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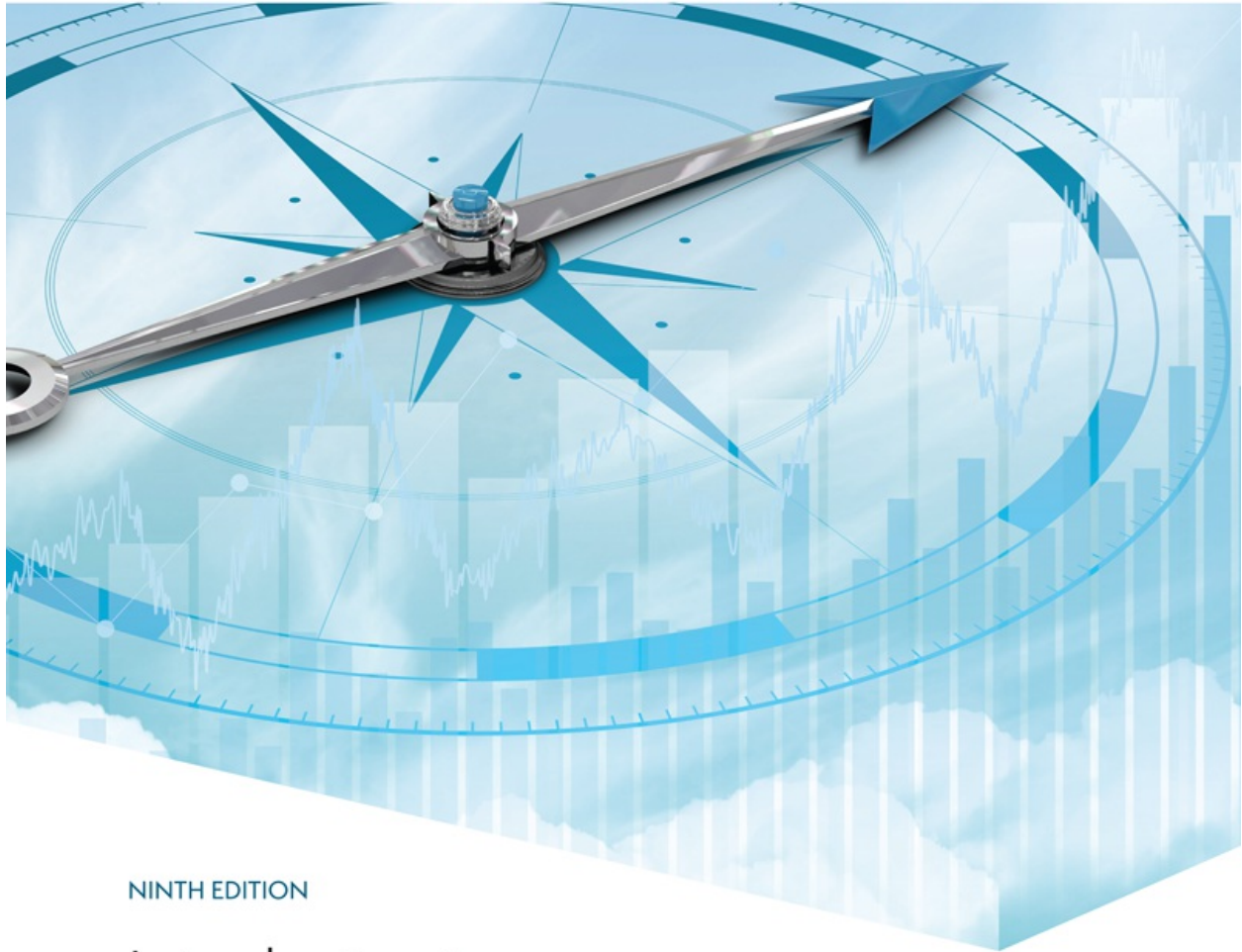
NINTH EDITION

Introduction to
**MANAGERIAL
ACCOUNTING**

Brewer
Garrison
Noreen

**Mc
Graw
Hill**

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introduction TO
MANAGERIAL ACCOUNTING

9TH EDITION

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INTRODUCTION TO MANAGERIAL ACCOUNTING

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DEDICATION

To our families and to our many colleagues who use this book.

About the Authors



Peter C. Brewer

Peter C. Brewer teaches in the Department of Accountancy at Wake Forest University. Prior to joining the faculty at Wake Forest, he was an accounting professor at Miami University for 19 years. He holds a BS degree in accounting from Penn State University, an MS degree in accounting from the University of Virginia, and a PhD from the University of Tennessee. He has published more than 40 articles in a variety of journals, including *Management Accounting Research*, the *Journal of Information Systems*, *Cost Management*, *Strategic Finance*, the *Journal of Accountancy*, *Issues in Accounting Education*, and the *Journal of Business Logistics*.

