

Wiley Loose-Leaf Print Edition

ACCOUNTING

PRINCIPLES

FOURTEENTH EDITION

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Paul Kimmel's

Accounting Course Design



Paul Kimmel, co-author on several Wiley accounting titles, teaches at University of Wisconsin — Madison using Wiley's online course in a flipped-classroom format.

 **Wiley's online course was developed with the student experience in mind.**

See how Paul uses four key elements to focus his course on developing his students' success.



Guided Learning

EXAMPLE:

Paul customizes his learning path to highlight and structure pre-assignments, post-assignments and discussions, adaptive practice, exam practice, and quizzing.

The **flexible, linear learning path** enables you to control what your students see, when they see it, and in what order. This makes it very clear for students to understand what they're supposed to complete. This is especially vital for online classes. **Having a clear path to learn reduces the risk of "losing" students, keeping them engaged and on track in your course.**



Information Retention

EXAMPLE:

Paul assigns Interactive Tutorials ahead of pre-lecture assignments so students come to class ready to actively participate.

Interactive Tutorials provide students with a self-paced lecture walkthrough of the chapters. Broken into small chunks, students must respond to integrated questions correctly or exhaust attempts before moving on, enhancing the retention of information. **Trying to solve a problem before being taught the solution is frustrating but improves retention.**

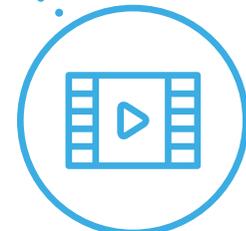


Continuous Practice

EXAMPLE:

Paul uses Adaptive Practice as a capstone activity at the end of each week to improve retention.

Adaptive Practice is a powerful learning tool that provides feedback, showing the areas students need to work on. **To improve learning, employ dynamic (adaptive) testing rather than static testing. Without feedback, students often overestimate their competence and don't see a need to try to improve.**



Just-in-Time Homework Help

EXAMPLE:

Paul assigns post-assignment problems supported by Solution Walkthrough Videos.

Solution Walkthrough Videos provide students with 24/7 just-in-time homework support and enable you to assign more difficult homework questions. **Longer, multi-learning objective problems with video support help students consolidate their understanding.**

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Course Design Suggestions from *Make It Stick**

- ✓ Trying to solve a problem before being taught the solution improves retention.
- ✓ Testing (active retrieval) doesn't just measure learning, it strengthens memory.
- ✓ Spaced "testing" results in greater retention.
- ✓ Providing feedback strengthens testing more than testing alone.

**Make It Stick*; Brown, Roediger, and McDaniel, 2014.

Considerations for a Flipped Classroom

Based on Paul Kimmel's course with two in-person lectures per week.

EXAMPLE WEEKLY SCHEDULE

SUNDAY	Online	Complete first pre-assignment. Due Monday before class.
MONDAY	In Class	Students do at least two exercises in class on blank sheet (i.e., conditions faced in a test).
TUESDAY	Online	Complete second pre-assignment. Due Wednesday before class.
WEDNESDAY	In Class	Students do at least two exercises in class on blank sheet.
THURSDAY/FRIDAY	Online	Complete post-assignment. Due Friday night.
FRIDAY/SATURDAY	Online	Complete adaptive practice assignment.

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Account Classification and Presentation

Account Title	Classification	Financial Statement	Normal Balance
A			
Accounts Payable	Current Liability	Balance Sheet	Credit
Accounts Receivable	Current Asset	Balance Sheet	Debit
Accumulated Depreciation—Buildings	Plant Asset—Contra	Balance Sheet	Credit
Accumulated Depreciation—Equipment	Plant Asset—Contra	Balance Sheet	Credit
Advertising Expense	Operating Expense	Income Statement	Debit
Allowance for Doubtful Accounts	Current Asset—Contra	Balance Sheet	Credit
Amortization Expense	Operating Expense	Income Statement	Debit
B			
Bad Debt Expense	Operating Expense	Income Statement	Debit
Bonds Payable	Long-Term Liability	Balance Sheet	Credit
Buildings	Plant Asset	Balance Sheet	Debit
C			
Cash	Current Asset	Balance Sheet	Debit
Common Stock	Stockholders' Equity	Balance Sheet	Credit
Copyrights	Intangible Asset	Balance Sheet	Debit
Cost of Goods Sold	Cost of Goods Sold	Income Statement	Debit
D			
Debt Investments	Current Asset/Long-Term Investment	Balance Sheet	Debit
Depreciation Expense	Operating Expense	Income Statement	Debit
Discount on Bonds Payable	Long-Term Liability—Contra	Balance Sheet	Debit
Dividend Revenue	Other Income	Income Statement	Credit
Dividends	Temporary account closed to Retained Earnings	Retained Earnings Statement	Debit
Dividends Payable	Current Liability	Balance Sheet	Credit
E			
Equipment	Plant Asset	Balance Sheet	Debit
F			
Freight-Out	Operating Expense	Income Statement	Debit
G			
Gain on Disposal of Plant Assets	Other Income	Income Statement	Credit
Goodwill	Intangible Asset	Balance Sheet	Debit
I			
Income Summary	Temporary account closed to Retained Earnings	Not Applicable	(1)
Income Tax Expense	Income Tax Expense	Income Statement	Debit
Income Taxes Payable	Current Liability	Balance Sheet	Credit
Insurance Expense	Operating Expense	Income Statement	Debit
Interest Expense	Other Expense	Income Statement	Debit
Interest Payable	Current Liability	Balance Sheet	Credit
Interest Receivable	Current Asset	Balance Sheet	Debit
Interest Revenue	Other Income	Income Statement	Credit
Inventory	Current Asset	Balance Sheet (2)	Debit

(continued)

Account Classification and Presentation (continued)

Account Title	Classification	Financial Statement	Normal Balance
L			
Land	Plant Asset	Balance Sheet	Debit
Loss on Disposal of Plant Assets	Other Expense	Income Statement	Debit
M			
Maintenance and Repairs Expense	Operating Expense	Income Statement	Debit
Mortgage Payable	Long-Term Liability	Balance Sheet	Credit
N			
Notes Payable	Current Liability/ Long-Term Liability	Balance Sheet	Credit
O			
Owner's Capital	Owner's Equity	Owner's Equity and Balance Sheet	Credit
Owner's Drawings	Temporary account closed to Owner's Capital	Owner's Equity	Debit
P			
Patents	Intangible Asset	Balance Sheet	Debit
Paid-in Capital in Excess of Par— Common Stock	Stockholders' Equity	Balance Sheet	Credit
Paid-in Capital in Excess of Par— Preferred Stock	Stockholders' Equity	Balance Sheet	Credit
Preferred Stock	Stockholders' Equity	Balance Sheet	Credit
Premium on Bonds Payable	Long-Term Liability—Adjunct	Balance Sheet	Credit
Prepaid Insurance	Current Asset	Balance Sheet	Debit
Prepaid Rent	Current Asset	Balance Sheet	Debit
R			
Rent Expense	Operating Expense	Income Statement	Debit
Retained Earnings	Stockholders' Equity	Balance Sheet and Retained Earnings Statement	Credit
S			
Salaries and Wages Expense	Operating Expense	Income Statement	Debit
Salaries and Wages Payable	Current Liability	Balance Sheet	Credit
Sales Discounts	Revenue—Contra	Income Statement	Debit
Sales Returns and Allowances	Revenue—Contra	Income Statement	Debit
Sales Revenue	Revenue	Income Statement	Credit
Selling Expenses	Operating Expense	Income Statement	Debit
Service Revenue	Revenue	Income Statement	Credit
Stock Investments	Current Asset/Long-Term Investment	Balance Sheet	Debit
Supplies	Current Asset	Balance Sheet	Debit
Supplies Expense	Operating Expense	Income Statement	Debit
T			
Treasury Stock	Stockholders' Equity	Balance Sheet	Debit
U			
Unearned Service Revenue	Current Liability	Balance Sheet	Credit
Utilities Expense	Operating Expense	Income Statement	Debit

(1) The normal balance for Income Summary will be credit when there is a net income, debit when there is a net loss. The Income Summary account does not appear on any financial statement.

(2) If a periodic system is used, Inventory also appears on the income statement in the calculation of cost of goods sold.

The following is a sample chart of accounts. It does not represent a comprehensive chart of all the accounts used in this text but rather those accounts that are commonly used. This sample chart of accounts is for a company that generates both service revenue as well as sales revenue. It uses the perpetual approach to inventory. If a periodic system was used, the following temporary accounts would be needed to record inventory purchases: Purchases, Freight-In, Purchase Returns and Allowances, and Purchase Discounts.

Chart of Accounts

Assets	Liabilities	Owner's and Stockholders' Equity	Revenues	Expenses
Cash	Notes Payable	Owner's Capital	Service Revenue	Administrative Expenses
Accounts Receivable	Accounts Payable	Owner's Drawings	Sales Revenue	Amortization Expense
Allowance for Doubtful Accounts	Unearned Service Revenue	Common Stock	Sales Discounts	Bad Debt Expense
Interest Receivable	Salaries and Wages Payable	Paid-in Capital in Excess of Par—Common Stock	Sales Returns and Allowances	Cost of Goods Sold
Inventory	Unearned Rent Revenue	Preferred Stock	Interest Revenue	Depreciation Expense
Supplies	Interest Payable	Paid-in Capital in Excess of Par—Preferred Stock	Gain on Disposal of Plant Assets	Freight-Out
Prepaid Insurance	Dividends Payable	Treasury Stock		Income Tax Expense
Prepaid Rent	Income Taxes Payable	Retained Earnings		Insurance Expense
Land	Bonds Payable	Dividends		Interest Expense
Equipment	Discount on Bonds Payable	Income Summary		Loss on Disposal of Plant Assets
Accumulated Depreciation—Equipment	Premium on Bonds Payable			Maintenance and Repairs Expense
Buildings	Mortgage Payable			Rent Expense
Accumulated Depreciation—Buildings				Salaries and Wages Expense
Copyrights				Selling Expenses
Goodwill				Supplies Expense
Patents				Utilities Expense

Accounting Principles

Fourteenth Edition

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for their love, support, and encouragement.

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This book was set in 9.5/12 STIX Two Text by Lumina Datamatics, Inc.

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ISBN: 978-1-119-70708-0

The inside back cover will contain printing identification and country of origin if omitted from this page. In addition, if the ISBN on the back cover differs from the ISBN on this page, the one on the back cover is correct.

Library of Congress Cataloging-in-Publication Data

Names: Weygandt, Jerry J., author. | Kimmel, Paul D., author. | Mitchell, Jill E., author.

Title: Accounting principles / Jerry J. Weygandt, PhD, CPA, University of Wisconsin—Madison, Madison, Wisconsin, Paul D. Kimmel, PhD, CPA, University of Wisconsin—Madison, Wisconsin, Jill E. Mitchell, MS, MEd, CIA, Northern Virginia Community College, Annandale, Virginia.

Description: Fourteenth Edition. | Hoboken : Wiley, 2020. | Revised edition.

Identifiers: LCCN 2020042820 (print) | LCCN 2020042821 (ebook) | ISBN 9781119707110 (paperback) | ISBN 9781119709879 (adobe pdf) | ISBN 9781119707080 (epub)

Subjects: LCSH: Accounting.

Classification: LCC HF5635 .W524 2020 (print) | LCC HF5635 (ebook) | DDC 657—dc23

LC record available at <https://lcn.loc.gov/2020042820>

LC ebook record available at <https://lcn.loc.gov/2020042821>

Printed in America.

10 9 8 7 6 5 4 3 2 1

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Cases for Management Decision Making

From the Authors

Dear Student,

Why This Course? Remember your biology course in high school? Did you have one of those “invisible man” models (or maybe something more high-tech than that) that gave you the opportunity to look “inside” the human body? This accounting course offers something similar. To understand a business, you have to understand the financial insides of a business organization. An accounting course will help you understand the essential financial components of businesses. Whether you are looking at a large multinational company like **Apple** or **Starbucks** or a single-owner software consulting business or coffee shop, knowing the fundamentals of accounting will help you understand what is happening. As an employee, a manager, an investor, a business owner, or a director of your own personal finances—any of which roles you will have at some point in your life—you will make better decisions for having taken this course.

Why This Text? Your instructor has chosen this text for you because of the authors’ trusted reputation. The authors have worked hard to provide instructional material that is engaging, timely, and accurate.

How to Succeed? We’ve asked many students and many instructors whether there is a secret for success in this course. The nearly unanimous answer turns out to be not much of a secret: “Do the homework.” This is one course where doing is learning. The more time you spend on the homework assignments—using the various tools that this text provides—the more likely you are to learn the essential concepts, techniques, and methods of accounting.

Good luck in this course. We hope you enjoy the experience and that you put to good use throughout a lifetime of success the knowledge you obtain in this course. We are sure you will not be disappointed.

“Whether you are looking at a large multinational company like **Apple** or **Starbucks** or a single-owner software consulting business or coffee shop, knowing the fundamentals of accounting will help you understand what is happening.”

Jerry J. Weygandt
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Acknowledgments

Accounting Principles has benefited greatly from the input of focus group participants, manuscript reviewers, those who have sent comments by letter or e-mail, ancillary authors, and proofers. We greatly appreciate the constructive suggestions and innovative ideas of reviewers and the creativity and accuracy of the ancillary authors and checkers.

Karen Andrews, *Lewis-Clark State College*
Sandra Bailey, *Oregon Institute of Technology*
Stacie Bailey, *College of Southern Maryland*
Shele Bannon, *Queensborough Community College*
Robert Barta, *Suffolk County Community College*
Ellen Bartley, *St. Joseph's College*
LuAnn Bean, *Florida Institute of Technology*
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We thank Margaret Shackell of Forsyth Technical Community College and Diane Tanner of University of North Florida for their creativity and efforts in the development of the *Data Analytics in Action* problems, and Benjamin Huegel and Teresa Speck of St. Mary's University for their extensive efforts in the preparation of the homework materials related to Current Designs. We also appreciate the considerable support provided to us by the following people at Current Designs: Mike Cichanowski, Jim Brown, Diane Buswell, and Jake Greseth. We also benefited from the assistance and suggestions provided to us by Joan Van Hise in the preparation of materials related to sustainability.

