

TEACHER'S EDITION

Practical Business Math Procedures

Eighth Edition



Jeffrey Slater

DVD
INCLUDES

Practical Business Math Procedures

Teacher's Edition

JEFFREY SLATER

North Shore Community College
Danvers, Massachusetts

Eighth Edition



**McGraw-Hill
Irwin**

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PRACTICAL BUSINESS MATH PROCEDURES

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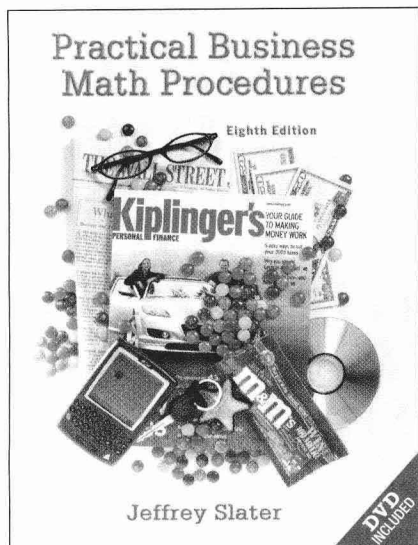
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DVD with Each Text



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Thank you for using my book in the past and considering this new edition for the future. This Teacher's Edition walkthrough is designed to describe the features that have made **Practical Business Math Procedures** the most popular business math textbook published. As the author, I believe you should put your energy into the classroom. It is my job to provide the best text and supporting package. I want to hear from you, so here is a toll-free number to my home: **1-800-484-1341 . . . 8980**. My e-mail address is jeffslater@aol.com.

Getting a college education isn't easy. Students often work full-time to put themselves through school, and I developed and wrote this book and supplements to help you give them every opportunity for success. This edition maintains all the features that have made it successful since its introduction in 1983. These include clear explanations supported by detailed, step-by-step examples; complete coverage at the appropriate level; student-oriented pedagogical tools such as the Chapter Organizer; focus on real business applications; anticipation of student difficulties; accuracy; and unsurpassed teaching support material. Staying on top means constant improvement.

When I sat down to think about how I could make **Practical Business Math Procedures** even better, I had lots of input to draw from. Feedback from teachers like you, over 30 reviewers and special focus groups, who are gratefully noted in the Acknowledgments page, and my own students gave me advice and suggestions for improvements.

My passion: To serve my customers—being number one in sales is never taken lightly.

This Teacher's Edition of the text differs from the student version by including worked solutions to problems printed in red, along with this walkthrough of key features.

Let me explain some of these features on the following pages.

Jeff

Jeffrey Slater

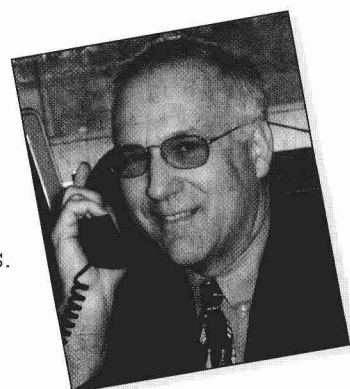
THE SLATER LEARNING SYSTEM

Text

- Practice Quiz
- Chapter Organizer
- Critical Thinking Discussion Questions
- Drill Problems
- Word Problems
- Challenge Problems
- Summary Practice Test
- Toll-Free Hotline for students
- Personal Finance: A Kiplinger Approach
- Business Math Scrapbook with Internet Application
- Internet Website (www.mhhe.com/slater8e)
- Appendix A Additional Problems
- Appendix B Problems by Learning Unit
- Video Cases
- Compounding/Present Value Overlays

Supplements

- Business Math Handbook and Study Guide
- Business Math Internet Resource Guide
- PowerPoint
- DVD-ROM
- Overhead Solution Transparencies
- Test Bank
- Computerized Testing
- Instructor's CD
- Instructor's Resource Manual
- Excel Workbook
- Financial Calculator Guide
- Electronic Calculator Guide
- Student Solutions Manual
- Author support—e-mail, toll-free number
- Publisher support—sales representatives, e-mail
- *The Wall Street Journal* newspaper



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Real-World Applications

Instructors asked for an even greater emphasis on the applications of business math in the United States and globally. The Eighth Edition includes references to companies such as Gap, eBay, Coca-Cola, Wal-Mart, and UPS to illustrate chapter topics. Over 130 actual clippings from *The Wall Street Journal* and 22 *Kiplinger's Personal Finance* magazine articles give students a more complete view of real-world practices from the business press.



STORE AND ITEMS	OUNCES	COST	COST PER OUNCE
Dominick's In Chicago			
Ocean Spray Cranberry Juice	128	\$7.99	\$0.062
Ocean Spray Cranberry Juice	64	3.79	0.059
Wal-Mart In Mesa, Ariz.			
Country Time Lemonade (Value Pack)	30	\$3.16	\$0.105
Country Time Lemonade mix	20	1.97	0.099
Jif 4lb Can Family Size	64	6.98	0.109
Jif Creamy 18 oz. jar	18	1.88	0.104
Minute Maid OJ 16oz can	16	1.98	0.124
Minute Maid OJ 12oz can	12	0.98	0.082
Kraft Cool Whip (Family Size)	16	2.07	0.129
Kraft Cool Whip	8	0.97	0.121
Wal-Mart In Vernon Hills, Ill.			
Pringles (Twin Pack)	12	\$1.80	\$0.150
Pringles can	6	0.88	0.147

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When you shop for items in the supermarket, do you assume that the largest size will be your best buy? This is not always true. In the *Wall Street Journal* clipping, you can see that the 18-ounce jar of Jif peanut butter is cheaper.

$$\frac{\$6.98}{64 \text{ oz.}} = \$0.109$$

$$\frac{\$1.88}{18 \text{ oz.}} = \$0.104$$

You should always compare the sizes and prices of the larger size of an item with the smaller size of the same item. You may be surprised how often you find that the smaller size is the best buy.

In Chapter 2, we introduced the 1.69-ounce bag of M&M's® shown in Table 3.1. Note that in Table 3.1

we give the fractional breakdown of the six colors in the 1.69-ounce bag of M&M's® and express the values in decimals. We have rounded the decimal equivalents to the nearest hundredths.

This chapter is divided into two learning units. The first unit discusses rounding decimals, converting fractions to decimals, and converting decimals to fractions. The second unit shows you how to add, subtract, multiply, and divide decimals, along with some shortcuts for multiplying and dividing decimals. Added to this unit is a global application of decimals dealing with foreign exchange rates.