Professor Brewer has served on the editorial boards of the *Journal of Accounting Education* and *Issues in Accounting Education*. His article “Putting Strategy into the Balanced Scorecard” won the 2003 International Federation of Accountants’ Articles of Merit competition, and his articles “Using Six Sigma to Improve the Finance Function” and “Lean Accounting: What’s It All About?” were awarded the Institute of Management Accountants’ Lybrand Gold and Silver Medals in 2005 and 2006. He has received Miami University’s Richard T. Farmer School of Business Teaching Excellence Award.

Prior to joining the faculty at Miami University, Professor Brewer was employed as an auditor for Touche Ross in the firm’s Philadelphia office. He also worked as an internal audit manager for the Board of Pensions of the Presbyterian Church (USA).



Ray H. Garrison

Ray H. Garrison is emeritus professor of accounting at Brigham Young University, Provo, Utah. He received his BS and MS degrees from Brigham Young University and his DBA degree from Indiana University.

As a certified public accountant, Professor Garrison has been involved in management consulting work with both national and regional accounting firms. He has published articles in *The Accounting Review*, *Management Accounting*, and other professional journals. Innovation in the classroom has earned Professor Garrison the Karl G. Maeser Distinguished Teaching Award from Brigham Young University.



Eric W. Noreen

Eric W. Noreen has taught at INSEAD in France and the Hong Kong Institute of Science and Technology and is emeritus professor of accounting at the University of Washington. Currently, he is the Accounting Circle Professor of Accounting, Fox School of Business, Temple University.

He received his BA degree from the University of Washington and MBA and PhD degrees from Stanford University. A Certified Management Accountant, he was awarded a Certificate of Distinguished Performance by the Institute of Certified Management Accountants.

Professor Noreen has served as associate editor of *The Accounting Review* and the *Journal of Accounting and Economics*. He has numerous articles in academic journals, including the *Journal of Accounting*

Research; The Accounting Review; the Journal of Accounting and Economics; Accounting Horizons; Accounting, Organizations and Society; Contemporary Accounting Research; the Journal of Management Accounting Research; and the Review of Accounting Studies.

Professor Noreen has won a number of awards from students for his teaching.

Pointing Students in the Right Direction

“Why do I need to learn Managerial Accounting?”

Brewer’s *Introduction to Managerial Accounting* has earned a reputation as the most accessible and readable book on the market, while leveraging assets from the Garrison Managerial Accounting franchise. Its manageable chapters and clear presentation point students toward understanding just as the needle of a compass provides direction to travelers.

However, the book’s authors also understand that everyone’s destinations are different. Some students will become accountants, while others are destined for careers in management, marketing, or finance. Not only does the Brewer text teach students managerial accounting concepts in a clear and concise way, but it also asks students to consider how the concepts they’re learning will apply to the real-world situations they will eventually confront in their careers. This combination of conceptual understanding and the ability to apply that knowledge directs students toward success, whatever their final destination happens to be.

Here’s how your colleagues have described Brewer’s *Introduction to Managerial Accounting*:

“This is the best introductory managerial accounting textbook that I know of. It is concise, easy to follow, and comes with a number of useful materials. I like this book especially because it is very much student-oriented.”

Minwoo Lee, Western Kentucky University

“Brewer has always been an outstanding text and this newest edition continues the tradition while providing excellent options for students to utilize to enhance their learning and creative options for instructors to enhance their presentations.”

Diane Marker, University of Toledo

“Great, readable text with streamlined coverage. The number of chapters combined with the readability make this a lean, up-to-date product.”

Timothy Griffin, Hillsborough Community College

“A book with an appropriate level of coverage for students who may not all be majoring in accounting. This book has enough detail for accounting majors, with coverage that still keeps the interest and understanding of non-majors.”

Dawn McKinley, Harper Community College

“Ground breaking, aimed at making it easy for students to appreciate the concepts and material.”

Isaac Bonaparte, Towson University

CONFIDENCE AT THE CORE

Your students want a text that is concise and that presents material in a clear and readable manner. *Introduction to Managerial Accounting* retains accessible materials while avoiding advanced topics related to cost accounting. Students' biggest concern is whether they can solve the end-of-chapter problems after reading the chapter. Market research indicates that *Brewer, Garrison, and Noreen* helps students apply what they've learned better than any other managerial accounting text on the market. Additionally, the key supplements are written and continually revised to ensure that students and instructors will work with clear, well-written supplements that employ consistent terminology. Author Pete Brewer examined each and every end-of-chapter question in **Connect** to guarantee accuracy and consistency.

RELEVANCE AND DECISION MAKING

All students who pass through your class need to know how accounting information is used to make business decisions, especially if they plan to be future managers. That's why *Brewer, Garrison, and Noreen* make decision making a pivotal component of *Introduction to Managerial Accounting*. In every chapter you'll find the following key features that are designed to teach your students how to use accounting information: Each chapter opens with a **Decision Feature** vignette that uses real-world examples to show how accounting information is used to make everyday business decisions; **Decision Point** boxes within the chapters help students to develop analytical, critical thinking, and problem-solving skills; and end-of-chapter **Building Your Skills** cases challenge students' decision-making skills.