We appreciate the exemplary support and commitment given to us by executive editor Zoe Craig, marketing manager Christina Koop, course content developer Lindsey Myers, instructional designer Matt Origoni, senior course production operations specialist Nicole Repasky, editorial supervisor Terry Ann Tatro, designer Jon Boylan, program assistant Natalie Munoz, senior production editor Rachel Conrad, and Julie Perry, Cindy Durand, Amy Kopperude, Jennifer Collins, Gladys Soto, and Richard Bretan at Lumina. All of these professionals provided innumerable services that helped the text take shape.

We will appreciate suggestions and comments from users—
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New to This Edition: Data Analytics

The authors carefully considered how to thoughtfully and meaningfully integrate data analytics into the accounting course, and are pleased to provide the following data analytics resources.

Data Analytics in the Real World

Real-world examples that illustrate engaging situations in companies are provided throughout the text.

Data Analytics Insight Netflix



Ronnie Overgoor/
Unsplash

Using Data Science to Create Art

Technology provides decision-makers and problem-solvers with access to a large volume of information called “big data.” And **Netflix**, the world’s leading subscription streaming entertainment service, is tapping into this big data as part of its efforts to ramp up its original content production.

In a recent year, Netflix planned to spend \$8 billion on content creation. Producing content involves a blend of creativity, technology, and business decisions, all of which result in costs. And by analyzing the large amounts of data from past productions,

such as filming locations and production schedules, Netflix can more precisely estimate costs for future productions. Further, consider that the production of a TV show or film involves hundreds of tasks. Here again, Netflix uses data science, in this case to visualize where bottlenecks might occur or where opportunities might exist to increase the efficiency of the production process.

Source: Ritwik Kumar et. al., “Data Science and the Art of Producing Entertainment at Netflix,” *The Netflix Tech Blog* (March 26, 2018).

How can “big data” improve decision-making? (Answer is available near the end of the chapter.)

Data Analytics and Decision-Making

The text also provides numerous discussions and examples where accounting information is used to support business decisions using data analytics.

Increased access to ever larger amounts of data about customers, suppliers, products, and virtually every other aspect of a business has resulted in a greater reliance by companies on data analytics to support business decisions. Credit sales, sales returns and allowances, and sales discounts all provide rich opportunities for the use of data analytics.

- Effectively analyzing data regarding current, as well as potential, customers can help a company expand its sales base while minimizing the risk of unpaid receivables.
- In recent years, companies such as **Best Buy**, **REI**, and **Costco** have all refined their customer return policies, sometimes with unique rules for specific product types, as a result of data analytics applied to their data on product returns.
- To achieve the optimal cost-benefit balance on sales discounts, companies statistically analyze past discount practices to determine how large the discount should be, how long the payment period should be, and other factors.

Data Analytics in Action

Most chapters offer *Data Analytics in Action* problems, to offer students the opportunity to see how they might use data analytics to help solve realistic business problems. Excel templates for each of the *Data Analytics in Action* problems provide students a framework for solving the problem. *Data Analytics in Excel* videos provide students with step-by-step guidance in performing the Excel skills they will need to solve these problems.

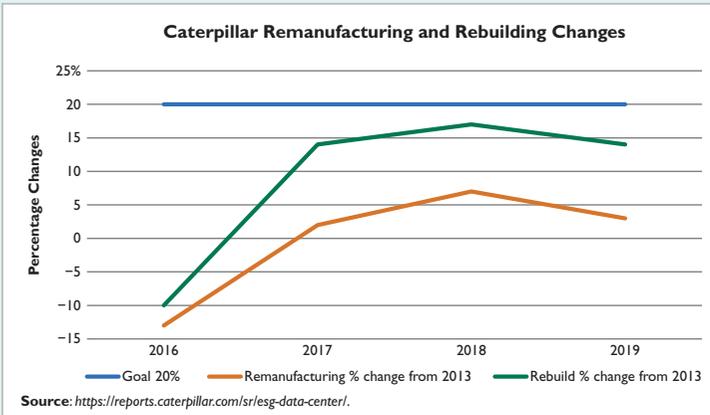
Using Data Visualization to Analyze Changes over Time

DA6.1 Data visualization can be used to analyze company changes over time.

Example: Recall the Feature Story “Where Is That Spare Bulldozer Blade?” presented in the chapter. **Caterpillar** continues to enhance its inventory management by improving its product sustainability in two ways. First, it is rebuilding used parts to like-new condition. Second, the company is remanufacturing usable inventory parts when customers trade-in or dispose of their used equipment. These actions not only reduce inventory costs but also enable Caterpillar to participate in the circular economy, where manufacturers take responsibility for their products at the end of the product lives. As noted in its 2019 sustainability report, Caterpillar has a goal of 20% growth in both rebuilding and remanufacturing from 2013 to 2020.



Has Caterpillar reached this goal? A line chart can help you visualize the company’s progress over time. What information can you obtain by examining the following chart?



The chart indicates that while Caterpillar’s goal has remained at 20%, the remanufacturing and rebuilding businesses are growing. The biggest increase in the growth of rebuilding occurred from 2016 to 2017. There was a decline from 2018 to 2019 in these initiatives as Caterpillar may have reached a peak that is leveling off due to new production that is more sustainable.

For this case, you will look more closely at specific Caterpillar data regarding its end-of-life returned materials and the percentage usable for recycling. You will create and analyze a combination column and line chart to determine how Caterpillar can increase its gross profit as it relates to these end-of-life materials.

Go to WileyPLUS for complete case details and instructions.

Using Data Analytics to Compare Companies’ Profitability

DA6.2 Manufacturing construction equipment is a competitive business. For this case, you will use company data to calculate the gross profit ratio, as well as the percentages of cost of goods sold, other expenses, and net income as compared to revenue, for **Caterpillar**, **Cummins**, and **CNH Industrial**. You will then create and analyze a clustered column chart based on this data. Finally, you will compare the rebuilding and recycling efforts of the companies and what impact these initiatives might have on their profitability.



Go to WileyPLUS for complete case details and instructions.

Data Visualization Homework Assignments

PowerBI and Tableau visualizations accompanied by questions are available with most chapters. PowerBI and Tableau visualizations allow students to interpret visualizations and think critically about data.

Data Analytics Module

An **accounting-specific data analytics module** with interactive lessons, case studies, and videos is part of the Wiley online course. The module has been prepared using industry-validated content to help students develop the professional competencies needed for the changing workforce.

New to This Edition: Chapter-by-Chapter Changes

In addition to the following changes, business and markets news videos from **Bloomberg** that reference real-world news and decision-making related to accounting concepts are now provided for most chapters, with accompanying multiple-choice and discussion questions.

Chapter 1: Accounting in Action

- NEW introductory discussion of how financial statement users can employ data analytics to improve decision-making.
- NEW Data Analytics Insight box, on how **Netflix** uses data analytics to help estimate costs for future projects as well as identify both bottlenecks and opportunities in its production processes.
- NEW example and illustration of how to apply basic accounting equation to determine owner's equity.
- NEW Helpful Hints on meaning of "incurred," additional discussion of revenues, and difference between accounts receivable and accounts payable.
- NEW discussion and illustration on financial statement preparation order/interrelationships.

Chapter 2: The Recording Process

- NEW illustration of the recording process, to increase student understanding of the three steps.
- NEW Helpful Hints, such as reinforcing the difference between a trial balance and a general ledger, to increase student understanding.

Chapter 3: Adjusting the Accounts

- NEW illustration showing the timeline of financial statement preparation.
- NEW discussion and illustration of the five-step revenue recognition process.
- NEW detailed explanations for why adjusting entries are necessary, including presenting the two rules of adjusting entries: (1) will include one income statement account and one balance sheet account and (2) will never affect the Cash account.
- Highlighted how each type of adjusting entry will affect the income statement and balance sheet.
- NEW illustration on enhancing qualities of accounting information, to improve student understanding.

Chapter 4: Completing the Accounting Cycle

- Updated discussion of worksheet to put its use more in context of the accounting cycle.

- Provided one overview worksheet for the accounting cycle steps for improved student understanding.
- Simplified illustration of the closing process for improved understanding.
- NEW Helpful Hint on the Income Summary account for improved understanding.

Chapter 5: Accounting for Merchandising Operations

- MOVED discussion of comprehensive income statement to Chapter 18.
- NEW section, "Data Analytics and Credit Sales" on how companies use data analytics to improve business decision-making regarding their policies on credit sales, sales returns and allowances, and sales discounts.
- NEW Helpful Hint to ensure student understanding of the Inventory account
- NEW Comprehensive Accounting Cycle Review for the perpetual inventory method for additional practice opportunity.

Chapter 6: Inventories

- NEW separate DO IT!s at end of each cost flow method discussion, so students can immediately check their understanding of the FIFO, LIFO, and average-cost methods.
- NEW data analytics discussion in "Analysis" section.
- NEW illustration showing **Walmart's** recent inventory disclosure, using retail inventory method.
- NEW Data Analytics in Action problems allow students to perform basic data analytics and data visualization.

Chapter 7: Accounting Information Systems

- NEW Feature Story, on how **Soul to Sole Footwear** uses its computerized accounting system effectively.

Chapter 8: Fraud, Internal Control, and Cash

- NEW section on how data analytics helps improve internal controls.
- NEW illustration of an electronic check, with callouts for improved student understanding.
- NEW section on Electronic Banking, with more detailed discussion of EFTs and new discussion and illustration on electronic and mobile banking internal controls.
- NEW illustration on how banks account for customer transactions.

- NEW discussion of robotic process automation (RPA) software and how companies can use it as part of their bank reconciliation process.
- NEW discussion of COSO initiative.
- NEW Data Analytics in Action problems allow students to perform basic data analytics and data visualization.

Chapter 9: Accounting for Receivables

- NEW Feature Story on how **Nike** has increased its sales through its credit policies.
- NEW section on data analytics and receivables management.

Chapter 10: Plant Assets, Natural Resources, and Intangible Assets

- NEW Feature Story on how equipment can determine financial success in the airline industry.
- NEW discussion and International Note on use of historical cost principle and cash equivalent price in determining the cost of plant assets.
- Included more DO IT!s at end of subsections of depreciation methods, so students can immediately test their understanding of how to calculate straight-line, declining-balance, and units-of-activity depreciation methods.
- NEW discussion and illustration on depreciation disclosure in the notes to the financial statements.
- Expanded discussion of how companies must disclose in the financial statements significant changes in depreciation estimates.
- Moved “Sale of Plant Assets” section before “Retirement of Plant Assets” section for more logical organization of topics.
- Expanded discussion of description of intangible assets and how to account for them.
- NEW Data Analytics in Action problems allow students to perform basic data analytics and data visualization.

Chapter 11: Current Liabilities and Payroll Accounting

- Updated definition of current liabilities per FASB to include “from existing current assets or through the creation of other current liabilities.”
- Included most recent information regarding sales taxes payable on Internet sales.
- NEW illustration on accounting for contingent liabilities, for improved student understanding.
- NEW illustration on W-4 form for improved student understanding.
- Updated FICA tax information per most recent guidance.

Chapter 12: Accounting for Partnerships

- NEW Data Analytics in Action problems allow students to perform basic data analytics and data visualization.

Chapter 13: Corporations: Organization and Capital Stock Transactions

- NEW discussion on hybrid forms of business organization.
- NEW discussion on how investors monitor a company’s dividend practices.

- New discussion on how payment of stock dividend can be viewed as merely a publicity gesture.
- New People, Planet, and Profit Insight box on the upward trend of shareholder proposals on corporate responsibility.
- NEW Investor Insight box, on how companies that pay dividends can increase investor wealth.

Chapter 14: Corporations: Dividends, Retained Earnings, and Income Reporting

- NEW Data Analytics in Action problems allow students to perform basic data analytics and data visualization.

Chapter 15: Long-Term Liabilities

- Updated Feature Story to discuss how debt has both helped and hurt **General Motors** and **Ford**.

Chapter 16: Investments

- Updated Feature Story to discuss emergence of new on-line streaming services as well as recent acquisition of **WarnerMedia** by **AT&T**.

Chapter 17: Statement of Cash Flows

- Added more T-accounts and journal entries to increase understandability of preparing the statement of cash flows using the indirect method.
- Used 2018 **Apple** financial statements for example in how to analyze the statement of cash flows using free cash flow calculation, for increased student engagement.
- NEW Data Analytics in Action problems allow students to perform basic data analytics and data visualization.

Chapter 18: Financial Statement Analysis

- Improved discussion of comprehensive income/statement of comprehensive income by consolidating within one section, for improved student understanding.

Chapter 19: Managerial Accounting

- NEW section on the value of data analytics in helping managers understand the relationship between CVP variables and business trends.
- NEW Data Analytics Insight box on how **Disney** uses its MagicBands as a source of data to analyze the behavior of its customers.
- Expanded discussion within “Manufacturing Costs” section to ensure student understanding of raw materials versus direct materials as well as what is considered to be manufacturing overhead. Also updated Illustration 1.4 (assignment of costs to cost categories) to include an explanation for each cost classification, again to ensure student understanding.
- Moved up discussion of balance sheet (before income statement) in “Manufacturing Costs in Financial Statements” section for more logical presentation of topics.
- Updated each “Managerial Accounting Today” section subtopic for the latest information on service industries, lean manufacturing, balanced scorecard, ethics, and social responsibility.

- NEW Data Analytics in Action problems allow students to perform basic data analytics and data visualization.

Chapter 20: Job Order Costing

- NEW Data Analytics Insight box on how **Autodesk** uses data analytics to improve its software and profitability.
- More discussion on assigning raw materials costs and assigning factory labor costs, to improve student understanding.
- Updated time ticket discussion for more recent process involving scanning of employee identification codes.
- NEW Data Analytics in Action problems allow students to perform basic data analytics and data visualization.