One of the most common uses of decimals occurs when we spend dollars and cents, which is a *decimal number*. A **decimal**, then, is a decimal number with digits to the right of a *decimal point*, indicating that decimals, like fractions, are parts of a whole that are less than one. Thus, we can interchange the terms *decimals* and *decimal numbers*. Remembering this will avoid confusion between the terms *decimal*, *decimal number*, and *decimal point*.

Is Your Bank Nice?

It makes sense to go to a bank that really wants your business. Here's what some different banks are doing or aren't doing to lure customers.

BANK	OPEN SUNDAY	GREETERS	FREE CHECKING*	FEE FOR USING ANOTHER BANK'S ATM*
Bank of America Bankofamerica.com	No	In test-phase in Atlanta.	\$1,000	\$2
Commerce Bank Commerceonline.com	Yes. Nearly 200 branches in New York, New Jersey, Pennsylvania and Delaware.	Yes	None in New York; \$100 elsewhere.	None
JP Morgan Chase Chase.com	Only a few in Brooklyn, Long Island and Queens.	Yes	\$3,000	None if you maintain the minimum balance.
U.S. Bank Usbank.com	Yes. 253 branches in grocery stores and retailers throughout 18 states in the West.	No	None	\$2
First Union Firstunion.com	No	Yes	None with direct deposit of your paycheck.	\$1.50 to \$2.00

*Fees may vary by market.

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The Wall Street Journal Highlights

With over 130 clippings from *The Wall Street Journal*, students can see the relevance of text topics to the business world.

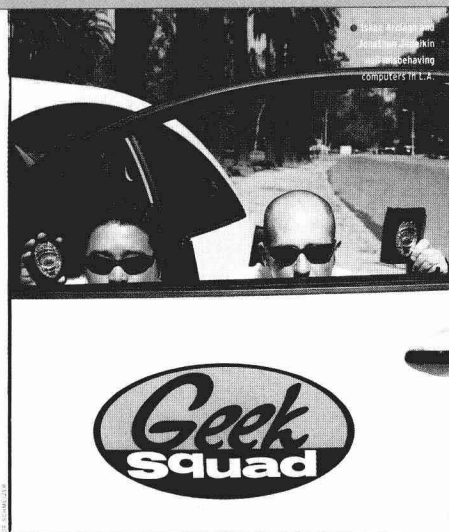
Kiplinger's Personal Finance Magazine Articles

These articles were completely updated this edition and include:

1. This Geek for Hire, page 33
2. You Must be 55 to Apply, page 65
3. A Detour Off the Beaten Path, page 90
4. Small Change, Big Fees, page 118
5. Stamp Out Spam, page 141
6. Glamour Girl, page 173
7. Delectable Dining Deal, page 206
8. Phone, TV, or PC?, page 237
9. Don't Delay, page 261
10. What It's Like to Outlive Your Money, page 282
11. Take Our Money, page 297
12. Make Your Children Millionaires, page 320
13. My Big Lottery Splurge? College for My Daughter, page 342
14. Credit Catch-22, page 368
15. All I Want Is a House I Can Afford, page 384
16. Chew on This, page 412
17. A Quick Course in Real Estate Taxes, page 434
18. Cheesy and Cheap, page 456
19. The Noose Tightens, page 468
20. Open Season, page 492
21. Shake-Up at the Top, page 510
22. When to Hatch Your Nest Egg Early, page 536

Personal Finance

A KIPLINGER APPROACH



HELP | Is your PC driving you crazy? Find a **COMPUTER DOCTOR** who makes house calls. By Kristin Davis

THIS GEEK FOR HIRE

THE "SPECIAL agents" of the Geek Squad show up at the door in black pants, white shirts, white socks and black clip-on ties. They drive VW New Beetles painted black and white to resemble police squad cars (although the Geekmobile fleet also includes a '60 Ford Falcon, a '58 Simca and a black ice-cream truck). Their clients—in Chicago, Los Angeles, Minneapolis and San Francisco—range from a grandma who can't get on the Internet to members of U2 and the Rolling Stones, to the

operator of the infamous Oscar Mayer Wienermobile. The company's "rapid-response computer-support task force" is available for house calls 24/7 ("We don't date," a company fact sheet reads). Techs have even met clients—dubbed civilians—at the airport for a predeparture laptop fix.

The Geek Squad (www.geeksquad.com) is one of the most successful (and certifiably geekiest) tech-for-hire firms. But others are cropping up around the country to cater to residential and small-business customers. Before long they'll be as ubiquitous as plumbers.

Geek is a popular appellation: Geeks On Call (www.geeksoncall.com), based in Norfolk, Va., has franchises in Colorado, Florida, Kansas, Maryland, Missouri, Texas, Virginia and the District of Columbia and intends to expand nationwide. And "rent-a-geek" companies are rampant—we found outfits using that moniker in nearly 20 cities around the nation, including Bellevue, Wash.; Burlington, Vt.; Memphis; and Vancouver, B.C.

At www.rentageek.com, you can view a directory of thousands of techs (many of them moonlighters) who provide on-site service. But the directory is not screened; technicians post their own listings. When hiring any computer tech, it's good practice to ask for references and look for significant computer-troubleshooting experience. A-plus certification by the Computing Technology Industry Association indicates that a tech has passed an exam on computer-repair basics and has at least six months' experience.

What's a typical service call? Techs for hire handle everything from rescuing a crashed hard drive to setting up a wireless network to helping a technophobe learn to use a greeting-card program. "A lot of people say their computer doesn't work when they really just don't know how to use it," says Scott Cooper, an Indianapolis rent-a-geek. He charges between \$35 and \$40 an hour; most jobs take less than an hour, he says.

Hourly rates of \$30 to \$50 are typical of sole proprietors and smaller companies. Many of the Geeks On Call franchises charge \$60 to \$65 to make a service call, plus \$15 to \$20 per quarter-hour they're on the case. The Geek Squad quotes a flat fee ahead of time, with a \$149 minimum.

Many rent-a-geeks also do Web-site design and basic computer training. "Training is very popular as a gift," says Robert Stephens, founder of the Geek Squad, especially with people who buy computers for their parents. **E**

—Reporter ALISON STEVENSON

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BUSINESS MATH ISSUE

The rates charged by Geek franchises are much too high.

1. List the key points of the article and information to support your position.
2. Write a group defense of your position using math calculations to support your view.

Favorite Features of the Book

You can count on all of the key features developed for this book over the years remaining in the Eighth Edition. I have listened to instructors using the text, as well as my own students, in order to improve the book and make sure it serves you and your students effectively. My goal was to make it as motivating and understandable as possible for both the young, out of high school student and the older, returning student.

