildings, and equipment, used in the operation of a business. (p. 515)
- Public Company** A company that sells its stock to the general public. (p. 407)
- Purchase Allowance** An amount granted to the purchaser as an incentive to keep goods that are not "as ordered." (p. 282)
- Purchase Discount** A discount that businesses offer to purchasers as an incentive for early payment. (p. 281)
- Purchase Return** A situation in which sellers allow purchasers to return merchandise that is defective, damaged, or otherwise unsuitable. (p. 282)
- Purchases Journal** Special journal used to record all purchases of merchandise inventory, office supplies, and other assets on account. (p. B-14)
- Rate of Return on Common Stockholders' Equity** Shows the relationship between net income available to common stockholders and their average common equity invested in the company. (Net income – Preferred dividends) / Average common stockholders' equity. (pp. 724, 847)
- Rate of Return on Total Assets** A ratio that measures the success a company has in using its assets to earn income. (pp. 586, 846)
- Receivable** A monetary claim against a business or an individual. (p. 459)
- Relative-Market-Value Method** A method of allocating the total cost (100%) of multiple assets purchased at one time. Total cost is divided among the assets according to their relative market values. (p. 518)
- Remittance Advice** An optional attachment to a check that tells the business the reason for the payment. (p. 413)
- Residual Value** The expected value of a depreciable asset at the end of its useful life. (pp. 154, 521)
- Retailer** A type of merchandiser who buys merchandise either from a manufacturer or a wholesaler and then sells those goods to consumers. (p. 276)
- Retained Earnings** Equity earned by profitable operations of a corporation that is not distributed to stockholders. (pp. 38, 701)
- Return on Assets (ROA)** Measures how profitably a company uses its assets. Net income / Average total assets. (p. 50)
- Revenue Expenditure** An expenditure that does not increase the capacity or efficiency of an asset or extend its useful life. Revenue expenditures are debited to an expense account. (p. 519)
- Revenue Recognition Principle** Requires companies to record revenue when (or as) the entity satisfies each performance obligation. (p. 148)
- Revenues** Amounts earned from delivering goods or services to customers. (p. 38)
- Reversing Entry** A special journal entry that eases the burden of accounting for transactions in the next period. Such entries are the exact opposite of a prior adjusting entry. (p. 232)
- Routing Number** On a check, the 9-digit number that identifies the bank upon which the payment is drawn. (p. 422)
- Sales Discounts** Reduction in the amount of revenue earned on sales for early payment. (p. 288)
- Sales Journal** Special journal used to record credit sales. (p. 33)
- Sales Returns and Allowances** Customer's return of merchandise or an allowance granted to the customer. (p. 289)
- Sales Revenue** The amount that a merchandiser earns from selling its inventory. (p. 287)
- Sarbanes-Oxley Act (SOX)** Requires management to review internal control and take responsibility for the accuracy and completeness of their financial reports. (p. 37)
- Sarbanes-Oxley Act (SOX)** Requires companies to review internal control and take responsibility for the accuracy and completeness of their financial reports. (p. 408)
- Secured Bonds** Bonds that give bondholders the right to take specified assets of the issuer if the issuer fails to pay principal or interest. (p. 651)
- Securities and Exchange Commission (SEC)** U.S. governmental agency that oversees the U.S. financial markets. (p. 32)
- Security** A share or interest representing financial value. (p. 572)
- Selling Expenses** Expenses related to marketing and selling the company's goods and services. (p. 297)
- Separation of Duties** Dividing responsibilities between two or more people to limit fraud and promote accuracy of accounting records. (p. 409)
- Serial Bonds** Bonds that mature in installments at regular intervals. (p. 651)
- Server** The main computer where data are stored, which can be accessed from many different computers. (p. B-4)
- Short-term Investment** An investment in debt and equity securities that the investor intends to sell in one year or less. (p. 573)
- Short-term Note Payable** A written promise made by the business to pay a debt, usually involving interest, within one year or less. (p. 607)
- Signature Card** A card that shows each authorized person's signature for a bank account. (p. 422)
- Significant Influence Equity Investment** An equity security in which the investor has the ability to exert influence over operating and financial decisions of the investee company. (p. 574)
- Simple Interest** Interest calculated only on the principal amount. (p. 666)
- Single-Step Income Statement** Income statement format that groups all revenues together and then lists and deducts all expenses together without calculating any subtotals. (p. 295)
- Small Stock Dividend** A stock dividend of less than 20% to 25% of the issued and outstanding stock. (p. 715)
- Social Security (FICA) Tax** Federal Insurance Contributions Act (FICA) tax, which is withheld from employees' pay and matched by the employer. (p. 611)
- Software** Set of programs or instructions that drives the computer to perform the work desired. (p. B-21)
- Sole Proprietorship** A business with a single owner. (p. 33)
- Source Document** Provides the evidence and data for accounting transactions. (pp. 90, B-3)
- Special Journal** An accounting journal designed to record one specific type of transaction. (p. B-5)
- Specific Identification Method** An inventory costing method based on the specific cost of particular units of inventory. (p. 357)
- Stated Interest Rate** The interest rate that determines the amount of cash interest the borrower pays and the investor receives each year. (p. 651)