Chapter 21: Process Costing

- Production cost report now has the “Cost Reconciliation Schedule” section to include costs to be accounted for, not just costs accounted for.
- Throughout, have carefully scrutinized discussion to ensure complete student understanding. For example, in the “Transfer to Next Department” section, have added explanation of what department transfers entail.

Chapter 22: Cost-Volume-Profit

- NEW discussion on CVP and the use of data analytics, using **DHL Express** as an example.
- NEW expanded highlighted equations, to show more detailed calculations for improved understanding.
- NEW expanded explanation of what CVP analysis is.
- NEW illustration and discussion on how a GAAP income statement differs from a CVP income statement.
- NEW discussion on the variable cost ratio.
- Updated Service Company Insight to feature more recent information on the business of music promotion (and using Drake as an example instead of the Rolling Stones) and computing the break-even point.
- Enhanced end-of-chapter assignments by offering students more opportunities to prepare CVP income statements, as well as a new problem on regression analysis.
- NEW Data Analytics in Action problems allow students to perform basic data analytics and data visualization.

Chapter 23: Incremental Analysis

- Highlighted the decision rules, as well as additional factors to consider, for incremental analysis decisions.

Chapter 24: Budgetary Planning

- NEW Data Analytics Insight box on how **Dickey’s Barbecue Pit** uses data analytics to improve restaurant sales performance.
- NEW Data Analytics in Action problem allows students to perform basic data analytics and data visualization.

Chapter 25: Budgetary Control and Responsibility Accounting

- NEW Data Analytics Insight boxes on rolling forecasts and zero-based budgeting.
- Updated section on “Judgmental Factors in ROI” with “Alternative Measures of ROI Inputs” for more precise discussion and improved student understanding.
- NEW Data Analytics in Action problems allow students to perform basic data analytics and data visualization.

Chapter 26: Standard Costs and Balanced Scorecard

- NEW Data Analytics Insight box on how manufacturing companies are using technology such as 5G cellular to improve the amount and speed of data collection to improve operations.
- NEW highlighted applications of determining standard costs in “A Case Study” section, for improved student understanding.
- NEW Data Analytics in Action problem allows students to perform basic data analytics and data visualization.

Chapter 27: Planning for Capital Investments

- NEW Data Analytics Insight box on how **Electronic Arts** uses data from its current online video games to help it develop future products.
- Improved illustration showing computation of cash pay-back period by including detailed steps and computations.
- NEW Management Insight box on 5G and how it presents a risky investment to telecom companies.
- NEW Data Analytics in Action problems allow students to perform basic data analytics and data visualization.

Proven Pedagogical Features

When you think of accounting, you probably don't think of sports. So why do we have a photo of an athlete on our cover? It's because this image represents active learning that's best accomplished through full engagement, commitment, and practice. Through the integrated learning experience with the text and online course materials, *Accounting Principles, Fourteenth Edition*, takes the same approach many coaches do, by helping students not only master key concepts first but understand why they're important. In this way, students appreciate the importance of accounting basics and develop a solid foundation of knowledge. This leads to better student retention and sets them up for success in future careers.

In this new edition, all content has been carefully reviewed and revised to ensure maximum student understanding. At the same time, the time-tested features that have proven to be of most help to students have been retained, such as the following.

Infographic Learning

Over half of the text is visual, providing students alternative ways of learning about accounting. In addition, a new interior design promotes accessibility.

ILLUSTRATION 1.6
Determining owner's equity

Assets	=	Liabilities	+	Owner's Equity
Car		Bank's Claim		Your Claim
\$15,000	=	\$10,000	+	\$5,000



Real-World Decision-Making

Real-world examples that illustrate interesting situations in companies and how accounting information is used are integrated throughout the text, such as in the opening Feature Story as well as the Insight boxes.

People, Planet, and Profit Insight



PeopleImages/E+/Getty Images

Regaining Goodwill

After falling to unforeseen lows amidst scandals, recalls, and economic crises, the reputation of corporate America is recovering in the eyes of the American public. Overall corporate reputation is experiencing rehabilitation as the American public gives high marks overall to corporate America, specific industries, and the largest number of individual companies in a dozen years. This is according to the findings of the *2011 Harris Interactive RQ Study*, which measures the reputations of the 60 most visible companies in the United States.

The survey focuses on six reputational dimensions that influence reputation and consumer behavior. Four of these dimensions, along with the five corporations that ranked highest within each, are as follows.

- **Social Responsibility:** (1) Whole Foods Market, (2) Johnson & Johnson, (3) Google, (4) The Walt Disney Company, (5) Procter & Gamble Co.
- **Emotional Appeal:** (1) Johnson & Johnson, (2) Amazon.com, (3) UPS, (4) General Mills, (5) Kraft Foods
- **Financial Performance:** (1) Google, (2) Berkshire Hathaway, (3) Apple, (4) Intel, (5) The Walt Disney Company
- **Products and Services:** (1) Intel Corporation, (2) 3M Company, (3) Johnson & Johnson, (4) Google, (5) Procter & Gamble Co.

Source: www.harrisinteractive.com.

Name two industries today that are probably rated low on the reputational characteristics of “being trusted” and “having high ethical standards.” (Answer is available near the end of the chapter.)

Additional Guidance

Throughout the text, marginal notes, such as *Helpful Hints*, *Alternative Terminology*, and *Ethics Notes*, are provided as additional guidance. In addition, more than 100 new Solution Walkthrough Videos are now available in Wiley’s online course.

Correcting Entries—An Avoidable Step

Unfortunately, errors may occur in the recording process. Companies should correct errors, **as soon as they discover them**, by journalizing and posting **correcting entries**. If the accounting records are free of errors, no correcting entries are needed.

You should recognize several differences between correcting entries and adjusting entries.

- Adjusting entries are an integral part of the accounting cycle. Correcting entries, on the other hand, are unnecessary if the records are error-free.
- Companies journalize and post adjustments **only at the end of an accounting period**. In contrast, companies make correcting entries **whenever they discover an error** (see **Ethics Note**).
- Adjusting entries always affect at least one balance sheet account and one income statement account. In contrast, correcting entries may involve any combination of accounts in need of correction. **Correcting entries must be posted before closing entries.**

To determine the correcting entry, it is useful to compare the incorrect entry with the correct entry. Doing so helps identify the accounts and amounts that should—and should not—be corrected. After comparison, the accountant makes an entry to correct the accounts. The following two cases for Mercato Co. illustrate this approach.

ETHICS NOTE

When companies find errors in previously released income statements, they restate those numbers. Perhaps because of the increased scrutiny caused by Sarbanes-Oxley, in a recent year companies filed a record 1,195 restatements.

DO IT! Exercises

DO IT! Exercises in the body of the text prompt students to stop and review key concepts. They outline the Action Plan necessary to complete the exercise as well as show a detailed solution.

DO IT! 3 | Adjusting Entries for Accruals

Micro Computer Services began operations on August 1, 2022. At the end of August 2022, management prepares monthly financial statements. The following information relates to August.

1. At August 31, the company owed its employees \$800 in salaries and wages that will be paid on September 1.
2. On August 1, the company borrowed \$30,000 from a local bank on a 1-year note payable. The annual interest rate is 10%. Interest will be paid with the note at maturity.
3. Revenue for services performed but unrecorded for August totaled \$1,100.

Prepare the adjusting entries needed at August 31, 2022.

Solution

1. Salaries and Wages Expense	800	
Salaries and Wages Payable		800
(To record accrued salaries)		
2. Interest Expense	250	
Interest Payable		250
(To record accrued interest: \$30,000 × 10% × $\frac{1}{12}$ = \$250)		
3. Accounts Receivable	1,100	
Service Revenue		1,100
(To record revenue for services performed)		

Related exercise material: **BE3.7, DO IT! 3.3, E3.5, E3.6, E3.7, E3.8, and E3.9.**

ACTION PLAN

- **Make adjusting entries at the end of the period to recognize revenues for services performed and for expenses incurred.**
- **Don't forget to make adjusting entries for accruals. Adjusting entries for accruals will increase both a balance sheet and an income statement account.**

Review and Practice

Each chapter concludes with a Review and Practice section which includes a review of learning objectives, key terms glossary, practice multiple-choice questions with annotated solutions, practice brief exercises with solutions, practice exercises with solutions, and a practice problem with a solution.

Review and Practice

Practice Brief Exercises

- 1. (LO 1)** The ledger of Dey Company includes the following accounts. Explain why each account may need adjustment. *Indicate why adjusting entries are needed.*
- | | |
|------------------------------|--------------------------------|
| a. Supplies. | c. Salaries and Wages Payable. |
| b. Unearned Service Revenue. | d. Interest Payable. |

Solution

1. a. Supplies: to recognize supplies used during the period.
- b. Unearned Service Revenue: to record revenue generated for services performed.
- c. Salaries and Wages Payable: to recognize salaries and wages accrued to employees at the end of a reporting period.
- d. Interest Payable: to recognize interest accrued but unpaid on notes payable.

- 2. (LO 2) Financial Statement** At the end of its first year, the trial balance of Denton Company shows Equipment of \$40,000 and zero balances in Accumulated Depreciation—Equipment and Depreciation Expense. Depreciation for the year is estimated to be \$8,000. Prepare the adjusting entry for depreciation at December 31, post the adjustments to T-accounts, and indicate the balance sheet presentation of the equipment at December 31. *Prepare adjusting entry for depreciation.*

Solution

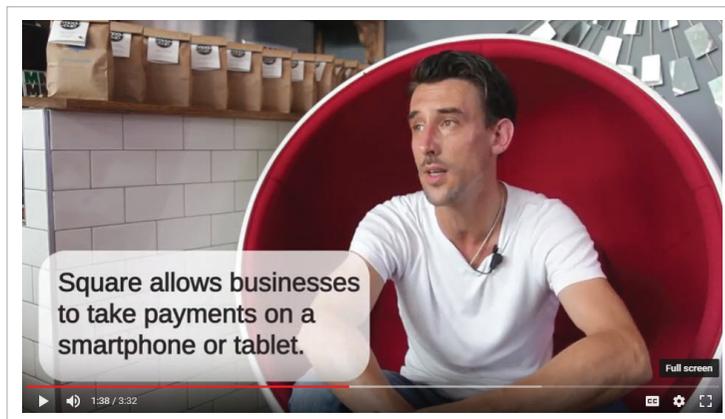
2. Dec. 31	Depreciation Expense	8,000	
	Accumulated Depreciation—Equipment		8,000
	Depreciation Expense	Accum. Depreciation—Equipment	
12/31	8,000	12/31	8,000
Balance Sheet:			
	Equipment	\$40,000	
	Less: Accumulated Depreciation—Equipment	<u>8,000</u>	\$32,000

Engaging Digital Tools

Digital study tools in Wiley's online course include the following.

Real-World Company Videos

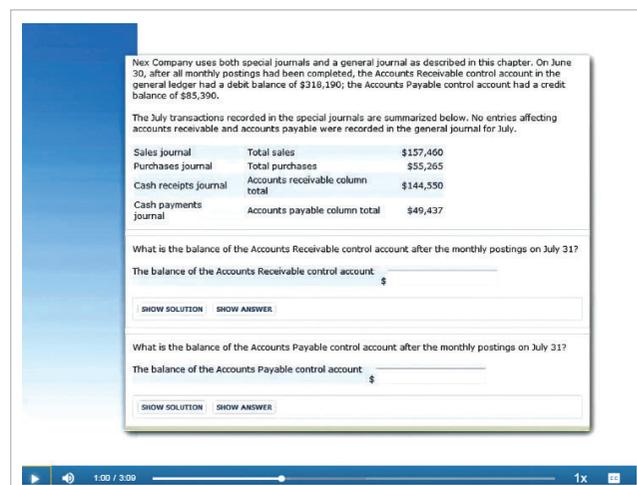
Real-world company videos feature both small businesses and larger companies to help students apply content and see how business owners apply concepts from the text in the real world. New to this edition are news videos from **Bloomberg** that reference real-world news and decision-making related to accounting concepts, with accompanying multiple-choice and discussion questions.



Source: YouTube.

Solution Walkthrough Videos

Solution Walkthrough Videos are available as question assistance and to help students develop problem-solving techniques. These videos walk students through solutions step-by-step and are based on the most regularly assigned exercises and problems in the text.



Nex Company uses both special journals and a general journal as described in this chapter. On June 30, after all monthly postings had been completed, the Accounts Receivable control account in the general ledger had a debit balance of \$318,190; the Accounts Payable control account had a credit balance of \$85,300.

The July transactions recorded in the special journals are summarized below. No entries affecting accounts receivable and accounts payable were recorded in the general journal for July.

Sales journal	Total sales	\$157,460
Purchases journal	Total purchases	\$55,265
Cash receipts journal	Accounts receivable column total	\$144,550
Cash payments journal	Accounts payable column total	\$49,437

What is the balance of the Accounts Receivable control account after the monthly postings on July 31?
The balance of the Accounts Receivable control account: \$ _____
SHOW SOLUTION SHOW ANSWER

What is the balance of the Accounts Payable control account after the monthly postings on July 31?
The balance of the Accounts Payable control account: \$ _____
SHOW SOLUTION SHOW ANSWER

Source: YouTube.

Interactive Tutorials

Interactive tutorials are voice-guided reviews of topics in each learning objective. Checkpoints in the tutorials require students to review and solve simple self-assessment exercises.

HORIZONTAL ANALYSIS OF SALES IN RELATION TO BASE PERIOD
Apply horizontal analysis and ... / Horizontal analysis / Horizontal Analysis Of Sales In ...

The percentage of the base period for each of the 5 years, assuming 2015 as the base period, is shown below.

We can determine that net sales increased approximately 9.3%

$$\frac{(\$38,064 - \$34,835) \div \$34,835}{\$34,835} = 9.3\%$$

Net Sales (in millions) in relation to base period 2015					
2019	2018	2017	2016	2015	
\$41,072	\$41,575	\$41,974	\$38,064	\$34,835	
117.9%	119.3%	120.5%	109.3%	100%	

We can also determine that net sales increased %

$$\frac{(\$41,072 - \$34,835) \div \$34,835}{\$34,835} = \text{[input]} \%$$

Gradable Excel Questions

Gradable Excel questions for each chapter provide students an opportunity to practice Excel skills in the context of solving accounting problems.