Chapter Openers

The chapter openers explain to students where they've been and introduce them to the chapter's topics. Students can see the real-world applications of business math through *The Wall Street Journal* clips which make the topics relevant to them. Each chapter opener also includes a timeline featuring significant events in an industry or field which will provide you and your students with enriched business knowledge and conversation topics. (p. 36)

Timeline
Highlights in FAO Schwarz's History

1862 Frederick August Otto Schwarz founds the business just six years after arriving in America from Germany	1931 FAO Schwarz moves uptown to its flagship Fifth Avenue store; in 1986 it moves across the street	1988 FAO Schwarz reaches new fame when Tom Hanks dances across a toy piano at the Manhattan store in the movie <i>Big</i>	1999 FAO Schwarz attempts to capitalize on its upscale image by moving into a line of children's "lifestyle" products, including clothing, furniture, and eyewear	2002 Right Start buys FAO Schwarz in a stock deal valued at \$58 million; Right Start's shareholders approve changing the company's name to FAO Inc.
1870 Mr. Schwarz opens the first New York store, called Schwarz Toy Bazaar, on Broadway	1963 The Schwarz family sells the company to <i>Parents</i> magazine, the first of several owners	1990 Dutch company Koninklijke Bijenkorf Beheer buys FAO Schwarz, vowing to expand the chain	2001 Right Start, founded as a catalog company in 1985, acquires specialty toy retailer Zany Brainy	2003 In January, FAO files for Chapter 11 bankruptcy-court protection following a tough holiday season; in December, the company announces it will file for bankruptcy protection a second time, resulting in an immediate fire sale at the company's 83 Zany Brainy stores, 15 FAO Schwarz stores, and 38 Right Start outlets

CHAPTER 2

Fractions

LEARNING UNIT OBJECTIVES

LU 2-1: Types of Fractions and Conversion Procedures

- Recognize the three types of fractions (pp. 38-39).
- Convert improper fractions to whole or mixed numbers and mixed numbers to improper fractions (p. 40).
- Convert fractions to lowest and highest terms (pp. 40-42).

LU 2-2: Addition and Subtraction of Fractions

- Add like and unlike fractions (pp. 43-44).
- Find the least common denominator (LCD) by inspection and prime numbers (pp. 44-46).
- Subtract like and unlike fractions (p. 46).
- Add and subtract mixed numbers with the same or different denominators (pp. 47-48).

LU 2-3: Multiplication and Division of Fractions

- Multiply and divide proper fractions and mixed numbers (pp. 49-51).
- Use the cancellation method in the multiplication and division of fractions (pp. 50-51).

Clear Explanations

Explanations are given in a step-by-step format that is easy to follow and remember, followed by understandable examples. (p. 51)

Dividing Mixed Numbers

Now you are ready to divide mixed numbers by using improper fractions.

DIVIDING MIXED NUMBERS

- Step 1.** Convert all mixed numbers to improper fractions.
- Step 2.** Invert the divisor (take its reciprocal) and multiply. If your final answer is an improper fraction, reduce it to lowest terms. You can do this by finding the greatest common divisor or by using the cancellation technique.

EXAMPLE $8\frac{3}{4} \div 2\frac{5}{6}$

Step 1. $\frac{35}{4} \div \frac{17}{6}$

Step 2. $\frac{35}{4} \times \frac{6}{17} = \frac{105}{34} = 3\frac{3}{34}$

Here we used the cancellation technique.

Functional Use of Color

Functional color-coding was first introduced in the Third Edition of the text. While many books use color, I set out from the beginning to use color to teach. I personally color-code each element to enhance the learning process. For example, when a student sees a number in red, they know it is a key item they are solving for.

Color Key



Blue: Movement, cancellations, steps to solve, arrows, blueprints



Gold: Formulas and steps



Green: Tables and forms



Red: Key items we are solving for



Magenta: Worked-out solutions in Teacher's Edition only

Plastic Overlays


Chapter 13 features plastic overlays that review compounding, present value, ordering annuities, and present value annuities.

Practice Quizzes and
New Appendix A

Practice Quizzes follow each Learning Unit in the book. These quizzes provide immediate feedback for students to check their progress and are followed by worked-out solutions. The logo lets students know that videos are available on the student DVD-ROM. In these videos I carefully walk students through the material, reinforcing the content. These are accessible by each Learning Unit so students can go *directly* to the Practice Quiz they choose without searching cumbersome videotapes. (p. 247) New to this edition is Appendix A, a complete parallel set of practice quizzes. Answers are found in the Instructor's Resource Manual.

LU 9-1

PRACTICE QUIZ



1. Jill Foster worked 52 hours in one week for Delta Airlines. Jill earns \$10 per hour. What is Jill's gross pay, assuming overtime is at time-and-a-half?

2. Matt Long had \$180,000 in sales for the month. Matt's commission rate is 9%, and he had a \$3,500 draw. What was Matt's end-of-month commission?

3. Bob Meyers receives a \$1,000 monthly salary. He also receives a variable commission on net sales based on the following schedule (commission doesn't begin until Bob earns \$8,000 in net sales):

\$8,000–\$12,000	1%	Excess of \$20,000 to \$40,000	5%
Excess of \$12,000 to \$20,000	3%	More than \$40,000	8%

Assume Bob earns \$40,000 net sales for the month. What is his gross pay?

✓ Solutions

1. $40 \text{ hours} \times \$10.00 = \$400.00$
 $12 \text{ hours} \times \$15.00 = \underline{180.00}$ ($\$10.00 \times 1.5 = \15.00)
 $\$580.00$

2. $\$180,000 \times .09 = \$16,200$
 $\underline{- 3,500}$
 $\$12,700$

Blueprint Aid for
Dissecting and Solving
a Word Problem

Students need help in overcoming their fear of word problems. The first eight chapters (except Chapter 4) provide a "blueprint" format for solving word problems. It shows students how to begin the problem-solving process, gets them actively involved in dissecting the word problem, shows visually what has to be done before calculating, and provides a structure for them to use. (p. 155)

Solving for Base

The Word Problem Sales of Peanut and other M&M's® chocolate candies are 20% of total M&M's® sales. Sales of Milk Chocolate M&M's® are \$320,000. What are the total sales of all M&M's®?