A CONTEMPORARY APPROACH TO LEARNING

Today's students rely on technology more than ever as a learning tool, and *Introduction to Managerial Accounting* offers the finest technology package

of any text on the market. From study aids like narrated, animated **Guided Examples** to online grading and course management, our technology assets have one thing in common: They make your class time more productive, more stimulating, and more rewarding for you and your students. **McGraw Hill Connect** is an online assignment and assessment solution that connects students with the tools and resources they'll need to be successful. These resources include an online, media-rich, searchable version of the text in addition to access to **Connect**, giving students a convenient way to access everything they need to succeed in their course.

BREWER / GARRISON / NOREEN'S POWERFUL PEDAGOGY

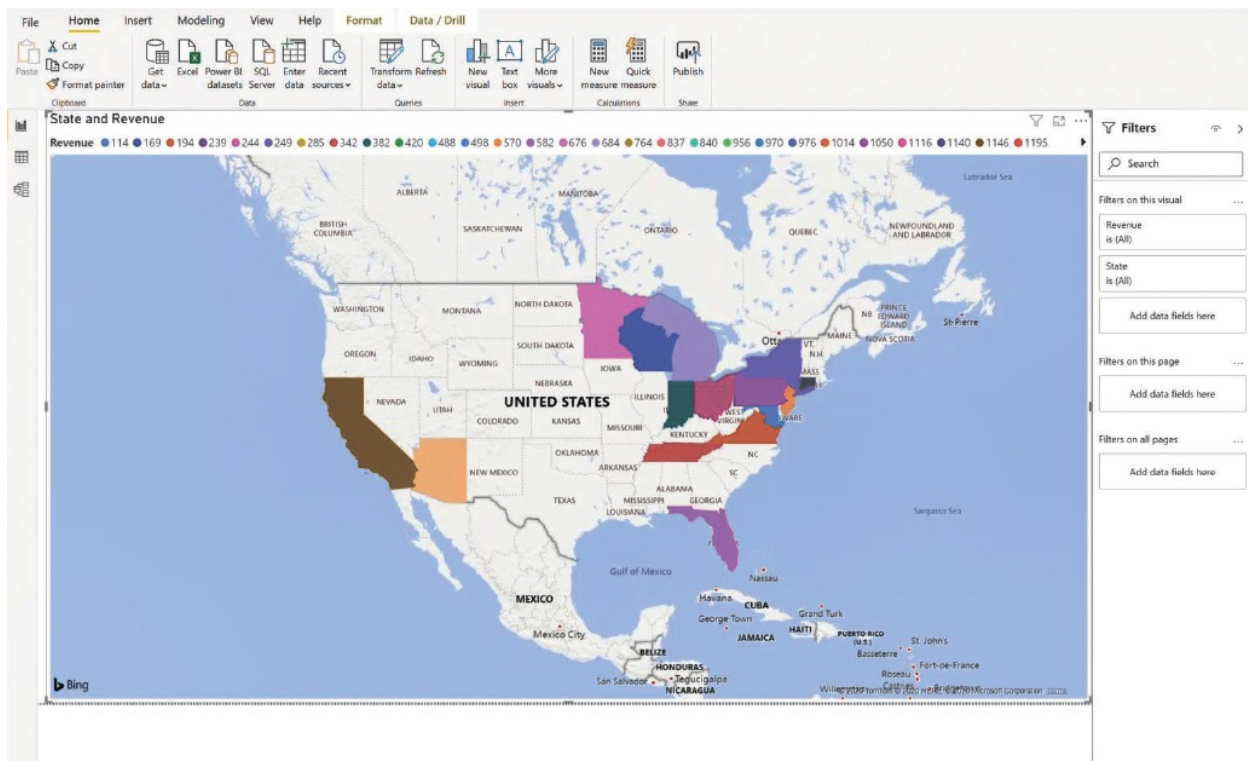
Introduction to Managerial Accounting includes pedagogical elements that engage and instruct students without cluttering the pages or interrupting student learning. Brewer's key pedagogical tools enhance and support students' understanding of the concepts rather than compete with the narrative for their attention.

NEW DATA ANALYTICS

New **Data Analytics Exercises** teach students how to use software tools to derive managerial insights and communicate them to stakeholders. These new exercises, which appear in **Connect**, are linked to a diverse range of learning objectives that span numerous chapters. Some of these exercises require students to use various Microsoft Excel-based tools, such as Goal Seek, Pivot Tables, and Solver to analyze data sets to derive solutions. Other exercises also teach students how to use a variety of **Data Visualization** techniques, such as charts, graphs, and maps, to communicate their findings in succinct and compelling ways. Students will also be given the opportunity to acquire the value-add skill of interpreting Tableau data visualizations.