A	B	C	D	E	F	G	H	I	J	K
Function: IF; Formula: Subtract, Multiply; Cell Referencing										
Brief Exercise - Using Excel to Determine Variances						Student Work Area				
PROBLEM						Required: Provide input into cells shaded in yellow in this template. Use cell references to the Problem area with mathematical formulas in the input cells. In the last input field, input an IF function with cell references to your work area.				
In October, Pine Company was determining its overhead variance. Its predetermined overhead rate is based on direct labor hours. The following										
Manufacturing overhead costs incurred		\$ 118,000				Actual overhead				
Actual direct labor hours		21,000				Overhead applied				
Standard hours allowed for work done		20,600				Total overhead variance				
Predetermined overhead rate		\$ 6.00				Nature of variance				
Compute the amount of the total overhead variance and designate if the variance is favorable or unfavorable using Excel's IF function.										
						Answer Field 15.4% of your score. Formula: Multiply; Cell reference. Use a mathematical formula and cell referencing to the Problem area to determine the overhead applied.				

Data Visualization Homework Assignments

PowerBI and Tableau visualizations accompanied by questions are available with most chapters. PowerBI and Tableau visualizations allow students to interpret visualizations and think critically about data.

In addition, other learning opportunities in Wiley's online course include the following.

- **Accounting-Specific Data Analytics Module** offers interactive lessons, case studies, and videos. The module has been prepared using industry-validated content to help students develop the professional competencies needed for the changing workforce.
- **Cookie Creations** is a continuing case that spans across the financial accounting chapters and shows how a small business grows from a sole proprietorship to a corporation.
- **Waterways Corporation** is a continuing case that spans across the managerial accounting chapters and offers students the opportunity to see how a small business might use managerial accounting to operate effectively.
- **Wiley Accounting Updates** (wileyaccountingupdates.com) provide faculty and students with weekly curated news articles and suggested discussion questions.
- **Flashcards and Crossword Puzzles** help students study and master basic vocabulary and concepts.
- **Student Practice** quickly and effectively assesses student understanding of the material they have just covered.
- **Adaptive Practice** helps students quickly understand what they know and what they do not know, and provides opportunities for practice to effectively prepare for class or quizzes and exams.

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CASES FOR MANAGEMENT DECISION-MAKING

(The full text of these cases is available in Wiley's online course.)

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RAPID REVIEW: CHAPTER CONTENT

CHAPTER 1



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Accounting in Action

The **Chapter Preview** describes the purpose of the chapter and highlights major topics.

Chapter Preview

The following Feature Story about **Columbia Sportswear Company** highlights the importance of having good financial information and knowing how to use it to make effective business decisions. Whatever your pursuits or occupation, the need for financial information is inescapable. You cannot earn a living, spend money, buy on credit, make an investment, or pay taxes without receiving, using, or dispensing financial information. Good decision-making depends on good information. The purpose of this chapter is to show you that accounting is the system used to provide useful financial information.

The **Feature Story** helps you picture how the chapter topic relates to the real world of accounting and business.

Feature Story

Knowing the Numbers

Many students who take this course do not plan to be accountants. If you are in that group, you might be thinking, “If I’m not going to be an accountant, why do I need

to know accounting?” Well, consider this quote from Harold Geneen, a former chairman of **IT&T**: “To be good at your business, you have to know the numbers—cold.” In business, accounting and financial statements are the means for communicating the numbers. If you don’t know how to read financial statements, you can’t really know your business.

Knowing the numbers is sometimes even a matter of corporate survival. Consider the story of **Columbia Sportswear Company**, headquartered in Portland, Oregon. Gert Boyle's family fled Nazi Germany when she was 13 years old and then purchased a small hat company in Oregon, Columbia Hat Company. In 1971, Gert's husband, who was then running the company, died suddenly of a heart attack. Gert took over the small, struggling company with help from her son Tim, who was then a senior at the University of Oregon. Somehow, they kept the company afloat. Today, Columbia has more than 4,000 employees and annual sales in excess of \$1 billion. Its brands include Columbia, Mountain Hardwear, Sorel, and Montrail.

Columbia doesn't just focus on financial success. Several of its factories have participated in a project to increase

health awareness of female factory workers in developing countries. Columbia is also a founding member of the Sustainable Apparel Coalition, which strives to reduce the environmental and social impact of the apparel industry. In addition, the company monitors all of the independent factories that produce its products to ensure that they comply with the company's Standards of Manufacturing Practices. These standards address such issues as forced labor, child labor, harassment, wages and benefits, health and safety, and the environment.

Employers such as Columbia Sportswear generally assume that managers in all areas of the company are "financially literate." To help prepare you for that, this text will help you learn how to read and prepare financial statements, and how to use key tools to evaluate financial results using basic data analytics.

Chapter Outline

The **Chapter Outline** presents the chapter's topics and subtopics, as well as practice opportunities.

LEARNING OBJECTIVES

REVIEW

PRACTICE

LO 1 Identify the activities and users associated with accounting.	<ul style="list-style-type: none"> • Three activities • Who uses accounting data 	DO IT! 1 Basic Concepts
LO 2 Explain the building blocks of accounting: ethics, principles, and assumptions.	<ul style="list-style-type: none"> • Ethics • GAAP • Measurement principles • Assumptions 	DO IT! 2 Building Blocks of Accounting
LO 3 State the accounting equation, and define its components.	<ul style="list-style-type: none"> • Assets • Liabilities • Owner's equity 	DO IT! 3 Owner's Equity Effects
LO 4 Analyze the effects of business transactions on the accounting equation.	<ul style="list-style-type: none"> • Accounting transactions • Transaction analysis • Summary of transactions 	DO IT! 4 Tabular Analysis
LO 5 Describe the four financial statements and how they are prepared.	<ul style="list-style-type: none"> • Income statement • Owner's equity statement • Balance sheet • Statement of cash flows • Financial statements: order of preparation 	DO IT! 5 Financial Statement Items

Go to the Review and Practice section at the end of the chapter for a review of key concepts and practice applications with solutions.

Visit WileyPLUS for additional tutorials and practice opportunities.

Accounting Activities and Users

LEARNING OBJECTIVE 1

Identify the activities and users associated with accounting.

What consistently ranks as one of the top career opportunities in business? What frequently rates among the most popular majors on campus? What was the undergraduate degree chosen by **Nike** founder Phil Knight, **Home Depot** co-founder Arthur Blank, former acting director of the **Federal Bureau of Investigation (FBI)** Thomas Pickard, and numerous members of Congress? Accounting.¹ Why did these people choose accounting?

- They wanted to understand what was happening financially to their organizations.
- Accounting is the financial information system that provides these insights.
- In short, to understand your organization, you have to know the numbers.

Accounting consists of three basic activities—it **identifies, records, and communicates** the economic events of an organization to interested users. Let's take a closer look at these three activities.

Essential terms are printed in blue when they first appear, and are defined in the end-of-chapter **Glossary Review**.

Three Activities

As a starting point to the accounting process, a company **identifies the economic events relevant to its business**. Examples of economic events are the sale of snack chips by **PepsiCo**, the provision of telephone services by **AT&T**, and the payment of wages by **Facebook**.

Once a company like PepsiCo identifies economic events, it **records** those events in order to provide a history of its financial activities. Recording consists of keeping a systematic, chronological diary of events, measured in dollars and cents. In recording, PepsiCo also classifies and summarizes economic events.

Finally, PepsiCo **communicates** the collected information to interested users by means of accounting reports.

- We refer to the communication process as financial reporting.
- The most common accounting reports are called financial statements.

To make the reported financial information meaningful, PepsiCo reports the recorded data in a standardized way. It accumulates information resulting from similar transactions. For example, PepsiCo accumulates all sales transactions over a certain period of time and reports the data as one amount in the company's financial statements. Such data are said to be reported **in the aggregate**. By presenting the recorded data in the aggregate, the accounting process simplifies a multitude of transactions and makes a series of activities understandable and meaningful.

A vital element in communicating economic events is the accountant's ability to **analyze and interpret** the reported information.

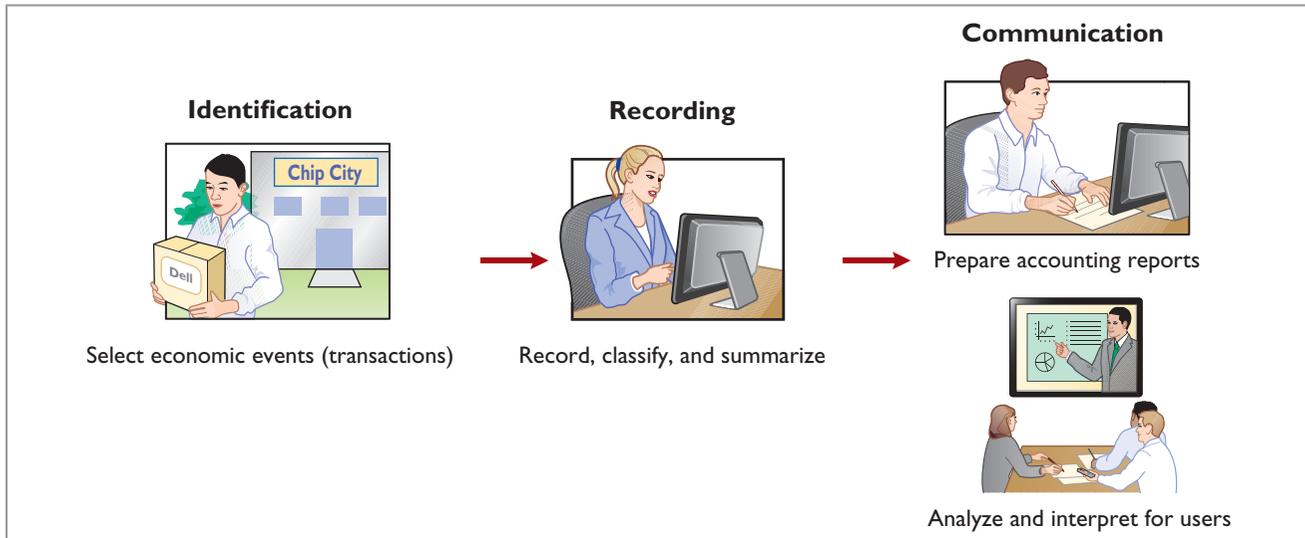
- **Analysis** involves use of ratios, percentages, and data visualization (graphs and charts) to highlight significant financial trends and relationships.
- **Interpretation** involves explaining the uses, meaning, and limitations of reported data.

¹The appendix to this chapter describes job opportunities for accounting majors and explains why accounting is such a popular major.

Appendices A–E show the financial statements of **Apple Inc.**, **PepsiCo, Inc.**, **The Coca-Cola Company**, **Amazon.com, Inc.**, and **Walmart Inc.**, respectively. (In addition, in the *A Look at IFRS* section at the end of each chapter, the French company **LVMH—Louis Vuitton** is analyzed.) We refer to these statements at various places throughout the text. At this point, these financial statements probably strike you as complex and confusing. By the end of this course, you’ll be surprised at your ability to understand, analyze, and interpret them.

Illustration 1.1 summarizes the activities of the accounting process.

ILLUSTRATION 1.1 The activities of the accounting process



You should understand that the accounting process **includes** the bookkeeping function.

- **Bookkeeping** usually involves only the recording of economic events.
- It is just one part of the accounting process.

In total, accounting involves **the entire process of identifying, recording, and communicating economic events.**²

Who Uses Accounting Data

HELPFUL HINT

Throughout this text, we will highlight examples where accounting information is used to support business decisions using *data analytics*.

Helpful Hints further clarify concepts being discussed.

Accounting software systems collect vast amounts of data about the economic events experienced by a company and about the parties with whom the company engages, such as suppliers and customers. Business decision-makers take advantage of this wealth of data by using **data analytics** to make more informed business decisions.

- Data analytics involves analyzing data, often employing both software and statistics, to draw inferences.
- As both data access and analytical software improve, the use of data analytics to support decisions is becoming increasingly common at virtually all types of companies (see **Helpful Hint**).

²The origins of accounting are generally attributed to the work of Luca Pacioli, an Italian Renaissance mathematician. Pacioli was a close friend and tutor to Leonardo da Vinci and a contemporary of Christopher Columbus. In his 1494 text *Summa de Arithmetica, Geometria, Proportione et Proportionalite*, Pacioli described a system to ensure that financial information was recorded efficiently and accurately.

Insight boxes provide examples of business situations from various perspectives—ethics, investor, international, corporate social responsibility, and data analytics. Guideline answers to the critical thinking questions as well as questions are available near the end of the chapter.

Data Analytics Insight Netflix



Ronnie Overgoor/
UnSplash

Using Data Science to Create Art

Technology provides decision-makers and problem-solvers with access to a large volume of information called “big data.” And **Netflix**, the world’s leading subscription streaming entertainment service, is tapping into this big data as part of its efforts to ramp up its original content production.

In a recent year, Netflix planned to spend \$8 billion on content creation. Producing content involves a blend of creativity, technology, and business decisions, all of which result in costs. And by analyzing the large amounts of data from past productions,

such as filming locations and production schedules, Netflix can more precisely estimate costs for future productions. Further, consider that the production of a TV show or film involves hundreds of tasks. Here again, Netflix uses data science, in this case to visualize where bottlenecks might occur or where opportunities might exist to increase the efficiency of the production process.

Source: Ritwik Kumar et. al., “Data Science and the Art of Producing Entertainment at Netflix,” *The Netflix Tech Blog* (March 26, 2018).

How can “big data” improve decision-making? (Answer is available near the end of the chapter.)

Users of accounting information can be divided broadly into two groups: internal users and external users.