The facts	Solving for?	Steps to take	Key points
<p>Peanut and other M&M's® chocolate candies sales: 20%.</p> <p>Milk Chocolate M&M's® sales: \$320,000.</p>	Total M&M's® sales.	<p>Identify key elements.</p> <p>Base: ?</p> <p>Rate: .80</p> <p>(100% – 20%)</p> <p>Portion: \$320,000</p> <p>Base = $\frac{\text{Portion}}{\text{Rate}}$</p>	<div><div>Portion (\$320,000)</div><div><div>Base (?)</div><div>Rate (.80)</div></div><div>(100% – 20%)</div></div> <p>Portion (\$320,000) and rate (.80) do relate to the same piece of base.</p>

Steps to solving problem

1. Set up the formula.

2. Calculate the base.

$$\text{Base} = \frac{\text{Portion}}{\text{Rate}}$$
$$B = \frac{\$320,000}{.80} \leftarrow \$320,000 \text{ is } 80\% \text{ of base}$$
$$B = \$400,000$$

The Chapter Organizer

This quick reference guide provides students with a complete set of notes, including color coding consistent with the text. Key points, formulas, examples, and vocabulary are included with page references. Widely copied by other textbooks, this tool is useful as a reference for students as well as for reviews before exams. (p. 427)

CHAPTER ORGANIZER AND STUDY GUIDE (concluded)															
Topic	Key point, procedure, formula	Example(s) to illustrate situation													
Sum-of-the-years'-digits method, p. 421	$\text{Depreciation expense} = \left(\frac{\text{Cost} - \text{Residual value}}{\text{Sum-of-the-years'-digits}} \right) \times \frac{\text{Remaining life}}{\frac{N(N+1)}{2}}$	Truck, \$32,000; estimated life, 5 years; residual value, \$2,000. <table> <tr> <th>Year</th><th>Cost (less residual value)</th><th>Rate</th><th>Depreciation expense</th></tr> <tr> <td>1</td><td>\$30,000</td><td>$\frac{5}{15}$</td><td>\$10,000</td></tr> <tr> <td>2</td><td>30,000</td><td>$\frac{4}{15}$</td><td>8,000</td></tr> </table>		Year	Cost (less residual value)	Rate	Depreciation expense	1	\$30,000	$\frac{5}{15}$	\$10,000	2	30,000	$\frac{4}{15}$	8,000
Year	Cost (less residual value)	Rate	Depreciation expense												
1	\$30,000	$\frac{5}{15}$	\$10,000												
2	30,000	$\frac{4}{15}$	8,000												
Declining-balance method, p. 423	An accelerated method. Residual value not subtracted from cost in depreciation schedule. Do not depreciate below residual value. $\text{Depreciation expense each year} = \text{Book value of equipment at beginning of year} \times \text{Depreciation rate}$	Truck, 50,000; estimated life, 5 years; residual value, \$10,000. $\frac{1}{5} = 20\% \times 2 = 40\%$ (assume double the straight-line rate) <table> <tr> <th>Year</th><th>Cost</th><th>Depreciation expense</th><th>Book value at end of year</th></tr> <tr> <td>1</td><td>\$50,000</td><td>\$20,000 (\$50,000 \times .40)</td><td>\$30,000 (\$50,000 - \$20,000)</td></tr> <tr> <td>2</td><td>50,000</td><td>12,000 (\$30,000 \times .40)</td><td>18,000 (\$30,000 - \$12,000)</td></tr> </table>		Year	Cost	Depreciation expense	Book value at end of year	1	\$50,000	\$20,000 (\$50,000 \times .40)	\$30,000 (\$50,000 - \$20,000)	2	50,000	12,000 (\$30,000 \times .40)	18,000 (\$30,000 - \$12,000)
Year	Cost	Depreciation expense	Book value at end of year												
1	\$50,000	\$20,000 (\$50,000 \times .40)	\$30,000 (\$50,000 - \$20,000)												
2	50,000	12,000 (\$30,000 \times .40)	18,000 (\$30,000 - \$12,000)												
MACRS/Tax Bill of 1989, p. 424	After December 31, 1986, depreciation calculation is modified. Tax Act of 1989 modifies way to depreciate cellular phones and similar equipment.	Auto: \$8,000, 5 years. First year, $.20 \times \$8,000 = \$1,600$ depreciation expense													
KEY TERMS	Accelerated Cost Recovery System (ACRS), p. 424 Accelerated depreciation method, p. 421 Accumulated depreciation, p. 418 Asset cost, p. 418 Book value, p. 418 Declining-balance method, p. 423	Depreciation, p. 418 Depreciation expense, p. 418 Depreciation schedule, p. 419 Estimated useful life, p. 419 Modified Accelerated Cost Recovery System (MACRS), p. 424 Omnibus Budget Reconciliation Act of 1989, p. 426 Residual value, p. 418	Salvage value, p. 419 Straight-line method, p. 419 Straight-line rate, p. 423 Sum-of-the-years'-digits method, p. 421 Trade-in value, p. 419 Units-of-production method, p. 420												

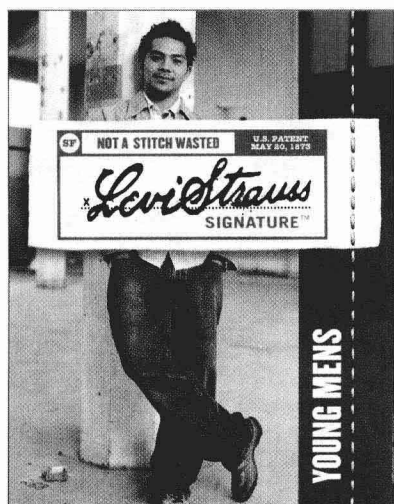
Critical Thinking Discussion Questions

These thought-provoking questions follow the Chapter Organizer and are designed to get students to think about the larger picture and the "why's" of business math. They go beyond the typical questions by asking students to explain, define, create, etc. (p. 427)

Critical Thinking Discussion Questions

- What is the difference between depreciation expense and accumulated depreciation? Why does the book value of an asset never go below the residual value?
- Compare the straight-line method to the units-of-production method. Should both methods be based on the passage of time?
- Explain the difference between the sum-of-the-years'-digits method and declining-balance method. Why is it possible in the declining-balance method for a person to depreciate below the residual value by mistake?
- Explain the Modified Accelerated Cost Recovery System. Do you think this system will be eliminated in the future?

Over 70 photos are included to stimulate student interest and help students see business math with imagination and enthusiasm. Whether showing Wendy's Hamburger chain's international sales, inventory systems, or Web-based real estate ventures, business math becomes real to them.



Courtesy Levi Strauss and Company.

Are you one of the many shoppers who shop at Target? If you wear jeans, you may be interested in the *Wall Street Journal* clipping "Levi Strauss Sells Low-Cost Jeans to Target in Bid to Increase Sales." The clipping states that Levi Strauss & Co. has begun selling its Levi Strauss Signature™ brand jeans to Target. If you are familiar with products from Levi Strauss & Co. and shop at the mass-channel retail stores that carry Levi Strauss Signature™ brand jeans, such as Target and Wal-Mart, you will probably look at these lower-cost jeans. Levi Strauss & Co. wants to boost sales with their Levi Strauss Signature™ brand products by appealing to a new group of value-conscious consumers who don't buy their other branded products.