NEW APPLYING TABLEAU

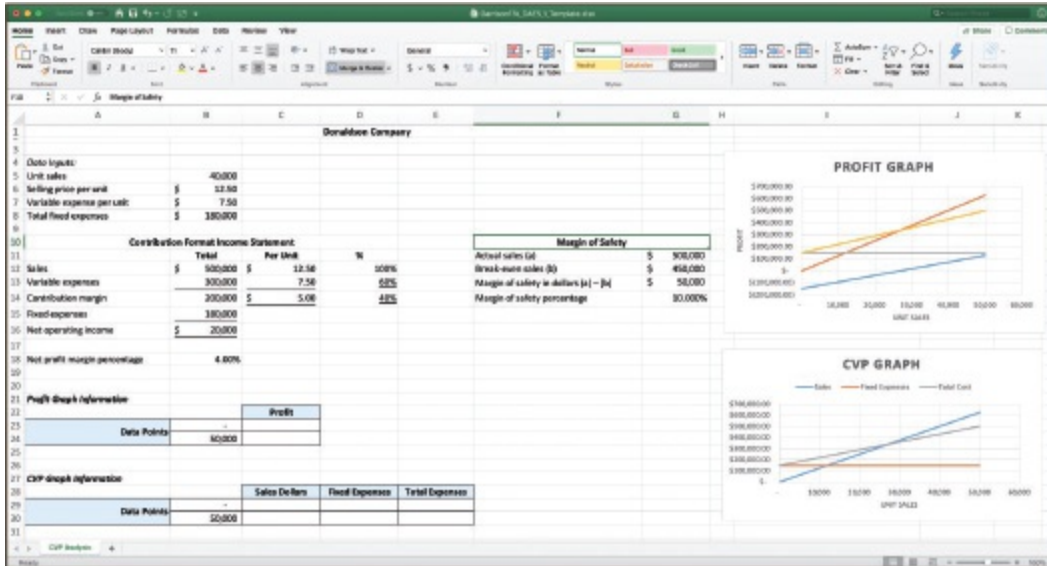
The authors have incorporated new **Data Analytics** exercises featuring **Tableau** at the end of each chapter. These exercises are auto-gradable in **Connect** and help students develop in-demand skills in analyzing and interpreting data and effectively communicating findings. Students page ix will be provided data as well as a video tutorial and step-by-step instructions to build a dashboard using **Tableau software**. Over the course of these exercises, students will gain both managerial insights as well as confidence in telling the story of data through visualization software.



Source: Microsoft Power BI

NEW APPLYING POWER BI

These exercises will introduce and teach students to drive better business decisions by analyzing data for insights via **Microsoft's Power Bi** software. **Power Bi** aims to provide interactive visualizations, business intelligence capabilities, and supports users' ability to gain deeper data insight. Users create their own reports and dashboards, harnessing data to tell a compelling business story.



Source: Microsoft Excel

EXCEL ANALYTICS

Excel Analytics were created to allow students to work with complex datasets in live Excel. They will need to use Excel-based tools to analyze data sets and derive solutions using a variety of Data Visualization techniques to communicate findings. These go beyond basic data manipulations and Excel skills and are an auto-graded feature in **Connect**.

Ch. 16: Data Analytics Exercise Saved Help Save & Exit Submit

3

Part 3 of 6

10 points

Print

References

Check my work

(The following information applies to the questions displayed below.)

This exercise provides a total of 13 data visualizations that describe a real company's performance based on 17 quarters of financial data. The visualizations are grouped into five dashboards that were created in Tableau: (1) sales analysis, (2) gross margin analysis, (3) operating expense analysis, (4) profitability analysis, and (5) market performance analysis.

Price-Earnings Ratio

Year/Quarter

Year/Quarter	Price-Earnings Ratio
Y1-Q1	529.0
Y1-Q2	238.4
Y1-Q3	174.5
Y1-Q4	187.7
Y2-Q1	168.1
Y2-Q2	166.8
Y2-Q3	316.3
Y2-Q4	314.2
Y3-Q1	198.9
Y3-Q2	177.6
Y3-Q3	131.3
Y3-Q4	109.3
Y4-Q1	72.7
Y4-Q2	72.6

The first bar in this chart is computed by dividing the stock price at the end of year 1 by the sum of that year's quarterly earnings per share. Each subsequent bar in the chart rolls forward one quarter at a time. So, for example, the second bar divides the stock price at the end of the first quarter of year 2 by the sum of the earnings per share from the four most recent quarters.

Earnings Per Share (EPS) vs. Stock Price

Year/Quarter

Year/Quarter	Stock Price	Earnings Per Share
Y1-Q1	~\$300	~\$0.50
Y1-Q2	~\$400	~\$0.50
Y1-Q3	~\$500	~\$0.50
Y1-Q4	~\$600	~\$0.50
Y2-Q1	~\$700	~\$0.50
Y2-Q2	~\$800	~\$0.50
Y2-Q3	~\$900	~\$0.50
Y2-Q4	~\$1,000	~\$0.50
Y3-Q1	~\$1,100	~\$0.50
Y3-Q2	~\$1,200	~\$0.50
Y3-Q3	~\$1,300	~\$0.50
Y3-Q4	~\$1,400	~\$0.50
Y4-Q1	~\$1,500	~\$0.50
Y4-Q2	~\$1,600	~\$0.50
Y4-Q3	~\$1,700	~\$0.50
Y4-Q4	~\$1,800	~\$0.50
Y5-Q1	~\$1,900	~\$0.50

+ a b l e a u

< Prev
3 of 6
Next >

NEW CONNECT-ONLY TEST BANK

A new online-only test bank is now available in **Connect**, containing more than **1,400 new multiple-choice** test bank questions. These new, author-created **Connect-only Test Bank** questions were written in such a way to prevent students from finding answers on external sites. The questions are presented in a combination of static and algorithmic (both quantitative and qualitative algo) modes and they cover all learning objectives for all chapters. These qualitative or quantitative algo questions can span the entire degree of difficulty continuum.