Internal Users

Internal users of accounting information are the managers who plan, organize, and run a business. Internal users include **marketing managers, production supervisors, finance directors, and company officers**. In running a business, internal users must answer many important questions, as shown in **Illustration 1.2**.

ILLUSTRATION 1.2 Questions that internal users ask

Questions Asked by Internal Users

 <p>Finance</p> <p>Is cash sufficient to pay dividends to Microsoft stockholders?</p>	 <p>Marketing</p> <p>What price should Apple charge for an iPhone to maximize the company’s net income?</p>	 <p>Human Resources</p> <p>Can General Motors afford to give its employees pay raises this year?</p>	 <p>Management</p> <p>Which PepsiCo product line is the most profitable? Should any product lines be eliminated?</p>
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To answer these and other questions, internal users need detailed information on a timely basis.

- **Managerial accounting** provides internal reports to help users make decisions about their companies.
- Examples are financial comparisons of operating alternatives, projections of income from new sales campaigns, and forecasts of cash needs for the next year.

External Users

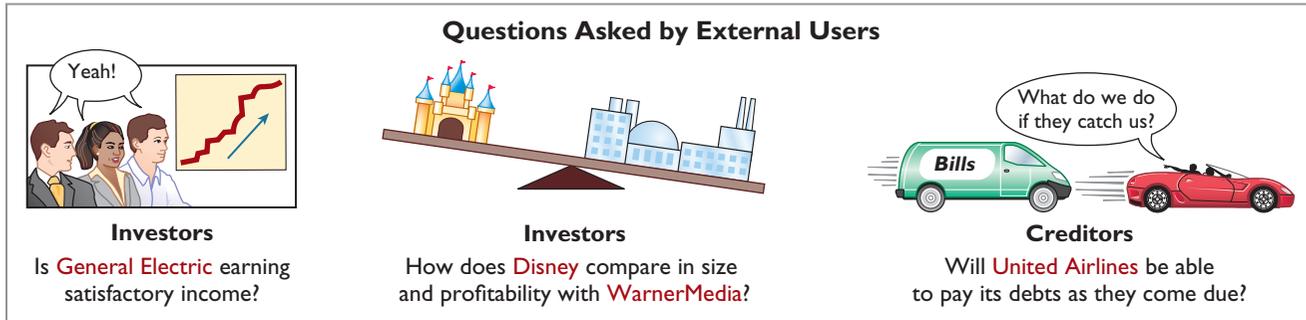
External users are individuals and organizations outside a company who want financial information about the company. The two most common types of external users are investors and creditors.

- **Investors** (owners) use accounting information to decide whether to buy, hold, or sell ownership shares of a company.

- **Creditors** (such as suppliers and bankers) use accounting information to evaluate the risks of granting credit or lending money.

Illustration 1.3 shows some questions that investors and creditors may ask.

ILLUSTRATION 1.3 Questions that external users ask



Financial accounting answers these questions. It provides economic and financial information for investors, creditors, and other external users. The information needs of external users vary considerably.

- **Taxing authorities**, such as the Internal Revenue Service, want to know whether the company complies with tax laws.
- **Customers** are interested in whether a company like **Tesla, Inc.** will continue to honor product warranties and support its product lines.
- **Labor unions**, such as the **Major League Baseball Players Association**, want to know whether the owners have the ability to pay increased wages and benefits.
- **Regulatory agencies**, such as the Securities and Exchange Commission or the Federal Trade Commission, want to know whether the company is operating within prescribed rules.

ACTION PLAN

- Review the basic concepts discussed.
- Develop an understanding of the key terms used.

The **DO IT!** exercises ask you to put newly acquired knowledge to work. They outline the **Action Plan** necessary to complete the exercise, and they show a **Solution**.

DO IT! 1 | Basic Concepts

Indicate whether each of the five statements presented below is true or false. If false, indicate how to correct the statement.

1. The three steps in the accounting process are identification, recording, and communication.
2. Bookkeeping encompasses all steps in the accounting process.
3. Accountants prepare, but do not interpret, financial reports.
4. The two most common types of external users are investors and company officers.
5. Managerial accounting activities focus on reports for internal users.

Solution

1. True. 2. False. Bookkeeping involves only the recording step. 3. False. Accountants analyze and interpret information in reports as part of the communication step. 4. False. The two most common types of external users are investors and creditors. 5. True.

Related exercise material: **DO IT! 1.1, E1.1, and E1.2.**

The Building Blocks of Accounting

LEARNING OBJECTIVE 2

Explain the building blocks of accounting: ethics, principles, and assumptions.

A doctor follows certain protocols in treating a patient's illness. An architect follows certain structural guidelines in designing a building.

- Similarly, an accountant follows certain standards in reporting financial information.
- These standards are based on specific principles and assumptions.

For these standards to work, however, a fundamental business concept must be present—ethical behavior.

Ethics in Financial Reporting

People won't gamble in a casino if they think it is "rigged." Similarly, people won't play the stock market if they think share prices are rigged. At one time, the financial press was full of articles about financial scandals at **Enron**, **WorldCom**, **HealthSouth**, and **AIG**. As more scandals came to light, a mistrust of financial reporting in general seemed to be developing.

One article in the *Wall Street Journal* noted that "repeated disclosures about questionable accounting practices have bruised investors' faith in the reliability of earnings reports, which in turn has sent stock prices tumbling."

- Imagine trying to carry on a business or invest money if you could not depend on the financial statements to be honestly prepared. Information would have no credibility.
- There is no doubt that a sound, well-functioning economy depends on accurate and dependable financial reporting.

United States regulators and lawmakers were very concerned that the economy would suffer if investors lost confidence in corporate accounting because of unethical financial reporting. In response, Congress passed the **Sarbanes-Oxley Act (SOX)** to reduce unethical corporate behavior and decrease the likelihood of future corporate scandals.

- As a result of SOX, top management must now certify the accuracy of financial information.
- In addition, penalties for fraudulent financial activity are much more severe.
- Also, SOX increased the independence requirements of the outside auditors who review the accuracy of corporate financial statements and increased the oversight role of boards of directors (see **Ethics Note**).

The standards of conduct by which actions are judged as right or wrong, honest or dishonest, fair or not fair, are **ethics**. Effective financial reporting depends on sound ethical behavior. To sensitize you to ethical situations in business and to give you practice at solving ethical dilemmas, we address ethics in a number of ways in this text:

1. A number of the *Feature Stories* and other parts of the text discuss the central importance of ethical behavior to financial reporting.
2. *Ethics Insight* boxes and marginal *Ethics Notes* highlight ethics situations and issues in actual business settings.
3. Many of the *People, Planet, and Profit Insight* boxes focus on ethical issues that companies face in measuring and reporting social and environmental issues.
4. At the end of the chapter, an *Ethics Case* simulates a business situation and asks you to put yourself in the position of a decision-maker in that case.

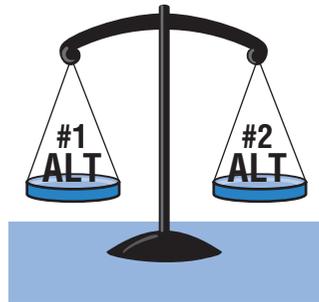
Ethics Notes help sensitize you to some of the ethical issues in accounting.

ETHICS NOTE

Circus-founder P.T. Barnum is alleged to have said, "Trust everyone, but cut the deck." What Sarbanes-Oxley does is to provide measures (like cutting the deck of playing cards) that help reduce incidents of fraud.

When analyzing these various ethics cases and your own ethical experiences, you should apply the three steps outlined in **Illustration 1.4**.

ILLUSTRATION 1.4 Steps in analyzing ethics cases and situations



1. Recognize an ethical situation and the ethical issues involved.

Use your personal ethics to identify ethical situations and issues. Some businesses and professional organizations provide written codes of ethics for guidance in some business situations.

2. Identify and analyze the principal elements in the situation.

Identify the **stakeholders**—persons or groups who may be harmed or benefited. Ask the question: What are the responsibilities and obligations of the parties involved?

3. Identify the alternatives, and weigh the impact of each alternative on various stakeholders.

Select the most ethical alternative, considering all the consequences. Sometimes there will be one right answer. Other situations involve more than one right solution; these situations require an evaluation of each and a selection of the best alternative.

Ethics Insight Dewey & LeBoeuf LLP



Alliance Images/
Shutterstock.com

I Felt the Pressure—Would You?

“I felt the pressure.” That’s what some of the employees of the now-defunct law firm of **Dewey & LeBoeuf LLP** indicated when they helped to overstate revenue and use accounting tricks to hide losses and cover up cash shortages. These employees worked for the former finance director and former chief financial officer (CFO) of the firm. Here are some of their comments:

- “I was instructed by the CFO to create invoices, knowing they would not be sent to clients. When I created these invoices, I knew that it was inappropriate.”
- “I intentionally gave the auditors incorrect information in the course of the audit.”

What happened here is that a small group of lower-level employees over a period of years carried out the instructions of their bosses. Their bosses, however, seemed to have no concern about unethical practices as evidenced by various e-mails with one another in which they referred to their financial manipulations as accounting tricks, cooking the books, and fake income.

Sources: Ashby Jones, “Guilty Pleas of Dewey Staff Detail the Alleged Fraud,” *Wall Street Journal* (March 28, 2014); and Sara Randazzo, “Dewey CFO Escapes Jail Time in Fraud Case Sentencing,” *Wall Street Journal* (October 10, 2017).

Why did these employees lie, and what do you believe should be their penalty for these lies? (Answer is available near the end of the chapter.)

International Note

Over 160 countries use international standards (called IFRS). For example, all companies in the European Union follow IFRS. The differences between U.S. and international standards are not generally significant.

International Notes highlight differences between U.S. and international accounting standards.

Generally Accepted Accounting Principles

The accounting profession has developed standards that are generally accepted and universally practiced.

- This common set of standards is called **generally accepted accounting principles (GAAP)**.
- These standards indicate how to report economic events.

The primary accounting standard-setting body in the United States is the **Financial Accounting Standards Board (FASB)**. The **Securities and Exchange Commission (SEC)** is the agency of the U.S. government that oversees U.S. financial markets and accounting standard-setting bodies. The SEC relies on the FASB to develop accounting standards, which public companies must follow.

Many countries outside of the United States have adopted the accounting standards issued by the **International Accounting Standards Board (IASB)**. These standards are called **International Financial Reporting Standards (IFRS)** (see **International Note**).

As markets become more global, it is often desirable to compare the results of companies from different countries that report using different accounting standards. In order to increase comparability, the two standard-setting bodies made efforts to reduce the differences between U.S. GAAP and IFRS.

However, it seems likely that there will continue to be two sets of financial reporting standards in the world for the foreseeable future due to the FASB and the IASB taking different approaches to various financial reporting issues. We highlight any major differences between GAAP and IFRS in *International Notes* as part of the text discussion as well as provide a more in-depth analysis in the *A Look at IFRS* section at the end of each chapter.

International Insight



Toru Hanai/Pool/Getty Images

The Korean Discount

If you think that accounting standards don't matter, consider events in South Korea. For many years, international investors complained that the financial reports of South Korean companies were inadequate and inaccurate. Accounting practices there often resulted in huge differences between stated revenues and actual revenues. Because investors did not have faith in the accuracy of the numbers, they were unwilling to pay as much for the shares of these companies relative to shares of comparable companies in different countries. This difference in share price was often referred to as the "Korean discount."

In response, Korean regulators decided that companies would have to comply with international accounting standards.

This change was motivated by a desire to "make the country's businesses more transparent" in order to build investor confidence and spur economic growth. Many other Asian countries, including China, India, and Japan, have also decided either to adopt international standards or to create standards that are based on the international standards.

Source: Evan Ramstad, "End to 'Korea Discount'?" *Wall Street Journal* (March 16, 2007).

What is meant by the phrase "make the country's businesses more transparent"? Why would increasing transparency spur economic growth? (Answer is available near the end of the chapter.)

Measurement Principles

GAAP generally uses one of two measurement principles, the historical cost principle or the fair value principle. Selection of which principle to follow generally relates to trade-offs between relevance and faithful representation (see **Helpful Hint**).

- **Relevance** means that financial information is capable of making a difference in a decision.
- **Faithful representation** means that the numbers and descriptions match what really existed or happened—they are factual.

HELPFUL HINT

Relevance and faithful representation are two primary qualities that make accounting information useful for decision-making.

Historical Cost Principle

The **historical cost principle** (or cost principle) dictates that companies record assets at their cost.

- Assets are resources a company owns.
- Companies use the historical cost principle to value assets not only at the time the asset is purchased but also over the time the asset is held.

For example, if **Best Buy** purchases land for \$360,000, the company initially reports it in its accounting records at \$360,000. But what does Best Buy do if, by the end of the next year, the fair value of the land has increased to \$400,000? Under the historical cost principle, it continues to report the land at \$360,000.

Fair Value Principle

The **fair value principle** states that assets and liabilities should be reported at fair value (the price received to sell an asset or settle a liability).

- Liabilities are creditor claims against assets.
- Fair value information may be more useful than historical cost for certain types of assets and liabilities.
- For example, certain investment securities are reported at fair value because market price information is usually readily available for these types of assets.

In determining which measurement principle to use, companies weigh the factual nature of cost figures versus the relevance of fair value. In general, most companies choose to use cost. Only in situations where assets are actively traded, such as investment securities, do companies apply the fair value principle extensively.

Assumptions

Assumptions provide a foundation for the accounting process. Two main assumptions are the **monetary unit assumption** and the **economic entity assumption**.

Monetary Unit Assumption

The **monetary unit assumption** requires that companies include in the accounting records only transaction data that can be expressed in money terms.

- This assumption enables accounting to quantify (measure) economic events.
- The monetary unit assumption is vital to applying the historical cost principle.

This assumption prevents the inclusion of some relevant information in the accounting records. For example, the health of a company's owner, the quality of service, and the morale of employees are not included. The reason: Companies cannot quantify this information in monetary terms. Though this information is important, companies record only events that can be measured in money.

Economic Entity Assumption

The **economic entity assumption** requires that the activities of the entity be kept separate and distinct from the activities of its owner and all other economic entities (see **Ethics Note**).