Before we study the two pricing methods available to Target (percent markup on cost and percent markup on selling price), we must know the following terms:

- **Selling price.** The price retailers charge consumers. The total selling price of all the goods sold by a retailer (like Target) represents the retailer's total sales.
- **Cost.** The price retailers pay to a manufacturer or supplier to bring the goods into the store.
- **Markup, margin, or gross profit.** These three terms refer to the difference between the cost of bringing the goods into the store and the selling price of the goods. As an example of high-margin sales, Sharper Image customers are buying more high-margin gadgets. This helps the company fuel a 15% rise in same-store sales.

End-of-Chapter Problems

At the end of each chapter Drill Problems are followed by Word Problems. I've added new problems in each chapter using material from newspapers such as the *Chicago Tribune*, and magazines such as *Nation's Business*, *Consumer Reports*, and *Smart Money* to help students see the relevance of the material.

An Excel logo next to a problem indicates an Excel template is available on the DVD-ROM and in the Excel Workbook to help solve that problem.

Challenge Problems let your students stretch their understanding and ability to solve more complex problems. I've included two per chapter, one of which is new to this edition. A Summary Practice Test concludes the problem section and covers all the Learning Objectives in the chapter. The phone logo reminds students that they can call the student toll-free hotline number at 1-800-338-9708. A first in business math, the hotline allows students to get extra help on these tests. I have recorded tips on how to solve each problem which students can access any time, 24 hours a day, and hear me walk them through the problem they are having difficulty with. In the Seventh Edition we had over 25,000 students call this number for help.

Drill Problems

DRILL PROBLEMS

Convert the following decimals to percents:

6-1. .68 68%

6-2. .951 95.1%

6-3. .8 80%

6-4. 8.00 800%

6-5. 3.561 356.1%

6-6. 6.006 600.6%

Convert the following percents to decimals:

6-7. 7% .07

6-8. 12% .12

6-9. $64\frac{3}{10}\%$.643

6-10. 75.9% .759

6-11. 119% 1.19

6-12. 89% .89

Word Problems

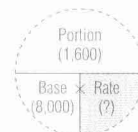
WORD PROBLEMS (First of Four Sets)

- 6-52.** At a local Burger King, a survey showed that out of 8,000 customers eating lunch, 1,600 ordered Diet Pepsi with their meal. What percent of customers ordered Diet Pepsi?



$$\frac{1,600}{8,000} = 20\%$$

Note: Portion and rate must refer to same piece of the base.

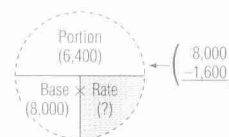


- 6-53.** What percent of customers in Problem 6-52 did not order Diet Pepsi?



$$\frac{6,400}{8,000} = 80\%$$

Note: Portion and rate must refer to same piece of the base.

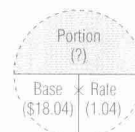


Challenge Problems

- 6-96.** According to the *Fort Worth Star-Telegram* of October 4, 2003, Continental Airlines stock climbed 4% from \$18.04. Shares of AMR Corporation, American Airlines' parent company, closed up 7% at \$12.55. AirTran Airways went from \$17.27 to \$17.96. Round answers to the nearest hundredth. (a) What is the new price of Continental Airlines stock? (b) What had been the price of AMR Corporation stock? (c) What percent did AirTran Airways increase? Round to the nearest percent.



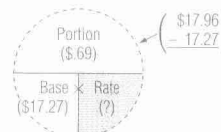
$$\begin{aligned} \text{a. } \$18.04 \times 1.04 &= \$18.76 \text{ or } \$18.04 \times .04 = \$.7216 \\ &+ \$18.04 \\ &\hline \$18.7616 &= \$18.76 \end{aligned}$$



$$\text{b. } \frac{\$12.55}{1.07} = \$11.728971 = \$11.73$$



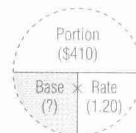
$$\text{c. } \frac{\$.69}{\$17.27} = 3.9953676\% = 4.00\%$$



Summary Practice Test

- 17.** The price of a Southwest airline ticket from Los Angeles to Boston increased to \$410. This is a 20% increase. What was the old fare? Round to the nearest cent. (p. 156)

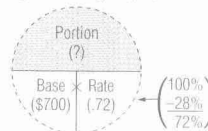
$$\frac{\$410}{1.20} = \$341.67$$



- 18.** Abby Matthew earns a gross pay of \$700 per week at Office Depot. Abby's payroll deductions are 28%. What is Abby's take-home pay? (p. 152)

$$P = \$700 \times .72$$

$$P = \$504$$



A Kiplinger Group Project at the end of each chapter includes an article from *Kiplinger's Personal Finance* magazine. Each article presents a business math issue for students to debate and solve. Suggested answers are located in the Instructor's Resource Manual in the Box. This is an excellent tool to develop critical thinking and writing skills. It also provides opportunities for students to become involved in team projects. As stated in the AMATYC standards: "mathematics faculty will foster interactive learning through student writing, reading, speaking, and collaborative activities so that students can learn to work effectively in groups and communicate about mathematics both orally and in writing." (p. 237)



Personal Finance

A KIPLINGER APPROACH

TECHNOLOGY | You can pack your cell phone with services—for a price. By Ronaleen R. Roba

PHONE, TV or PC?

DENNIS MILLER looks a bit fuzzy and moves as if he's in a slide show, but considering that you're watching him on a wireless phone (via MobiTV), it's kind of cool. The question is, how much are you willing to pay for cool—and some even useful—phone-data services?

We tested the latest cell-phone features and services. The selection is vast, but there are some that rise above the pack. Here's how it all comes together.

The basics. Each of the major carriers—AT&T Wireless, Cingular, Nextel, Sprint PCS, T-Mobile and Verizon Wireless—offers packages for today's data-enabled phones. All offer Web-based information from sources such as ABC News, CBS Marketwatch, CNN, ESPN, Travelocity and the Weather Channel. Verizon's Mobile Web and T-Mobile's t-Zones are typical packages; each costs \$5 a month.

Most carriers offer text messaging separately starting at a few bucks a month for hundreds of messages. Some carriers also sell text messages

a la carte. For example, T-Mobile charges 5 cents a message. AT&T's cheapest plan is \$2 a month for 25 outgoing messages (incoming messages are free).

Text messaging also may be included as part of your bundled plan. For example, Sprint's PCS Vision Pictures Pack costs \$15 a month (the first two months are free) for 100 text messages and unlimited picture sharing and Web access. Cingular's MEdia Basic plan is \$8 a month for 250 text messages and limited picture sharing and Internet access.

