

## From Jeff's Desk

**THANK YOU!** Thank you for making my book the best-selling business math text in the United States. I am happy to report to you more than ONE MILLION students have used my book. Being number one means never taking my customers for granted.

Need help?

Call me at 1-800-484-1341 . . . 8980 or email me at [jeffslater@aol.com](mailto:jeffslater@aol.com)

Customer Service at 1-800-338-3987

My promise to you: I will respond to your needs within 24 hours.

BEHIND THE SCENES WITH JEFF: Preparing this new edition

What did I like best about doing this revision?



[jeffslater@aol.com](mailto:jeffslater@aol.com)

practice quizzes, and a new set of videos that review worked-out solutions to all the Summary Practice Tests.

- Waiting for the mail each day hoping my *Kiplinger's* magazine would arrive so I could update the Business Math Issues.
- Learning how to proof my book on the computer.
- Agreeing to do the Test Bank and *Instructors Resource Guide* myself.

My PASSION is to serve my students and instructors. Being number one in this market is a huge responsibility that I do not take lightly. I work on this book 365 days a year. It is my baby and I love doing it.

PS: I hope you like the cover. It reflects material from each chapter and key features of the book.

Best,

**Jeffrey Slater**

- Waking up at 5 a.m. every morning with my dog Gracie to get the *Wall Street Journal* so I could find new clip that would reflect what is happening with bank failures, mortgage bailouts, low interest rates, subprime loans, new credit legislation, global unrest, and unemployment.
- Flying to Chicago in October 2009 to do new videos for the DVD. We spent time doing new chapter openers, new updates to the

## Why the need for a new revision?

### Highlights of changes for 10e: A Transition Guide for All My Loyal Adopters

In the last several years many banks have failed. The government has had to conduct stress tests on banks. Foreclosures on real estate have hit record levels. Unemployment has been close to 10%. Consumer buying habits have changed. New regulations on credit cards have been passed by Congress. New health plans are in the works. This textbook has addressed many of these problems. New clips have been added to cover the global economy. Many chapters have been rewritten to bring students up to date. **NO OTHER BUSINESS MATH BOOK IS THIS CURRENT.** Therefore 99% of all old articles, including *Kiplinger's* magazine, have been updated to reflect what is happening in today's business world. The following is a transition guide to help you plan for updating your syllabus.

#### All chapters:

- Two-page openers with new vocabulary preview
- Worked-out solutions for Extra Practice Quizzes in Appendix B
- New clips and cartoons within learning units
- New real-world word problems added to problem material
- New Money Tips in each learning unit
- New Challenge Problem
- New *Kiplinger's* Business Math Issue
- New Business Math Scrapbook and Internet Projects
- New videos showing how to work out problems for Summary Practice Tests

#### Chapter 2: Fractions

- In Learning Unit 2–2, discussion of use of Teacher Tube to add and subtract fractions

#### Chapter 3: Decimals

- New currency table with added explanations

#### Chapter 4: Banking

- Toxic banks and overdrafts shown
- Discussion of new Social Security debit cards
- Stress test scorecard added to discussion
- Latest trends in online banking, including Mobile Banking

#### Chapter 5: Solving for the Unknown: A How-to Approach for Solving Equations

- Discussion of Google and McDonald's in Russia

#### Chapter 6: Percents and Their Applications

- New global clips to introduce percents
- New clip on gas usage versus cost per gallon
- New discussion on percent increase and decrease with home heating oil example

#### Chapter 7: Discounts: Trade and Cash

- New discussion on rising cost of shipping

#### Chapter 8: Markups and Markdowns: Perishables and Breakeven Analysis

- Emphasis on cash-strapped consumers

#### Chapter 9: Payroll

- New payroll tables
- New Social Security rate in text now 6.2% on \$106,800

#### Chapter 14: Installment Buying, Rule of 78, and Revolving Charge Credit Cards

- New discussion of longer car loans
- New discussion of credit card legislation

#### Chapter 15: The Cost of Home Ownership

- New highlights of mortgage bailouts
- Discussion of 30-year mortgage and subprime loans
- Discussion of mortgage refinancing

#### Videos

- New video cases for Chapters 7, 8, and 16. The video for Chapter 11 deleted.
- Problem material in Chapter 9 updated

#### Technology

- Connect now available with *Practical Business Math Procedures*. See page T–15 or check with your McGraw-Hill/Irwin sales representative for details.

# Real-World Applications

Instructors asked for an even greater emphasis on the applications of business math in the United States and globally. The Tenth Edition includes references to companies such as Google, eBay, TiVo, Walmart, and DHL to illustrate chapter topics. Over 100 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.



Paul Sakuma/AP Photo

## Gap to Merge Brands Into Single Stores

Gap Inc. plans to close a handful of small stand-alone GapBody, Gap-Kids and babyGap stores to test a strategy of consolidating Gap brand offerings in its namesake stores and reducing its square footage.

"It's been clear to us by doing the numbers and talking to customers in our stores, having kids, baby, maternity, body, and adult in the same box makes sense," Chief Executive Glenn Murphy said at a conference hosted by Piper Jaffray Cos. in New York.