- An economic entity can be any organization or unit in society.
- It may be a company (such as **Crocs, Inc.**), a governmental unit (the state of Ohio), a municipality (Seattle), a school district (St. Louis District 48), or a church (Southern Baptist).

To illustrate, Sally Rider, owner of Sally's Boutique, must keep her personal living costs separate from the expenses of her business. Similarly, **J. Crew** and **Gap Inc.** are segregated into separate economic entities for accounting purposes.

Proprietorship A business owned by one person is generally a **proprietorship**. The owner is often the manager/operator of the business. Small service-type businesses (plumbing companies, beauty salons, and auto repair shops), farms, and small retail stores (antique shops, clothing stores, and used-book stores) are often proprietorships.

- Usually, only a relatively small amount of money (capital) is necessary to start in business as a proprietorship.
- The owner (proprietor) receives any profits, suffers any losses, and is personally liable for all debts of the business.

ETHICS NOTE

The importance of the economic entity assumption is illustrated by scandals involving **Adelphia**. In this case, senior company employees entered into transactions that blurred the line between the employees' financial interests and those of the company. For example, Adelphia guaranteed over \$2 billion of loans to the founding family.

There is no legal distinction between the business as an economic unit and the owner, but the accounting records of the business activities are kept separate from the personal records and activities of the owner.

Partnership A business owned by two or more persons associated as partners is a **partnership**. In most respects, a partnership is like a proprietorship except that more than one owner is involved.

- Typically, a partnership agreement (written or oral) sets forth such terms as initial investment, duties of each partner, division of net income (or net loss), and settlement to be made upon death or withdrawal of a partner.
- Each partner generally has unlimited personal liability for the debts of the partnership.
- Like a proprietorship, for accounting purposes the partnership transactions must be kept separate from the personal activities of the partners.

Partnerships are often used to organize retail and service-type businesses, including professional practices (lawyers, doctors, architects, and certified public accountants).

Corporation A business organized as a separate legal entity under state corporation law and having ownership divided into transferable shares of stock is a **corporation**.

- The holders of the shares (stockholders) enjoy limited liability; that is, they are not personally liable for the debts of the corporate entity.
- Stockholders may transfer all or part of their ownership shares to other investors at any time (i.e., sell their shares). The ease with which ownership can change adds to the attractiveness of investing in a corporation.
- Because ownership can be transferred without dissolving the corporation, the corporation enjoys an unlimited life.

Although the combined number of proprietorships and partnerships in the United States is more than five times the number of corporations, the revenue produced by corporations is eight times greater. Most of the largest companies in the United States—for example, **ExxonMobil**, **Ford**, **Walmart Inc.**, **Citigroup**, and **Apple**—are corporations.

Accounting Across the Organization



blublaf/E+/Getty Images

Spinning the Career Wheel

How will the study of accounting help you? A working knowledge of accounting is desirable for virtually every field of business. Some examples of how accounting is used in business careers include:

General management: Managers at **Ford Motors**, **Massachusetts General Hospital**, **California State University-Fullerton**, a **McDonald's** franchise, and

a **Trek** bike shop all need to understand accounting data in order to make wise business decisions.

Marketing: Marketing specialists at **Procter & Gamble** must be sensitive to costs and benefits, which accounting helps them quantify and understand. Making a sale is meaningless unless it is a profitable sale.

Finance: Do you want to be a banker for **Citicorp**, an investment analyst for **Goldman Sachs**, or a stockbroker for **Merrill**

Lynch? These fields rely heavily on accounting knowledge to analyze financial statements. In fact, it is difficult to get a good job in a finance function without two or three courses in accounting.

Real estate: Are you interested in being a real estate broker for **Prudential Real Estate**? Because a third party—the bank—is almost always involved in financing a real estate transaction, brokers must understand the numbers involved: Can the buyer afford to make the payments to the bank? Does the cash flow from an industrial property justify the purchase price? What are the tax benefits of the purchase?

Hospitality: Have you considered being an event planner or a general manager for a major hotel like **Marriott**? Leaders in these roles rely on the ability to interpret financial data such as sales from food and beverage, guest rooms, and events as indicators for future forecasting and critical operational decision-making.

How might accounting help you? (Answer is available near the end of the chapter.)

ACTION PLAN

- Review the discussion of ethics and financial reporting standards.
- Develop an understanding of the key terms used.

DO IT! 2 | Building Blocks of Accounting

Indicate whether each of the five statements presented below is true or false. If false, indicate how to correct the statement.

1. Congress passed the Sarbanes-Oxley Act to reduce unethical behavior and decrease the likelihood of future corporate scandals.
2. The primary accounting standard-setting body in the United States is the Financial Accounting Standards Board (FASB).
3. The historical cost principle dictates that companies record assets at their cost. In later periods, however, the fair value of the asset must be used if its fair value is higher than its cost.
4. Relevance means that financial information matches what really happened; the information is factual.
5. A business owner's personal expenses must be separated from expenses of the business to comply with accounting's economic entity assumption.

Solution

1. True. 2. True. 3. False. The historical cost principle dictates that companies record assets at their cost. Under the historical cost principle, the company must also use cost in later periods. 4. False. Faithful representation, not relevance, means that financial information matches what really happened; the information is factual. 5. True.

Related exercise material: **DO IT! 1.2, E1.3, and E1.4.**

The Accounting Equation

LEARNING OBJECTIVE 3

State the accounting equation, and define its components.

The two basic elements of a business are what it owns and what it owes. **Assets** are the resources a business owns. For example, **Google** has total assets of approximately \$275.9 billion. Liabilities and owner's equity are the rights or claims against these resources. Thus, Google has \$275.9 billion of claims against its \$275.9 billion of assets. Claims of those to whom the company owes money (creditors) are called **liabilities**. Claims of owners are called **owner's equity**. Google has liabilities of \$74.5 billion and owner's equity of \$201.4 billion.

We can express the relationship of assets, liabilities, and owner's equity as an equation, as shown in **Illustration 1.5**.

ILLUSTRATION 1.5 The basic accounting equation

Assets	=	Liabilities	+	Owner's Equity
Resources owned by the business		Creditor claim against total assets		Owner's claim against total assets

This relationship is the **basic accounting equation**.

- Assets must equal the sum of liabilities and owner's equity.
- Liabilities appear before owner's equity in the basic accounting equation because they are paid first if a business is liquidated.

The accounting equation applies to all **economic entities** regardless of size, nature of business, or form of business organization. It applies to a small proprietorship such as a corner grocery store as well as to a giant corporation such as **PepsiCo**. The equation provides the **underlying framework** for recording and summarizing economic events.

Let's look in more detail at the categories in the basic accounting equation.

Assets

As noted above, **assets** are resources a business owns.

- The business uses its assets in carrying out such activities as production and sales.
- The common characteristic possessed by all assets is the capacity to provide future services or benefits.
- In a business, that service potential or future economic benefit eventually results in cash inflows (receipts).

For example, consider Campus Pizza, a local restaurant. It owns a delivery truck that provides economic benefits from delivering pizzas. Other assets of Campus Pizza include tables, chairs, jukebox, cash register, oven, tableware, and, of course, cash.

Liabilities

Liabilities are creditor claims against total assets—that is, existing debts and obligations. Businesses of all sizes usually borrow money and purchase merchandise on credit. These economic activities result in payables of various sorts:

- Campus Pizza, for instance, purchases cheese, sausage, flour, and beverages on credit from suppliers. These obligations are called accounts payable.
- Campus Pizza also has a note payable to First National Bank for the money borrowed to purchase the delivery truck.
- Campus Pizza may also have salaries and wages payable to employees and sales and real estate taxes payable to the local government.

All of these persons or entities to whom Campus Pizza owes money are its creditors.

Creditors may legally force the liquidation of a business that does not pay its debts. In that case, the law requires that creditor claims be paid before ownership claims.

Owner's Equity

The ownership claim on total assets is **owner's equity** (see **Helpful Hint**). It is equal to total assets minus total liabilities. Here is why:

- The assets of a business are claimed by either creditors or owners.
- To find out what belongs to owners, we subtract the creditors' claims (the liabilities) from assets.
- The remainder is the owner's claim on the assets—the owner's equity.

Since the claims of creditors must be paid **before** ownership claims, owner's equity is often referred to as **residual equity**.

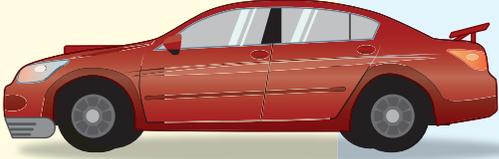
For example, say you purchase a car, an asset, that has a sales price of \$15,000. You pay \$5,000 cash and borrow the remainder, \$10,000, from a bank. You, the owner, have claim to the \$5,000 you paid, and the bank, the creditor, has claim to the \$10,000 that you borrowed from it. As **Illustration 1.6** shows, your owner's equity (\$5,000) is equal to your asset (\$15,000 car) minus your liability (bank's claim of \$10,000).

HELPFUL HINT

In some places, we use the term "owner's equity" and in others we use "owners' equity." *Owner's* (singular, possessive) refers to one owner (the case with a sole proprietorship). *Owners'* (plural, possessive) refers to multiple owners (the case with partnerships or corporations).

ILLUSTRATION 1.6
Determining owner's equity

<u>Assets</u>	=	<u>Liabilities</u>	+	<u>Owner's Equity</u>
Car		Bank's Claim		Your Claim
\$15,000	=	\$10,000	+	\$5,000



Increases in Owner's Equity

In a proprietorship, owner's investments and revenues increase owner's equity.

Investments by Owner **Investments by owner** are the assets the owner puts into the business. These investments increase owner's equity. They are recorded in a category called **owner's capital**.

HELPFUL HINT

The effect of revenues is positive—an increase in owner's equity coupled with an increase in assets or a decrease in liabilities.

Revenues **Revenues** are the **increases in assets or decreases in liabilities resulting from the sale of goods or the performance of services in the normal course of business** (see **Helpful Hint**). Revenues usually result in an increase in an asset. They may arise from different sources and are called different names depending on the nature of the business. Campus Pizza, for instance, has two categories of sales revenues—pizza sales and beverage sales. Other titles for and sources of revenue common to many businesses are sales, fees, services, commissions, interest, dividends, royalties, and rent.

Decreases in Owner's Equity

In a proprietorship, owner's drawings and expenses decrease owner's equity.

Drawings An owner may withdraw cash or other assets for personal use. We use a separate classification called **drawings** to determine the total withdrawals for each accounting period. **Drawings decrease owner's equity.** They are recorded in a category called owner's drawings.

HELPFUL HINT

The effect of expenses is negative—a decrease in owner's equity coupled with a decrease in assets or an increase in liabilities.

Expenses **Expenses** are the cost of assets consumed or services used in the process of generating revenue (see **Helpful Hint**). They are **decreases in owner's equity that result from operating the business**. Like revenues, expenses take many forms and are titled differently depending on the type of asset consumed or service used. For example, Campus Pizza recognizes the following expenses: cost of ingredients (meat, flour, cheese, tomato paste, mushrooms, etc.); cost of beverages; salaries and wages expense; utilities expense (electric, gas, and water expense); delivery expense (gasoline, repairs, licenses, etc.); supplies expense (napkins, detergents, aprons, etc.); rent expense; interest expense; and property tax expense.

Let's summarize the increases and decreases to owner's equity.

- Owner's equity is increased by an owner's investments and by revenues from business operations.
- Owner's equity is decreased by an owner's withdrawals of assets and by expenses.

Illustration 1.7. expands the basic accounting equation by showing the items that comprise owner's equity. This format is referred to as the **expanded accounting equation**.

ILLUSTRATION 1.7 Expanded accounting equation

Basic Equation	Assets	=	Liabilities	+	Owner's Equity			
Expanded Equation	Assets	=	Liabilities	+	Owner's Capital	- Owner's Drawings	+ Revenues	- Expenses
Examples	<ul style="list-style-type: none"> • Cash • Accounts Receivable • Supplies • Equipment 		<ul style="list-style-type: none"> • Accounts Payable 		<ul style="list-style-type: none"> • Owner's Capital 	<ul style="list-style-type: none"> • Owner's Drawings 	<ul style="list-style-type: none"> • Service Revenue 	<ul style="list-style-type: none"> • Advertising Expense • Salaries and Wages Expense • Rent Expense • Utilities Expense

DO IT! 3 | Owner's Equity Effects

Classify the following items as investment by owner (I), owner's drawings (D), revenues (R), or expenses (E). Then indicate whether each item increases or decreases owner's equity.

1. Rent Expense.
2. Service Revenue.
3. Drawings.
4. Salaries and Wages Expense.

Solution

1. Rent Expense is an expense (E); it decreases owner's equity. 2. Service Revenue is revenue (R); it increases owner's equity. 3. Drawings is owner's drawings (D); it decreases owner's equity. 4. Salaries and Wages Expense is an expense (E); it decreases owner's equity.

Related exercise material: **BE1.1, BE1.2, BE1.3, BE1.4, BE1.5, BE1.6, DO IT! 1.3, and E1.5.**

ACTION PLAN

- Understand the sources of revenue.
- Understand what causes expenses.
- Review the rules for changes in owner's equity.
- Recognize that drawings are withdrawals of cash or other assets from the business for personal use.

Analyzing Business Transactions

LEARNING OBJECTIVE 4

Analyze the effects of business transactions on the accounting equation.



The system of collecting and processing transaction data and communicating financial information to decision-makers is known as the **accounting information system**. Factors that shape an accounting information system include the nature of the company's business, the types of transactions, the size of the company, the volume of data, and the information demands of management and others.

Most businesses use computerized accounting systems—sometimes referred to as electronic data processing (EDP) systems.

- These systems handle all the steps involved in the recording process, from initial data entry to preparation of the financial statements.
- Many companies have upgraded their accounting information systems in response to the requirements of Sarbanes-Oxley.
- In addition, companies are utilizing new technologies such as cloud-based storage, which permits employees to access records from different locations, and data automation and analytics tools, which help companies interpret large volumes of data to support enhanced decision-making and automate routine processes.