Each carrier also offers hundreds of other products that can be billed separately. For instance, Nextel and Verizon each ply you with 350 options, and Sprint, 250. You'll pay anywhere from \$2 to \$2.50 for music clips. Games will add about \$1 to \$6 to your bill, depending on the game's sophistication.

And there are a variety of choices for intellectual stimulation, such

as the *Los Angeles Times* crossword puzzle on Verizon (\$3.75 a month).

Exclusive services. While the overlap among services is great, some exclusive ones may make you want to switch carriers. Nextel is the only company that offers a global-positioning satellite system, called TeleNav (30 days free then \$10 a month for up to ten routes), which turns a phone like the Motorola i730 into a GPS device. You can enter destinations with your voice, and it gives you clear, spoken street-by-street directions throughout the continental U.S. and Hawaii. A poor man's GPS is

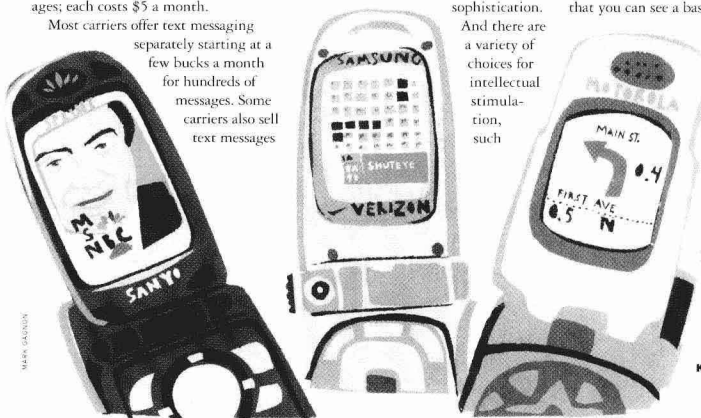
MapQuest Mobile, available on most carriers, including AT&T Wireless and Cingular (both are \$4 a month). This service provides maps to destinations you key into the phone.

For \$10 a month for unlimited access,

Sprint's MobiTV lets you *hear* a TV show playing on any of its 15 live channels perfectly, but you can only see a slide show of one to two frames per second.

The "kind of cool" factor is still there, but this gets frustrating given that you can see a basketball player shoot a three-pointer, but you can't see if the ball hits net, rim or merely air. That problem will disappear later this year when more advanced phones become available, putting MobiTV images on par with streaming video on a PC. ■

—Reporter:
ELIZABETH
KOUNTZE



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BUSINESS MATH ISSUE

Competition in phones and carrier plans is destroying the markup a company can command.

1. List the key points of the article and information to support your position.
2. Write a group defense of your position using math calculations to support your view.

Business Math Scrapbook with Internet Application

Video Cases on DVD

The Business Math Scrapbook with Internet Application provides real-world applications at the end of the chapters. They can be assigned at your discretion to give students an opportunity to apply the chapter theory to real life business situations and to see the importance of what they're learning. (p. 207)

There are seven video cases applying business math concepts to real companies such as Hotel Monaco, Louisville Slugger, American President Lines, Washburn Guitars, Online Banking, McDonald's, and Federal Signal Corp. Video clips are included on the student DVD. Some background case information and assignment problems incorporating information on the companies are included at the end of Chapters 6, 7, 8, 9, 11, 14, 16, and 21.

Slater's Business Math Scrapbook with Internet Application
Putting Your Skills to Work

PROJECT A
Go to the Web and visit Christie's International to get the latest update of Sotheby's and Christie's pact on fees charged sellers at auction.
Answers will vary.

PROJECT B
Do you agree with P&G's solution?
Answers will vary.

P&G Plans Steps To Ease Buyers' Ire Over Pampers Offer
CINCINNATI—Procter & Gamble Co., trying to stem consumer anger at a promotion for its Pampers diapers, plans to offer shoppers discount coupons and cash payments.
The flap stems from Pampers Perks, a promotion that offered Fisher-Price toys to parents for collecting points printed on Pampers packages. But P&G underestimated how many parents would mail in points and didn't have enough toys. While P&G says it legally doesn't have to offer parents prizes because toys were offered on a while-supplies-last basis, it risks angering some of its most vocal and loyal shoppers. The snafu was the subject of a Marketplace article last week in The Wall Street Journal. Fisher-Price is a unit of Mattel Inc.

Beat That
Some hotels plan to start guaranteeing that a discount Web site, the hotel will beat that hotel Web site. With so many discount-hotel surfing to nail down the bargains, but they're Here's a sampling for a one-night stay on Monday.

HOTEL	HOTEL WEB SITE
Crowne Plaza LAX Los Angeles	\$103 Crowneplaza.com
Four Points by Sheraton* Miami Beach	\$119 Sheraton.com
Holiday Inn Downtown Atlanta	\$56 Holiday-inn.com
Mark Hopkins Inter-Continental San Francisco	\$199 Intercontinental.com
St. Regis* Houston	\$135 Stregis.com
Westin River North* Chicago	\$259 Westin.com
W Times Square* New York	\$289 Whotels.com

*The 10% discount program at Starwood-owned hotels, such as P. Prices quoted as of yesterday; taxes and fees not included.

PROJECT C
Visit these websites to see if prices have changed.
Answers will vary.

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Internet Projects: See text website (www.mhhe.com/slater8e) and The Business Math Internet Resource Guide

Video Case

WASHBURN GUITARS

Washburn International, founded in 1883, makes 80 models of instruments, both custom and for the mass market. Washburn is a privately held company with over 100 employees and annual sales of \$48 million. This compares to its annual sales of \$300,000 when Rudy Schlacher took over in 1976. When he acquired the company, about 250 guitars were produced per month; now 15,000 are produced each month.

The Washburn tradition of craftsmanship and innovation has withstood the tests of economics, brand competition, and fashion. Since its birth in Chicago, the name Washburn has been branded into the world's finest stringed instruments. To maintain quality, Washburn must have an excellent pool of qualified employees who are passionate about craftsmanship.

Washburn consolidated its four divisions in an expansive new 130,000 square foot plant in Mundelein, Illinois. The catalyst for consolidating operations in Mundelein was a chronic labor shortage in Elkhart and Chicago. The Mundelein plant was the ideal home for all Washburn operations because it had the necessary space, was cost effective, and gave Washburn access to a labor pool.

To grow profitably, Washburn must also sell its other products. To keep Washburn's 16 domestic salespeople tuned in to the full line, the company offers an override incentive. It is essential that to produce quality guitars, Washburn must keep recruiting dedicated, well-qualified, and team-oriented employees and provide them with profitable incentives.

PROBLEM 1

\$120,000 was paid to 16 of Washburn's salespeople in override commissions. (a) What was the average amount paid to each salesperson? (b) What amount of the average sales commission will go toward the salesperson's Social Security tax? (c) What amount will go toward Medicare?