Stated Value Stock No-par stock that has been assigned an amount similar to par value. (p. 701)

Statement of Cash Flows Reports on a business's cash receipts and cash payments for a specific period. (pp. 48, 759)

Statement of Retained Earnings Reports how the company's retained earnings balance changed from the beginning to the end of the period. (p. 46)

Stock Certificate Paper evidence of ownership in a corporation. (p. 699)

Stock Dividend A distribution by a corporation of its own stock to its stockholders. (p. 714)

Stockholder A person who owns stock in a corporation. (p. 33)

Stockholders' Equity A corporation's equity that includes paid-in capital and retained earnings. (p. 701)

Stock Split An increase in the number of issued and outstanding shares of stock coupled with a proportionate reduction in the par value of the stock. (p. 718)

Straight-Line Amortization Method An amortization method that allocates an equal amount of bond discount or premium to each interest period over the life of the bond. (p. 656)

Straight-Line Method A depreciation method that allocates an equal amount of depreciation each year. ($\text{Cost} - \text{Residual value}$) / Useful life. (pp. 154, 522)

Subsidiary Company A company that is controlled by another corporation. (p. 580)

Subsidiary Ledger Record of accounts that provides supporting details on individual balances, the total of which appears in a general ledger account. (p. B-6)

T-Account A summary device that is shaped like a capital *T* with debits posted on the left side of the vertical line and credits on the right side of the vertical line. (p. 87)

Temporary Account An account that relates to a particular accounting period and is closed

at the end of that period—the revenues, expenses, Income Summary, and Dividends accounts. (p. 219)

Term Bonds Bonds that all mature at the same time. (p. 651)

Time Period Concept Assumes that a business's activities can be sliced into small time segments and that financial statements can be prepared for specific periods, such as a month, quarter, or year. (p. 148)

Times-Interest-Earned Ratio Evaluates a business's ability to pay interest expense. (p. 622)

Time Value of Money Recognition that money earns interest over time. (p. 652)

Timing Difference Difference that arises between the balance on the bank statement and the balance on the company's books because of a time lag in recording transactions. (p. 424)

Trademark An asset that represents distinctive identifications of a product or service. (p. 540)

Trading Debt Investment A debt security that the investor plans to sell in the very near future. (p. 573)

Trading on the Equity Earning more income on borrowed money than the related interest expense, thereby increasing the earnings for the owners of the business. (p. 848)

Transaction An event that affects the financial position of the business and can be measured with faithful representation. (p. 39)

Treasury Stock A corporation's own stock that it has previously issued and later reacquired. (p. 707)

Trend Analysis A form of horizontal analysis in which percentages are computed by selecting a base period as 100% and expressing amounts for following periods as a percentage of the base period amount. (p. 832)

Trial Balance A list of all ledger accounts with their balances at a point in time. (p. 105)

Underwriter A firm that handles the issuance of a company's stock to the public, usually

assuming some of the risk by agreeing to buy the stock if the firm cannot sell all of the stock to its clients. (p. 702)

Unearned Revenue A liability created when a business collects cash from customers in advance of providing services or delivering goods. (p. 84)

Unemployment Compensation Taxes

Taxes Payroll tax paid by employers to the government, which uses the cash to pay unemployment benefits to people who are out of work. (p. 615)

Units-of-Production Method A depreciation method that allocates a varying amount of depreciation each year based on an asset's usage. (p. 523)

Useful Life Length of the service period expected from an asset. May be expressed in time or usage. (p. 521)

Vendor The individual or business from whom a company purchases goods. (p. 277)

Vertical Analysis An analysis of a financial statement that reveals the relationship of each statement item to its base amount, which is the 100% figure. (p. 834)

Warranty An agreement that guarantees a company's product against defects. (p. 618)

Weighted-Average Method An inventory costing method based on the weighted-average cost per unit of inventory that is calculated after each purchase. Weighted-average cost per unit is determined by dividing the cost of goods available for sale by the number of units available. (p. 361)

Wholesaler A type of merchandiser who buys goods from manufacturers and then sells them to retailers. (p. 276)

Working Capital A measure of a business's ability to meet its short-term obligations with its current assets. Current assets – Current liabilities. (p. 839)

Worksheet An internal document that helps summarize data for the preparation of financial statements. (p. 170)

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