In this text, in order to emphasize the underlying concepts and principles, we focus on a manual accounting system. The accounting concepts and principles do not change whether a system is computerized or manual.

This **accounting cycle graphic** illustrates the steps companies follow each period to record transactions and eventually prepare financial statements.

Accounting information systems rely on a process referred to as **the accounting cycle**. As you can see from the graphic at the beginning of this section, the accounting cycle begins with the analysis of business transactions and ends with the preparation of a post-closing trial balance. We explain each of the steps, starting in this chapter and continuing in Chapters 2–4.

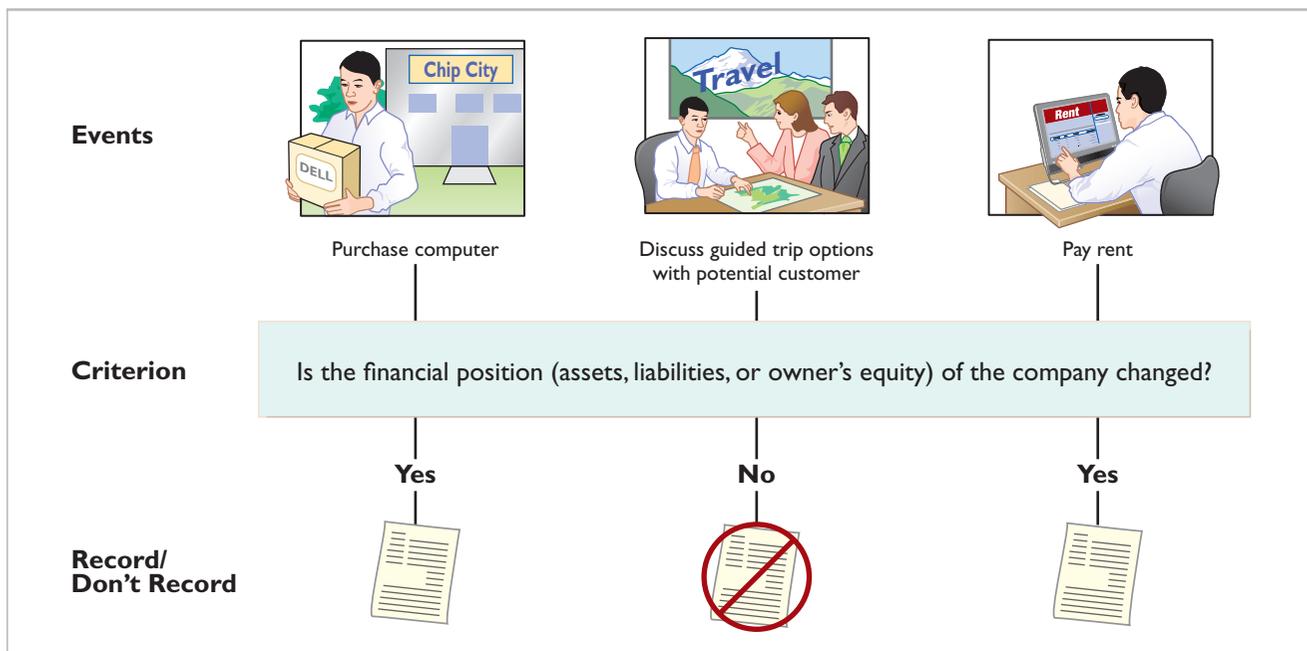
Accounting Transactions

Transactions (business transactions) are a business's economic events recorded by accountants. Transactions may be external or internal.

- **External transactions** involve economic events between the company and some outside enterprise. For example, Campus Pizza's purchase of cooking equipment from a supplier, payment of monthly rent to the landlord, and sale of pizzas to customers are external transactions.
- **Internal transactions** are economic events that occur entirely within one company. The use of cooking and cleaning supplies are internal transactions for Campus Pizza.

Companies carry on many activities that do not represent business transactions. Examples are hiring employees, responding to e-mails, talking with customers, and placing merchandise orders. Some of these activities may lead to business transactions: Employees will earn wages, and suppliers will deliver ordered merchandise. The company must analyze each event to find out if it affects the components of the accounting equation. If it does, the company will record the transaction. **Illustration 1.8** demonstrates the transaction identification process.

ILLUSTRATION 1.8 Transaction identification process



Each transaction must have a dual effect on the accounting equation. For example, if an asset is increased, there must be a corresponding:

- Decrease in another asset, *or*
- Increase in a specific liability, *or*
- Increase in owner's equity.

Two or more items could be affected. For example, as one asset is increased \$10,000, another asset could decrease \$6,000 and a liability could increase \$4,000. Any change in a liability or ownership claim is subject to similar analysis.

Transaction Analysis

To demonstrate how to analyze transactions in terms of the accounting equation, we will review the business activities of Softbyte, a smartphone app development company (see **Helpful Hint**). Softbyte is the creation of Ray Neal, an entrepreneur who wants to create focused apps that inspire and engage users of all ages. Ray was encouraged to start his own business after the success of “FoodAlert,” a customizable app he developed that tracks the daily location of local food trucks. The following business transactions occur during Softbyte’s first month of operations (**Helpful Hint**).

Transaction 1. Investment of Cash by Owner Ray Neal starts a smartphone app development company which he names Softbyte. On September 1, 2022, he invests \$15,000 cash in the business. This transaction results in an equal increase in assets and owner’s equity.

Basic Analysis	The asset Cash increases \$15,000, and owner’s equity (specifically, Owner’s Capital) increases \$15,000.				
Equation Analysis	<u>Assets</u>	=	<u>Liabilities</u>	+	<u>Owner’s Equity</u>
	Cash	=			Owner’s Capital
(1)	+\$15,000	=			+\$15,000 Initial Investment

Observe that the equality of the basic equation has been maintained. Note also that the source of the increase in owner’s equity (in this case, initial investment) is indicated. Why does this matter? Because investments by owner’s do not represent revenues, and they are excluded in determining net income. Therefore, it is necessary to make clear that the increase is an investment rather than revenue from operations. Additional investments have the same effect on owner’s equity as the initial investment.

Transaction 2. Purchase of Equipment for Cash Softbyte purchases computer equipment for \$7,000 cash. This transaction results in an equal increase and decrease in total assets, though the composition of assets changes.

Basic Analysis	The asset Cash decreases \$7,000, and the asset Equipment increases \$7,000.						
Equation Analysis	<u>Cash</u>	+	<u>Equipment</u>	=	<u>Liabilities</u>	+	<u>Owner’s Equity</u>
	\$15,000			=			Owner’s Capital
(2)	-\$7,000		+\$7,000	=			\$15,000
	\$ 8,000	+	\$7,000	=			\$15,000
	\$15,000						

Observe that total assets are still \$15,000. Owner’s equity also remains at \$15,000, the amount of Ray Neal’s original investment.

Transaction 3. Purchase of Supplies on Credit Softbyte purchases headsets (and other computer accessories expected to last several months) for \$1,600 from Mobile Solutions. Mobile Solutions agrees to allow Softbyte to pay this bill in October. This transaction is a **purchase on account** (a credit purchase). Assets increase because of the expected future benefits of using the headsets and computer accessories, and liabilities increase by the amount due Mobile Solutions (see **Helpful Hint**).

HELPFUL HINT

Study these transactions until you are sure you understand them. They are not difficult, but understanding them is important to your success in this course. The ability to analyze transactions in terms of the basic accounting equation is essential in accounting.

HELPFUL HINT

Notice that for each transaction, the equality of the accounting equation has been maintained—total assets will still equal total liabilities plus owner’s equity.

HELPFUL HINT

“On account” or “on credit” means that cash will be paid at a later date.

Basic Analysis	The asset Supplies increases \$1,600, and the liability Accounts Payable increases \$1,600.																																																											
Equation Analysis	<table border="0" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="3" style="border-top: 1px solid black; border-bottom: 1px solid black; text-align: center;">Assets</td> <td style="text-align: center;">=</td> <td colspan="2" style="border-top: 1px solid black; border-bottom: 1px solid black; text-align: center;">Liabilities</td> <td style="text-align: center;">+</td> <td colspan="2" style="border-top: 1px solid black; border-bottom: 1px solid black; text-align: center;">Owner's Equity</td> </tr> <tr> <td style="text-align: center;">Cash</td> <td style="text-align: center;">+</td> <td style="text-align: center;">Supplies</td> <td style="text-align: center;">+</td> <td style="text-align: center;">Equipment</td> <td style="text-align: center;">=</td> <td style="text-align: center;">Accounts Payable</td> <td style="text-align: center;">+</td> <td style="text-align: center;">Owner's Capital</td> </tr> <tr> <td style="text-align: center;">\$8,000</td> <td></td> <td></td> <td></td> <td style="text-align: center;">\$7,000</td> <td></td> <td></td> <td></td> <td style="text-align: center;">\$15,000</td> </tr> <tr> <td></td> <td></td> <td style="text-align: center;">+\$1,600</td> <td></td> <td></td> <td></td> <td style="text-align: center;">+\$1,600</td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;">\$8,000</td> <td style="text-align: center;">+</td> <td style="text-align: center;">\$ 1,600</td> <td style="text-align: center;">+</td> <td style="text-align: center;">\$7,000</td> <td style="text-align: center;">=</td> <td style="text-align: center;">\$1,600</td> <td style="text-align: center;">+</td> <td style="text-align: center;">\$15,000</td> </tr> <tr> <td colspan="4" style="border-top: 1px solid black; text-align: center;">\$16,600</td> <td></td> <td></td> <td colspan="3" style="border-top: 1px solid black; text-align: center;">\$16,600</td> </tr> </table>						Assets			=	Liabilities		+	Owner's Equity		Cash	+	Supplies	+	Equipment	=	Accounts Payable	+	Owner's Capital	\$8,000				\$7,000				\$15,000			+\$1,600				+\$1,600			\$8,000	+	\$ 1,600	+	\$7,000	=	\$1,600	+	\$15,000	\$16,600						\$16,600		
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\$16,600						\$16,600																																																						

Total assets are now \$16,600. This total is matched by a \$1,600 creditor's claim and a \$15,000 ownership claim.

Transaction 4. Services Performed for Cash Softbyte receives \$1,200 cash from customers for app development services it has performed. This transaction represents Softbyte's principal revenue-producing activity. Recall that **revenue increases owner's equity**.

Basic Analysis	The asset Cash increases \$1,200, and owner's equity increases \$1,200 due to Service Revenue.																																																																				
Equation Analysis	<table border="0" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="3" style="border-top: 1px solid black; border-bottom: 1px solid black; text-align: center;">Assets</td> <td style="text-align: center;">=</td> <td colspan="2" style="border-top: 1px solid black; border-bottom: 1px solid black; text-align: center;">Liabilities</td> <td style="text-align: center;">+</td> <td colspan="2" style="border-top: 1px solid black; border-bottom: 1px solid black; text-align: center;">Owner's Equity</td> </tr> <tr> <td style="text-align: center;">Cash</td> <td style="text-align: center;">+</td> <td style="text-align: center;">Supplies</td> <td style="text-align: center;">+</td> <td style="text-align: center;">Equipment</td> <td style="text-align: center;">=</td> <td style="text-align: center;">Accounts Payable</td> <td style="text-align: center;">+</td> <td style="text-align: center;">Owner's Capital</td> <td style="text-align: center;">+</td> <td style="text-align: center;">Revenues</td> </tr> <tr> <td style="text-align: center;">\$8,000</td> <td></td> <td style="text-align: center;">\$1,600</td> <td></td> <td style="text-align: center;">\$7,000</td> <td></td> <td style="text-align: center;">\$1,600</td> <td></td> <td style="text-align: center;">\$15,000</td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;">+\$1,200</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;">+\$1,200</td> </tr> <tr> <td style="text-align: center;">\$9,200</td> <td style="text-align: center;">+</td> <td style="text-align: center;">\$1,600</td> <td style="text-align: center;">+</td> <td style="text-align: center;">\$7,000</td> <td style="text-align: center;">=</td> <td style="text-align: center;">\$1,600</td> <td style="text-align: center;">+</td> <td style="text-align: center;">\$15,000</td> <td style="text-align: center;">+</td> <td style="text-align: center;">\$1,200</td> </tr> <tr> <td colspan="4" style="border-top: 1px solid black; text-align: center;">\$17,800</td> <td></td> <td></td> <td colspan="4" style="border-top: 1px solid black; text-align: center;">\$17,800</td> </tr> </table>						Assets			=	Liabilities		+	Owner's Equity		Cash	+	Supplies	+	Equipment	=	Accounts Payable	+	Owner's Capital	+	Revenues	\$8,000		\$1,600		\$7,000		\$1,600		\$15,000			+\$1,200										+\$1,200	\$9,200	+	\$1,600	+	\$7,000	=	\$1,600	+	\$15,000	+	\$1,200	\$17,800						\$17,800			
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\$17,800						\$17,800																																																															

The two sides of the equation balance at \$17,800. Service Revenue is included in determining Softbyte's net income.

Note that we do not have room to give details for each individual revenue and expense account in this illustration. Thus, revenues (and expenses when we get to them) are summarized under one column heading for Revenues and one for Expenses. However, it is important to keep track of the category (account) titles affected (e.g., Service Revenue) as they will be needed when we prepare financial statements later in the chapter.

Transaction 5. Purchase of Advertising on Credit Softbyte receives a bill for \$250 from the *Daily News* for advertising on its online website but postpones payment until a later date. This transaction results in an increase in liabilities and a decrease in owner's equity. Recall that **expenses decrease owner's equity**.