ADDITIONAL INTEGRATION EXERCISES

We have 15 exercises located in the back of the text and in **Connect** that integrate learning objectives across chapters. These exercises will increase the students' level of interest in the course because they forge the connections across chapters. Rather than seeing each chapter as an isolated set of learning objectives, students begin to see how it all fits together to provide greater managerial insight and more effective planning, controlling, and decision making. The **integration exercises** are also tailor-made for flipping the classroom because they offer challenging questions that require students to work in teams to derive solutions that synthesize what they have learned throughout the semester.

NEW AUDIO HINTS

Audio Hints have been added to certain problems in **Connect** and offer brief explanations of the key steps students need to solve specific end-of-chapter problems. With callouts to individual chapter learning objectives, audio hints are both a helpful tool for completing an assignment as well as an additional opportunity for students to link their work to the chapter content.

CHAPTER OUTLINE

Each chapter opens with an **outline** that provides direction to the student about the road they can expect to traverse throughout the chapter. The **A Look Back/A Look at This Chapter/A Look Ahead** feature reminds students what they have learned in previous chapters, what they can expect to learn in the current chapter, and how the topics will build on each other in chapters to come.

A LOOK BACK
Chapter 2 described how job-order costing systems can be used to assign manufacturing costs to individual jobs and to calculate unit product costs.

A LOOK AT THIS CHAPTER
In Chapter 3, we explore how job-order costing systems can be used to determine the value of ending inventories and cost of goods sold for external reporting purposes.

A LOOK AHEAD
Chapter 4 continues the discussion of the allocation of manufacturing overhead costs, showing how these costs can be more accurately assigned using activity-based costing.

3 Job-Order Costing: Cost Flows and External Reporting

Solomon A. Grady / Shutterstock

CHAPTER OUTLINE

Job-Order Costing—The Flow of Costs

- The Purchase and Issue of Materials
- Labor Cost
- Manufacturing Overhead Costs
- Applying Manufacturing Overhead
- Nonmanufacturing Costs
- Cost of Goods Manufactured
- Cost of Goods Sold

Schedules of Cost of Goods Manufactured and Cost of Goods Sold

- Schedule of Cost of Goods Manufactured
- Schedule of Cost of Goods Sold
- Income Statement

Underapplied and Overapplied Overhead—A Closer Look

- Computing Underapplied and Overapplied Overhead
- Disposition of Underapplied and Overapplied Overhead Balances
- Comparing the Two Methods for Disposing of Underapplied or Overapplied Overhead
- A General Model of Product Cost Flows

Appendix 3A: Job-Order Costing: A Microsoft Excel-Based Approach

- Fundamental Accounting Equations
- Three Key Assumptions
- Sapphire Company—Setting the Stage
- Sapphire Company—Transaction Analysis
- Sapphire Company—Schedules of Cost of Goods Manufactured and Cost of Goods Sold
- Sapphire Company—Income Statement

HELPFUL HINT

Helpful Hint boxes are found several times throughout each chapter and highlight a variety of common mistakes, key points, and “pulling it all together” insights for students.

HELPFUL HINT

When students prepare variable costing income statements they often mistakenly assume that variable selling and administrative expense is a product cost. The confusion arises because variable selling and administrative expense is included in the calculation of contribution margin; however, it is not a product cost. Variable selling and administrative expense is always a period cost and the total amount of this expense included in the income statement is always derived by multiplying the variable selling and administrative expense per unit by the number of units sold—not the number of units produced.

DECISION POINT

The **Decision Point** feature fosters critical thinking and decision-making skills by providing real-world business scenarios that require the resolution of a business issue. The suggested solution is located at the end of the chapter.

The Pricing Decision

DECISION POINT

Each year Webb Company produces and sells 20,000 units of its only product. The selling price for this product is \$100 per unit and its direct materials, direct labor, and variable manufacturing overhead costs per unit are \$25, \$15, and \$10, respectively. Webb's annual fixed manufacturing overhead expenses and fixed selling and administrative expenses are \$400,000 and \$150,000, respectively. It does not have any variable selling and administrative expenses.

The company's marketing manager believes a 10 percent price increase would lead to a 20 percent decline in the number of units sold. He claims that if the level of production stays at 20,000 units his price hike will increase gross margins and net operating income by \$40,000. Would you support the price increase? Do you think it will increase profits?