PROBLEM 2

Washburn is seeking a Sales and Marketing Coordinator with a bachelor's degree or equivalent experience, knowledgeable in Microsoft Office. This position pays \$25,000 to \$35,000, depending on experience. Assume a person is paid weekly and earns \$32,500. Using the percentage method, what would be the taxes withheld for a married person who claims 3 exemptions?

PROBLEM 3

Guitarists hoping for a little country music magic in their playing can now buy an instrument carved out of oak pews from the former home of the Grand Ole Opry. Only 243 of the Ryman Limited Edition Acoustic Guitars are being made, each costing \$6,250. Among the first customers were singers Vince Gill, Amy Grant, and Loretta Lynn. Ms. Lynn purchased two guitars. What would be the total revenue received by Washburn if all the guitars are sold?

PROBLEM 4

Under Washburn's old pay system, phone reps received a commission of 1.5% only on instruments they sold. Now the phone reps are paid an extra .75% commission on field sales made in their territory; the outside salespeople still get a commission up to 8%, freeing them to focus on introducing new products and holding in-store clinics. Assume sales were \$65,500: (a) How much would phone reps receive? (b) How much would the outside salespeople receive?

PROBLEM 5

Washburn introduced the Limited Edition EA27 Gregg Allman Signature Series Festival guitar—only 500 guitars were produced with a selling price of \$1,449.90. If Washburn's markup is 35% on selling price, what was Washburn's total cost for the 500 guitars?

PROBLEM 6

Retailers purchased \$511 million worth of guitars from manufacturers—some 861,300 guitars—according to a study done by the National Association of Music Merchants. (a) What would be the average selling price of a guitar? (b) Based on the average selling price, if manufacturer's markup on cost is 40%, what would be the average cost?

PROBLEM 7

A Model NV 300 acoustic-electric guitar is being sold for a list price of \$1,899.90, with a cash discount of 3/10, n/30. Sales tax is 7% and shipping is \$30.40. How much is the final price if the cash discount period was met?

PROBLEM 8

A Model M3SWE mandolin has a list price of \$1,299.90, with a chain discount of 5/3/2. (a) What would be the trade discount amount? (b) What would be the net price?

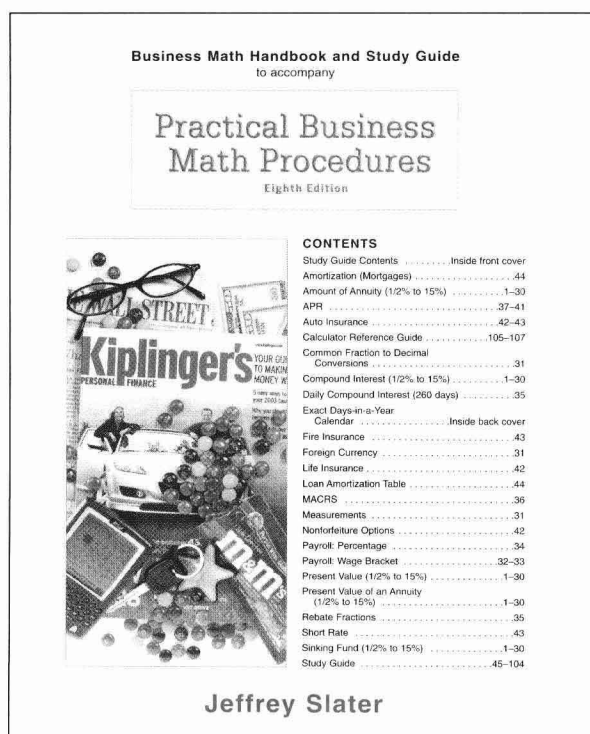
PROBLEM 9

A purchase was made of 2 Model J282DL six-string acoustic guitars at \$799.90 each, with cases priced at \$159.90, and 3 Model EA10 festival series acoustic-electric guitars at \$729.90, with cases listed at \$149.90. If sales tax is 6%, what is the total cost?

PROBLEM 10

Production of guitars has increased by what percent since Rudy Schlacher took over Washburn?

Supplements Package



Business Math Handbook and Study Guide

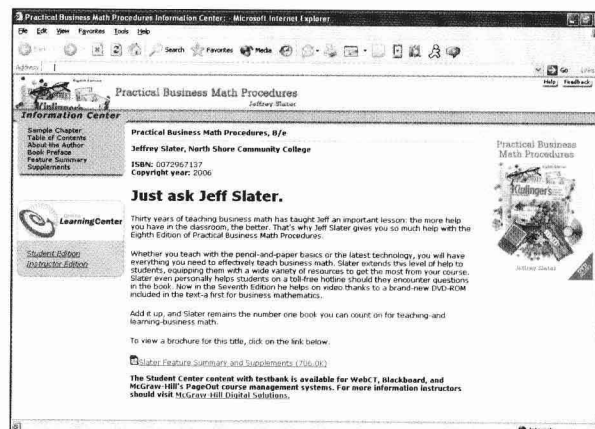
This reference guide contains all tables found in the text and is included free in the text. It has a built-in study guide providing self-paced worksheets that review chapter material. The worksheets cover vocabulary, theory, and math applications. A set of 10 extra word problem practice quizzes for each chapter is included as well as a section on the use of the calculator.

Website and Online Learning Center

The Business Math Website at www.mhhe.com/slater8e offers interactive environment for teachers and students. The instructor section contains text updates, supplement information, and teaching support including the electronic version of the Instructor's Resource Guide. It includes PageOut—a powerful, easy-to-use tool that allows you to produce professional course Web pages.

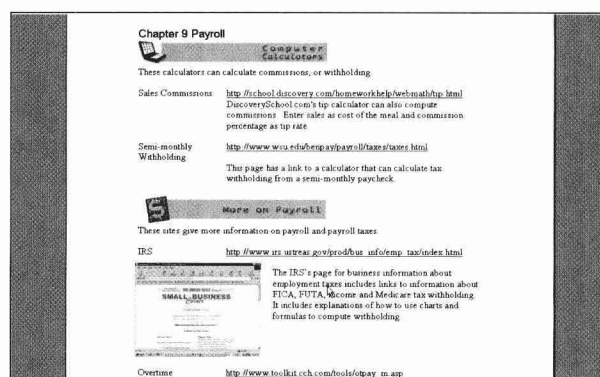
The Online Learning Center takes the pedagogical features and supplements of the book and places them online. It includes interactive self-grading quizzes, PowerPoint lectures, chapter outlines, teaching tips, and more. Student material includes practice quizzes, glossary, self-paced worksheets, and much more.

Included on Student DVD-ROM.