Basic Analysis	The liability Accounts Payable increases \$250, and owner's equity decreases \$250 due to Advertising Expense.																																																																															
Equation Analysis	<table border="0" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="3" style="border-top: 1px solid black; border-bottom: 1px solid black; text-align: center;">Assets</td> <td style="text-align: center;">=</td> <td colspan="2" style="border-top: 1px solid black; border-bottom: 1px solid black; text-align: center;">Liabilities</td> <td style="text-align: center;">+</td> <td colspan="3" style="border-top: 1px solid black; border-bottom: 1px solid black; text-align: center;">Owner's Equity</td> </tr> <tr> <td style="text-align: center;">Cash</td> <td style="text-align: center;">+</td> <td style="text-align: center;">Supplies</td> <td style="text-align: center;">+</td> <td style="text-align: center;">Equipment</td> <td style="text-align: center;">=</td> <td style="text-align: center;">Accounts Payable</td> <td style="text-align: center;">+</td> <td style="text-align: center;">Owner's Capital</td> <td style="text-align: center;">+</td> <td style="text-align: center;">Revenues</td> <td style="text-align: center;">-</td> <td style="text-align: center;">Expenses</td> </tr> <tr> <td style="text-align: center;">\$9,200</td> <td></td> <td style="text-align: center;">\$1,600</td> <td></td> <td style="text-align: center;">\$7,000</td> <td></td> <td style="text-align: center;">\$1,600</td> <td></td> <td style="text-align: center;">\$15,000</td> <td></td> <td style="text-align: center;">\$1,200</td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;">+\$250</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;">-\$250</td> </tr> <tr> <td style="text-align: center;">\$9,200</td> <td style="text-align: center;">+</td> <td style="text-align: center;">\$1,600</td> <td style="text-align: center;">+</td> <td style="text-align: center;">\$7,000</td> <td style="text-align: center;">=</td> <td style="text-align: center;">\$1,850</td> <td style="text-align: center;">+</td> <td style="text-align: center;">\$15,000</td> <td style="text-align: center;">+</td> <td style="text-align: center;">\$1,200</td> <td style="text-align: center;">-</td> <td style="text-align: center;">\$250</td> </tr> <tr> <td colspan="4" style="border-top: 1px solid black; text-align: center;">\$17,800</td> <td></td> <td></td> <td colspan="6" style="border-top: 1px solid black; text-align: center;">\$17,800</td> </tr> </table>						Assets			=	Liabilities		+	Owner's Equity			Cash	+	Supplies	+	Equipment	=	Accounts Payable	+	Owner's Capital	+	Revenues	-	Expenses	\$9,200		\$1,600		\$7,000		\$1,600		\$15,000		\$1,200									+\$250						-\$250	\$9,200	+	\$1,600	+	\$7,000	=	\$1,850	+	\$15,000	+	\$1,200	-	\$250	\$17,800						\$17,800					
Assets			=	Liabilities		+	Owner's Equity																																																																									
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The two sides of the equation still balance at \$17,800. Owner's Equity decreases when Softbyte incurs the expense. Expenses do not have to be paid in cash at the time they are incurred (see **Helpful Hint**). When Softbyte pays at a later date, the liability Accounts Payable will decrease and the asset Cash will decrease (see Transaction 8). The cost of advertising is an expense (rather than an asset) because Softbyte has used the benefits. Advertising Expense is included in determining net income.

HELPFUL HINT
 "Incurred" is a term used by accountants to indicate that an expense has occurred and needs to be recognized (whether paid in cash or not).

Transaction 6. Services Performed for Cash and Credit Softbyte performs \$3,500 of app development services for customers. The company receives cash of \$1,500 from customers, and it bills the balance of \$2,000 on account (see **Helpful Hint**). This transaction results in an equal increase in assets and owner's equity. Recall that **revenues increase owner's equity**.

HELPFUL HINT
 Revenues are recorded for the total amount earned, even if all of the cash has not yet been received.

Basic Analysis Three specific items are affected: The asset Cash increases \$1,500, the asset Accounts Receivable increases \$2,000, and owner's equity increases \$3,500 due to Service Revenue.

Equation Analysis	(6)														
	<u>Assets</u>				=	<u>Liabilities</u>	+	<u>Owner's Equity</u>							
	Cash	+	Accounts Receivable	+	Supplies	+	Equipment	=	Accounts Payable	+	Owner's Capital	+	Revenues	-	Expenses
	\$ 9,200				\$1,600		\$7,000		\$1,850		\$15,000		\$1,200		\$250
+1,500		+2,000										+3,500			
<u>\$10,700</u>	+	<u>\$2,000</u>	+	<u>\$1,600</u>	+	<u>\$7,000</u>	=	<u>\$1,850</u>	+	<u>\$15,000</u>	+	<u>\$4,700</u>	-	<u>\$250</u>	
				\$21,300								\$21,300			

Ser. Rev.

Softbyte recognizes \$3,500 in revenues when it performs the service. In exchange for this service, it received \$1,500 in Cash and Accounts Receivable of \$2,000. This Accounts Receivable represents customers' promises to pay \$2,000 to Softbyte in the future (see **Helpful Hint**). When it later receives collections on account, Softbyte will increase Cash and will decrease Accounts Receivable (see Transaction 9).

HELPFUL HINT
 Accounts receivable is recorded when a company will receive cash from a customer in the future. Accounts payable is recorded when a company will pay cash to a vendor in the future (that is, the company is the customer).

Transaction 7. Payment of Expenses Softbyte pays the following expenses in cash for September: office rent \$600, salaries and wages of employees \$900, and utilities \$200. These payments result in an equal decrease in assets and owner's equity. Recall the **expenses decrease owner's equity**.

Basic Analysis The asset Cash decreases \$1,700, and owner's equity decreases \$1,700 due to the following expenses: Rent Expense, Salaries and Wages Expense, and Utilities Expense.

Equation Analysis	(7)														
	<u>Assets</u>				=	<u>Liabilities</u>	+	<u>Owner's Equity</u>							
	Cash	+	Accounts Receivable	+	Supplies	+	Equipment	=	Accounts Payable	+	Owner's Capital	+	Revenues	-	Expenses
	\$ 10,700		\$2,000		\$1,600		\$7,000		\$1,850		\$15,000		\$4,700		\$ 250
-1,700															
<u>\$ 9,000</u>	+	<u>\$2,000</u>	+	<u>\$1,600</u>	+	<u>\$7,000</u>	=	<u>\$1,850</u>	+	<u>\$15,000</u>	+	<u>\$4,700</u>	-	<u>\$1,950</u>	
				\$19,600								\$19,600			

Rent Exp.
 Sal./Wages Exp.
 Utilities Exp.

The two sides of the equation now balance at \$19,600. Three lines are required in the analysis to indicate the different types of expenses that have been incurred.

Transaction 8. Payment of Accounts Payable Softbyte pays its \$250 *Daily News* bill in cash. The company previously (in Transaction 5) recorded the bill as an increase in Accounts Payable and a decrease in owner's equity.

Basic Analysis	This cash payment "on account" decreases the asset Cash by \$250 and also decreases the liability Accounts Payable by \$250.												
Equation Analysis	(8)	Assets				=	Liabilities		+	Owner's Equity			
		Cash	+ Accounts Receivable	+ Supplies	+ Equipment	=	Accounts Payable	+	Owner's Capital	+	Revenues	-	Expenses
		\$9,000	\$2,000	\$1,600	\$7,000	=	\$1,850		\$15,000		\$4,700		\$1,950
		-250				=	-250						
		\$8,750	+ \$2,000	+ \$1,600	+ \$7,000	=	\$1,600	+	\$15,000	+	\$4,700	-	\$1,950
		\$19,350				\$19,350							

Observe that the payment of a liability related to an expense that has previously been recorded does not affect owner's equity. Softbyte recorded the expense (in Transaction 5) and should not record it again.

Transaction 9. Receipt of Cash on Account Softbyte receives \$600 in cash from customers who had been billed for services (in Transaction 6). Transaction 9 does not change total assets, but it changes the composition of those assets.

Basic Analysis	The asset Cash increases \$600, and the asset Accounts Receivable decreases \$600.												
Equation Analysis	(9)	Assets				=	Liabilities		+	Owner's Equity			
		Cash	+ Accounts Receivable	+ Supplies	+ Equipment	=	Accounts Payable	+	Owner's Capital	+	Revenues	-	Expenses
		\$8,750	\$2,000	\$1,600	\$7,000	=	\$1,600		\$15,000		\$4,700		\$1,950
		+600	-600			=							
		\$9,350	+ \$1,400	+ \$1,600	+ \$7,000	=	\$1,600	+	\$15,000	+	\$4,700	-	\$1,950
		\$19,350				\$19,350							

Note that the collection of an account receivable for services previously billed and recorded does not affect owner's equity. Softbyte already recorded this revenue (in Transaction 6) and should not record it again.

Transaction 10. Withdrawal of Cash by Owner Ray Neal withdraws \$1,300 in cash from the business for his personal use. This transaction results in an equal decrease in assets and owner's equity. Recall that **drawings decrease owner's equity**.

Basic Analysis	The asset Cash decreases \$1,300, and owner's equity decreases \$1,300 due to owner's withdrawal (Owner's Drawings).														
Equation Analysis	(10)	Assets				=	Liabilities		+	Owner's Equity					
		Cash	+ Accounts Receivable	+ Supplies	+ Equipment	=	Accounts Payable	+	Owner's Capital	-	Owner's Drawings	+	Revenues	-	Expenses
		\$9,350	\$1,400	\$1,600	\$7,000	=	\$1,600		\$15,000				\$4,700		\$1,950
		-1,300				=				-1,300					Drawings
		\$8,050	+ \$1,400	+ \$1,600	+ \$7,000	=	\$1,600	+	\$15,000	-	\$1,300	+	\$4,700	-	\$1,950
		\$18,050				\$18,050									

Observe that the effect of a cash withdrawal by the owner is the opposite of the effect of an investment by the owner.

- **Owner's drawings are not expenses.**
- Expenses are incurred for the purpose of earning revenue.
- Drawings do not generate revenue. They are a **disinvestment**.

Like owner's investment, the company excludes owner's drawings in determining net income.

Summary of Transactions

Illustration 1.9 summarizes the September transactions of Softbyte to show their cumulative effect on the basic accounting equation. It also indicates the transaction number and the specific effects of each transaction.

Illustration 1.9 demonstrates some significant facts:

1. Each transaction is analyzed in terms of its effect on:
 - a. The three components of the basic accounting equation (assets, liabilities, and owner's equity).
 - b. Specific types (kinds) of items within each component (such as the asset Cash).
2. The two sides of the equation must always be equal.
3. The Owner's Capital, Owner's Drawings, Revenues, and Expenses columns indicate the causes of each change in the owner's claim on assets.

ILLUSTRATION 1.9 Tabular summary of Softbyte transactions

Transaction	Assets				=	Liabilities	+	Owner's Equity														
	Cash	+	Accounts Receivable	+				Supplies	+	Equipment	=		Accounts Payable	+	Owner's Capital	-	Owner's Drawings	+	Revenues	-	Expenses	
(1)	+15,000										+15,000									Initial invest.		
(2)	-7,000																					
(3)																						
(4)	+1,200																				Service Revenue	
(5)																					Adver. Expense	
(6)	+1,500																				Service Revenue	
(7)	-1,700																				Rent Expense	
																					Sal./Wages Exp.	
																					Utilities Expense	
(8)	-250																					
(9)	+600																					
(10)	-1,300																				Drawings	
	<u>\$ 8,050</u>	+	<u>\$1,400</u>	+	<u>\$1,600</u>	+	<u>\$7,000</u>	=	<u>\$1,600</u>	+	<u>\$15,000</u>	-	<u>\$1,300</u>	+	<u>\$4,700</u>	-	<u>\$1,950</u>					
	\$18,050					\$18,050																

There! You made it through your first transaction analysis. If you feel a bit shaky on any of the transactions, it might be a good idea at this point to get up, take a short break, and come back again for a brief (10- to 15-minute) review of the transactions, to make sure you understand them before you go on to the next section.

ACTION PLAN

- Analyze the effects of each transaction on the accounting equation.
- Use appropriate category names (not descriptions).
- Keep the accounting equation in balance.

DO IT! 4 | Tabular Analysis

Transactions made by Virmari & Co., a public accounting firm, for the month of August are shown below. Prepare a tabular analysis which shows the effects of these transactions on the expanded accounting equation, similar to that shown in Illustration 1.9.

1. The owner invested \$25,000 cash in the business.
2. The company purchased \$7,000 of office equipment on credit.
3. The company received \$8,000 cash in exchange for services performed.
4. The company paid \$850 for the current month's rent.
5. The owner withdrew \$1,000 cash for personal use.

Solution

Trans- action	Assets		=	Liabilities	+	Owner's Equity		
	Cash	+ Equipment	=	Accounts Payable	+	Owner's Capital	- Owner's Drawings	+ Revenues - Expenses
(1)	+\$25,000					+\$25,000		
(2)		+\$7,000		+\$7,000				
(3)	+8,000							+\$8,000 Service Revenue
(4)	-850							-\$850 Rent Expense
(5)	-1,000					-\$1,000		Drawings
	<u>\$31,150</u>	+ <u>\$7,000</u>	=	<u>\$7,000</u>	+ <u>\$25,000</u>	- <u>\$1,000</u>	+ <u>\$8,000</u>	- <u>\$850</u>
	\$38,150			\$38,150				

Related exercise material: BE1.7, BE1.9, DO IT! 1.4, E1.6, E1.7, and E1.8.

The Four Financial Statements

LEARNING OBJECTIVE 5

Describe the four financial statements and how they are prepared.

HELPFUL HINT

The income statement, owner's equity statement, and statement of cash flows are all for a period of time, whereas the balance sheet is for a point in time.

Companies prepare four financial statements from the summarized accounting data (see **Helpful Hint**):

1. An **income statement** presents the revenues and expenses and resulting net income or net loss for a specific period of time.
2. An **owner's equity statement** summarizes the changes in owner's equity for a specific period of time.
3. A **balance sheet** reports the assets, liabilities, and owner's equity at a specific date.
4. A **statement of cash flows** summarizes information about the cash inflows (receipts) and outflows (payments) for a specific period of time.

These statements provide relevant financial data for internal and external users. **Illustration 1.10** shows the financial statements of Softbyte.