THE FOUNDATIONAL 15

Each chapter contains one **Foundational 15** exercise that includes 15 “building-block” questions related to one concise set of data. These exercises can be used for in-class discussion or as homework assignments. They are found before the Exercises and are available in **Connect**.

Greenwood Company manufactures two products—14,000 units of Product Y and 6,000 units of Product Z. The company uses a plantwide overhead rate based on direct labor-hours. It is considering implementing an activity-based costing (ABC) system that allocates all of its manufacturing overhead to four cost pools. The following additional information is available for the company as a whole and for Products Y and Z:

LO4-1, LO4-2,
LO4-3, LO4-4

Activity Cost Pool	Activity Measure	Estimated Overhead Cost	Expected Activity
Machining.....	Machine-hours	\$200,000	10,000 MHs
Machine setups.....	Number of setups	\$100,000	200 setups
Production design.....	Number of products	\$84,000	2 products
General factory.....	Direct labor-hours	\$300,000	12,000 DLHs

Activity Measure	Product Y	Product Z
Machining.....	8,000	2,000
Number of setups.....	40	160
Number of products.....	1	1
Direct labor-hours.....	9,000	3,000

1. What is the company's plantwide overhead rate?
2. Using the plantwide overhead rate, how much manufacturing overhead cost is allocated to Product Y? How much is allocated to Product Z?
3. What is the activity rate for the Machining activity cost pool?
4. What is the activity rate for the Machine Setups activity cost pool?
5. What is the activity rate for the Product Design activity cost pool?
6. What is the activity rate for the General Factory activity cost pool?
7. Which of the four activities is a batch-level activity? Why?

“The textbook is very good, with the Foundational 15 being my favorite feature. The Review Problems are also very thorough and serve as an outstanding study tool for students to use independently. The writing flows very well. If a student takes the time to read each chapter thoroughly, there is no excuse not to do well in the Managerial Accounting Course.”

Randall Williams, Catawba Valley Community College

DECISION FEATURE

Each chapter opens with a **Decision Feature** that provides a real-world example for students, enabling them to see how the chapter's information and insights apply to the world outside the classroom. **Learning Objectives** alert

students to what they should expect as they progress through the chapter.

DECISION FEATURE



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Electric Vehicle Batteries—A Management Accounting Perspective

A study from **McKinsey & Company** says the cost of electric vehicle batteries has been steadily declining from \$1,000 per kilowatt-hour in 2010 to \$227 per kilowatt-hour in more recent years. As the cost of these batteries continues to fall, it remains to be seen if the corresponding decline in the manufacturers' selling prices will lead to a substantial increase in the number of electric vehicles sold.

From a management accounting standpoint, electric vehicle manufacturers would view the cost of their batteries as a direct material cost, a product cost, and a variable cost. It would be a direct material cost because the cost of each battery can be conveniently traced to a specific vehicle. It would be a product cost because installing one battery in each vehicle is a necessary part of the manufacturing process. It would be a variable cost because the battery cost per vehicle is constant whereas the total cost of batteries increases as more units are produced.

Source: Jacky Wong, "EV-Battery Makers Face Price Crunch," *The Wall Street Journal*, December 5, 2017, p. B13.

LEARNING OBJECTIVES

After studying Chapter 1, you should be able to:

- LO1-1** Understand cost classifications used for assigning costs to cost objects: direct costs and indirect costs.
- LO1-2** Identify and give examples of each of the three basic manufacturing cost categories.
- LO1-3** Understand cost classifications used to prepare financial statements: product costs and period costs.
- LO1-4** Understand cost classifications used to predict cost behavior: variable costs, fixed costs, and mixed costs.
- LO1-5** Understand cost classifications used in making decisions: relevant costs and irrelevant costs.
- LO1-6** Prepare income statements for a merchandising company using the traditional and contribution formats.



Data Analytics Exercise available in Connect to complement this chapter

IN BUSINESS BOXES

These helpful boxed features appear in every chapter and demonstrate how selected managerial accounting topics apply to real organizations and contexts.

The Administrative Costs of Redesigning the Office

IN BUSINESS

For decades American companies sought to “cram workers into tighter spaces with few separations between colleagues . . . [spending] millions of dollars . . . to create rows of open desks, intimate conference rooms, and elaborate communal gathering areas.” However, in the post-COVID-19 era companies are incurring additional administrative costs as they reexamine and redesign their office spaces. For example, **HP** welcomed back each employee to one of its offices with a kit containing three new office essentials—hand sanitizer, a mask, and gloves. **McCann Worldgroup**’s New York office has closed its cafeteria and ordered dozens of refrigerators and microwaves so employees can bring their lunches to work. **Discover Financial Services** is considering seating its employees at every other workstation, whereas **WeWork** is removing 30,000 conference-room chairs from its global offices to enable proper social distancing.

Source: Chip Cutter and Suzanne Vranica, “Offices Revamp to Keep Germs at Bay,” *The Wall Street Journal*, May 12, 2020, pp. B1 and B5.



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CONCEPT CHECK

Concept Checks allow students to test their comprehension of topics and concepts covered at meaningful points throughout each chapter.