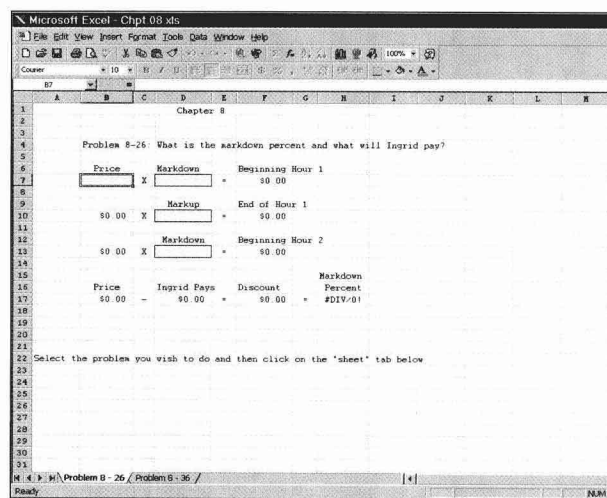
Business Math Internet Resource Guide

The Business Math Internet Resource Guide will take students online and show them and you interesting source materials for business math. Following an introduction on how to use the Internet, each chapter of the book has specific sites listed and a description of what students will find there. There are also projects listed for each chapter relating to the Internet. **Included on Student DVD-ROM.**



Excel Workbook

The Excel Workbook is available as a shrinkwrapped package with the text. This workbook instructs your students in constructing their own spreadsheets. It includes business topics such as inventory, interest, markup, and annuities using problems from the text. The templates are on the student DVD-ROM and are available for selected end-of-chapter problems designated with an Excel logo. Students can run these templates as is or add their own data. The DVD also includes an interest table feature that allows you to input any percentage rate and terms. The program will then generate table values. **Included on Student DVD-ROM.**



Electronic Calculator Guide with Computer Applications

This manual coordinates **Practical Business Math Procedures** applications with instruction in the 10-key calculator and computer keypad. It also reviews the touch method, includes speed drills, and helps students apply new skills to business math word problems. An introduction to Excel spreadsheets and how to enter data in spreadsheets is included.

Financial Calculator Guide

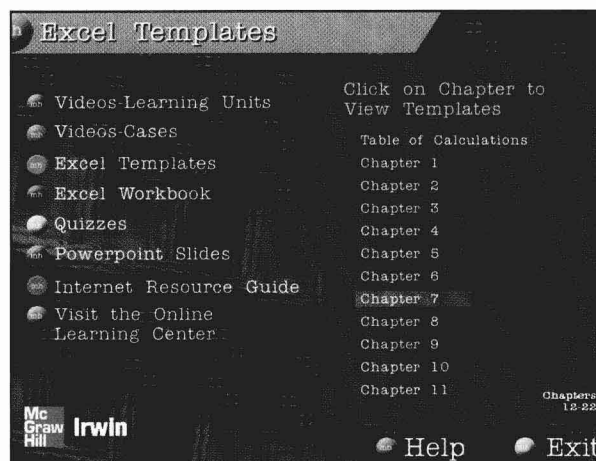
This guide covers using the HP 10BII and TI BAII PLUS financial calculators for Chapters 7, 8, and 10 through 15 in *Practical Business Math Procedures*. Many of the examples and practical quiz problems are illustrated. Selected end-of-chapter problems are also illustrated. This guide is divided into two sections. One section is devoted to the HP 10BII calculator and the other section covers the TI BAII PLUS calculator, also providing brief introductions to using each model.

Student Solutions Manual

This supplement provides completely worked-out solutions to selected end-of-chapter drill and word problems, plus additional word problems and practice quizzes for student reinforcement.

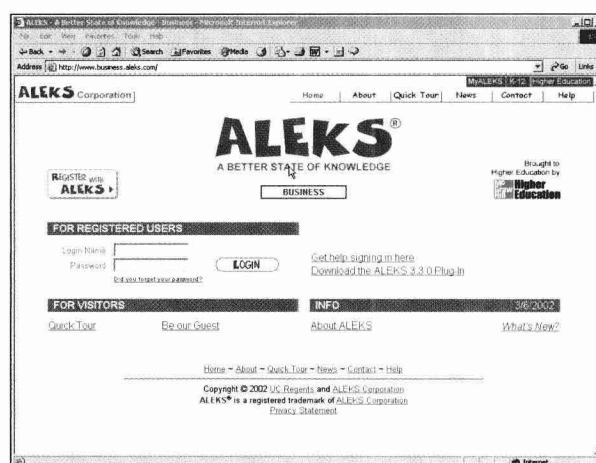
DVD-ROM

Students can use this tool on their computers or home DVD player to see and hear how the author solves all the practice quizzes in the text. Students can also refer to the DVD-ROM for PowerPoint lectures, self-grading practice quizzes, Excel Templates, the Internet Resource Guide, and Web links. Video cases apply business math concepts to real companies such as McDonald's, Louisville Slugger, and others.



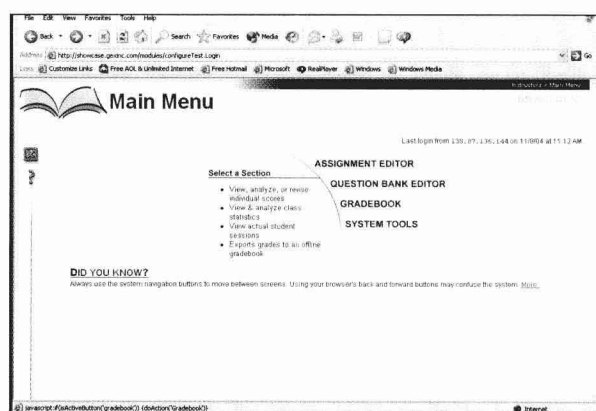
ALEKS

ALEKS (Assessment and Learning in Knowledge Spaces) is an artificial intelligence based system, which, acting much like a human tutor, can provide individualized assessment, practice, and learning. By assessing your knowledge, ALEKS focuses clearly on what you are ready to learn next and helps you master the course content more quickly and clearly. You can visit ALEKS at www.business.aleks.com.



McGraw-Hill's Homework Manager

Homework Manager is an online homework management system allowing you to assign select end-of-chapter problems and exercises to your students. Homework Manager's assignments are automatically graded for you and instant feedback is provided directly to your students. All you need to do is choose the problems you want to assign and collect the results from your online grade book.



Some of Homework Manager's problems are programmed with algorithms that create new versions of the problem by generating new data for select variables and keeping the structure of the problem intact. In effect, you have an unlimited number of problems. Algorithm-based problems allow you to create one assignment wherein each student gets a different version of the problem in the assignment. It also ensures that students are not just solving