3. Which of the following statements is false with respect to the schedule of cost of goods manufactured? (You may select more than one answer.)
 - a. The beginning raw materials inventory plus raw materials purchases minus ending raw materials inventory equals the raw materials used in production.
 - b. Direct labor costs and actual manufacturing overhead costs are included in the schedule of cost of goods manufactured.
 - c. The cost of goods manufactured represents the amount that will be debited to Cost of Goods Sold during an accounting period.
 - d. If the finished goods inventory increases during an accounting period, it will decrease the cost of goods manufactured.



CONCEPT
CHECK

END-OF-CHAPTER MATERIAL

Introduction to Managerial Accounting has earned a reputation for the best end-of-chapter review and discussion material of any text on the market. Our exercises and problems conform to AICPA, AACSB, and Bloom's Taxonomy categories, and they make a great starting point for class discussions and group projects. With **review problems, discussion questions, Excel problems, the Foundational 15 set, exercises, problems, and Building Your Skills**, Brewer offers students practice material of varying complexity and depth.

The Excel worksheet that appears below is to be used to recreate part of the example relating to Turbo Cruisers that appears earlier in the chapter. The workbook and instructions on how to complete the file, can be found in Connect.

	A	B	C	D
1	Chapter 3: Applying Excel			
2				
3	Base			
4	Allocation base	Machine-hours		
5	Estimated manufacturing overhead cost	\$300,000		
6	Estimated total amount of the allocation base	70,000 machine-hours		
7	Actual manufacturing overhead cost	\$250,000		
8	Actual total amount of the allocation base	80,000 machine-hours		
9				
10	Enter a formula into each of the cells marked with a ? below			
11				
12	Computation of the predetermined overhead rate			
13	Estimated manufacturing overhead cost	?		
14	Estimated total amount of the allocation base	?	Machine-hours	
15	Predetermined overhead rate	?	per machine-h	
16				
17	Computation of underapplied or overapplied manufacturing overhead			
18	Actual manufacturing overhead cost	?		
19	Manufacturing overhead cost applied to Work in Process during the year	?		
20	Predetermined overhead rate	?	per machine-h	
21	Actual total amount of the allocation base	?	Machine-hour	
22	Manufacturing overhead applied	?		
23	Underapplied (overapplied) manufacturing overhead	?		
24				

Source: Microsoft Excel

LO3-1, LO3-4

EXERCISE 3-1 Prepare Journal Entries LO3-1

Larned Corporation recorded the following transactions for the just completed month.

- \$80,000 in raw materials were purchased on account.
- \$71,000 in raw materials were used in production. Of this amount, \$62,000 was for direct materials and the remainder was for indirect materials.
- Total labor wages of \$112,000 were paid in cash. Of this amount, \$30,000 was for direct labor and the remainder was for indirect labor.
- Depreciation of \$175,000 was incurred on factory equipment.

Required:
Record the above transactions in journal entries.

EXERCISE 3-2 Prepare T-Accounts LO3-2, LO3-4

Jarvis Enterprises is a manufacturing company that had no beginning inventories. A subset of the transactions that it recorded during a recent month is shown below.

- \$94,000 in raw materials were purchased for cash.
- \$89,000 in raw materials were used in production. Of this amount, \$78,000 was for direct materials not incurred and paid. Of this amount, \$112,000 was for direct labor and \$2,000 was applied to production using the company's predetermined overhead for the period was completed.
- Finished goods were shipped to customers.
- Manufacturing overhead for the period was closed to Cost of Goods Sold.

Required:
Prepare T-accounts for the following accounts:
Raw Materials, Manufacturing Overhead, Work in Process, Factory Wages Payable, Finished Goods, and Cost of Goods Sold.
The ending balances for the T-accounts should be the same as the ending balances for the period.

PROBLEM 3-11 T-Account Analysis of Cost Flows LO3-2, LO3-3, LO3-4

Selected T-accounts of Moore Company are given below for the just completed year:

Raw Materials		Manufacturing Overhead	
Bal. 1/1	15,000	Credits	?
Debits	120,000	Debits	230,000
Bal. 12/31	25,000	Credits	?

Work in Process		Factory Wages Payable	
Bal. 1/1	20,000	Credits	470,000
Direct materials	90,000	Debits	185,000
Direct labor	150,000	Bal. 1/1	9,000
Overhead	240,000	Credits	180,000
Bal. 12/31	?	Bal. 12/31	4,000

Finished Goods		Cost of Goods Sold	
Bal. 1/1	40,000	Credits	?
Debits	?	Debits	?
Bal. 12/31	60,000	Credits	?

- Required:
- What was the cost of raw materials used in production during the year?
 - How much of the materials in (1) above consisted of indirect materials?
 - How much of the factory labor cost for the year consisted of indirect labor?
 - What was the cost of goods manufactured for the year?
 - What was the unadjusted cost of goods sold for the year? Do not include any unapplied overhead in your answer.
 - If overhead is applied to production on the basis of direct labor cost, what predetermined overhead rate was used?

Select cases are available in Connect.

ANALYTICAL THINKING LO3-1

Tom Emory and Jim Morris strolled back to their plant from the administrative offices of Ferguson & Son Manufacturing Company. Tom is manager of the machine shop in the company's factory; Jim is manager of the equipment maintenance department.

The men had just attended the monthly performance evaluation meeting for plant department heads. These meetings had been held on the third Tuesday of each month since Robert Ferguson, Jr., the president's son, had become plant manager a year earlier.

As they were walking, Tom Emory spoke: "Boy, I hate those meetings! I never know whether my department's accounting reports will show good or bad performance. I'm beginning to suspect the worst. If the accountants say I saved the company a dollar, I'm called 'Sir,' but if I spend even a little too much—boy, do I get in trouble. I don't know if I can hold on until I retire."

Tom had just been given the worst evaluation he had ever received in his long career with Ferguson & Son. He was the most respected of the experienced machinists in the company. He had been with Ferguson & Son for many years and was promoted to supervisor of the machine shop when the company expanded and moved to its present location. The president (Robert Ferguson, Sr.) had often stated that the company's success was due to the high-quality work of machinists like Tom. As supervisor, Tom stressed the importance of craftsmanship and told his workers that he wanted no sloppy work coming from his department.

When Robert Ferguson, Jr., became the plant manager, he directed that monthly performance comparisons be made between actual and budgeted costs for each department. The departmental budgets were intended to encourage the supervisors to reduce inefficiencies and to seek cost reduction opportunities.



CONCEPT OVERVIEW VIDEOS

Concept Overview Videos, available within Connect, teach the core concepts of the content in an animated, narrated, and interactive multimedia

format, bringing the key learning objectives of the course to life. Checkpoint questions allow instructors to assign points to knowledge checks and grade for accuracy, not just completion. **Concept Overview Videos** are particularly helpful for online courses and for those audio and visual learners who struggle reading the textbook page by page.

The screenshot displays a learning management system interface. At the top, it shows 'Study Mode: Ch. 2: Concept Overview Vid...' and 'Save'. On the left, there is a sidebar with a large number '9', 'Part 3 of 2', '0.83 points', and icons for 'Watch', 'Play', and 'Resources'. The main content area features a 'Required information' box with the following text: 'LO 2-4: Compute the total cost and the unit product cost of a job using multiple predetermined overhead rates. In this learning objective we compute the total cost and the unit product cost of a job using multiple predetermined overhead rates. We address the fact that the amount of overhead applied to all jobs during a period typically differs from the actual amount of overhead costs incurred during the period and address how that situation affects the income statement. We also explain how the job cost sheets form a subsidiary ledger, which is an underlying set of financial records relating to the amounts reported in the inventory accounts on the balance sheet.' Below this is a video player titled 'Job-Order Costing-An External Reporting Perspective' with a play button. At the bottom, there is a 'Knowledge Check 01' question: 'What is the term used when a company applies less overhead to production than it actually incurs?' with three radio button options: 'Misapplied', 'Overapplied', and 'Unadjusted'. The bottom navigation bar shows '< Prev', '9 of 12', and 'Next >'.

EXCEL SIMULATIONS

Simulated Excel questions, assignable within Connect, allow students to practice their Excel skills, such as basic formulas and formatting, within the context of Managerial Accounting. These questions feature animated, narrated “Help and Show Me” tutorials (when enabled), as well as automatic feedback and grading for both students and professors.

Cost of Goods Manufactured and Cost of Goods Sold - Excel

FILE HOME INSERT PAGE LAYOUT FORMULAS DATA REVIEW VIEW Sign In

Clipboard Font Alignment Number Conditional Formatting Format as Table Cell Styles Editing

A1 Stanford Enterprises uses job-order costing.

	A	B	C	D	E	F	G	H
1	Stanford Enterprises uses job-order costing.							
2	The allocation base for overhead is direct labor hours.							
3								
4	Data for the year just ended:							
5	Estimated total manufacturing overhead cost				\$ 275,000			
6	Estimated total direct labor hours				25,000			
7	Actual total direct labor hours				27,760			
8								
9	Actual costs for the year:							
10	Purchase of raw materials (all direct)				\$375,000			
11	Direct labor cost				\$536,300			
12	Manufacturing overhead costs				\$302,750			
13								
14	Inventories:		Beginning		Ending			
15	Raw materials (all direct)	\$	15,000	\$	11,375			
16	Work in process	\$	27,875	\$	22,350			
17	Finished goods	\$	34,600	\$	26,450			
18								
19	Use the data to answer the following.							
20								
21	1. Compute applied overhead and determine the amount of underapplied or overapplied overhead:							
22	Actual manufacturing overhead cost							
23	Predetermined overhead rate							
24	Actual direct labor hours							

READY

Attempt(s)

Source: Microsoft Excel

GUIDED EXAMPLES/HINT VIDEOS

Guided Example/Hint Videos provide an animated walk-through with narration of select exercises similar to those assigned. These short presentations, which can be turned on or off by instructors, provide reinforcement when students need it most.