The consolidation was one example Mr. Murphy used to illustrate the San Francisco-based apparel retailer's new real-estate strategy, which involves figuring out which of its 3,100 stores to reposition, relocate, remodel and "right size."

For the retail strategy in general, he said, "we probably won't see much of a benefit in 2008, but in 2009 going forward..."

By combining a 10,000-square-foot Gap adult and body store with a 5,000-square-foot kids-only store, Gap could save \$225,000 a year in rent alone, he said.

The "sweet spot" for Gap stores is 6,000 to 10,000 square feet and for Old Navy, 14,000 to 16,000 square feet, he said.

Gap has been struggling with sluggish sales across all its brands and has been trying to boost earnings by cutting inventory and costs.

Wall Street Journal © 2008



## Personal Finance

### A KIPLINGER APPROACH



## SAVE BIG ON PRESCRIPTIONS

Do your drugs cost too much? Find out how to get well for less. BY JESSICA L. ANDERSON

**WHEN ORDERING YOUR** prescriptions, it helps to think jeans. You could buy a designer pair for, say, \$200. But if the fit is right, \$50 Gap jeans would do just as well and cost a lot less. Likewise, if you're a savvy shopper, you'll compare drug prices and choose the medication that fits you best and costs the least. Nobody

but you will know the difference. **Go generic.** Switching to generic drugs could save you up to 80% per prescription. Thanks to a tidal wave of brand-name drugs losing patent protection—among them popular medications such as cholesterol-reducing Zocor, antihypertensive

Toprol-XL and antidepressant Zoloft—more generics are available than ever before, and chances are your medication is among them. Kristin Begley, of benefits consultant Hewitt Associates, says that \$60 billion worth of brand-name drugs are coming off patent in the next three years.

If your medication hasn't gone generic yet, you're not out of luck. Ask your doctor if there is a similar generic drug in the same therapeutic class. The most common conditions—high cholesterol, depression, allergies and diabetes—all have generics available, says Ron Fontanetta, a principal at benefits consulting firm Towers Perrin. "It's the single best way to save money."

Because generics cost less on the retail side, employers typically offer better coverage for them, too. Company plans that still use co-payments commonly charge \$10, \$20 or \$40 for prescriptions, with generics the least expensive, preferred brands (on the plan's approved, or formulary, list) in the middle and non-preferred brands the most expensive. By switching from a non-preferred brand to a generic, you could save \$30 in a snap.

The push for transparency in health-care costs has led many employers to switch from co-pays to co-insurance, meaning that the insurer pays a percentage of a drug's cost—typically 80%—and you pick up the rest. Lipitor, a widely used cholesterol reducer, costs \$82 for a 30-day supply at Drugstore.com, so you'd pay

\$16.40. But for a similar generic drug that costs \$28, you'd pay just \$5.60, saving you an additional 60%.

Some companies up the ante by adding extra incentives to make the switch, such as offering tiered co-insurance rates—say, 80% for generic drugs but just 50% for brand-name medicines. Reducing the co-insurance on Lipitor from 80% to 50% makes using a generic drug even more attractive. Begley says she is starting to see "coupon" programs in which companies foot the whole bill for a few months after an employee makes the switch.

If you still need an incentive, here it is: generic drugs for \$4. Wal-Mart and its warehouse retailer, Sam's Club, started the ball rolling in 2006, offering 30-day supplies of some drugs for just \$4. The program has expanded to more than 360 medications. Rival Target has a \$4-drug program that includes 315 medications; Walgreens offers 90-day supplies of some 300 generics for \$12.99.

Costco jumped on the \$4 bandwagon early on, but it dropped that approach and switched to a program of 100 pills for \$10 because of lost revenue. One regional grocery chain, Giant Eagle, now offers 400 generic drugs for \$4. Meijer, another regional chain, offers seven common antibiotics free. Missing in action? Big names CVS and Rite Aid.

**Meds by mail.** More than half the money spent on drugs today goes toward treating chronic conditions,

From Kiplinger's Personal Finance, May 2008, p. 71.

### BUSINESS MATH ISSUE

Generic drugs should never be bought online.

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.

## The Wall Street Journal Highlights

With over 100 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. An Early Look at Retirement, page 32
2. Deals on Fancy Meals, page 62
3. Natural Gas Glut, page 85
4. New Checking Account, page 110
5. How to Make a Million, page 133
6. What You Need to Know About Your Credit Score, page 167
7. Save Big On Prescriptions, page 199
8. Wear It Once and Request a Refund?, page 230
9. This Cobra Save Lives, page 253
10. Scams Exploit Hard Times, page 274
11. Good Mortgage Bonds, page 289
12. How to Find a Better Bank, page 312
13. Building Your Own Retirement Plan, page 334
14. Fewer Traps for Cardholders, page 361
15. Refinance, If You Can, page 377
16. Inflation Isn't a Problem—Yet, page 408
17. Keep Your Clunker, page 427
18. Should You Buy a GM?, page 453
19. What You Need to Know About Paying Your Taxes, page 466
20. What You Need to Know About Leasing a Car Now, page 490
21. Anatomy of a Bond, page 510
22. When Will I Get My Money Back?, page 540

# Favorite Features of the Text

You can count on all of the key features developed for this book over the years remaining in the Tenth 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 introduce students to the chapter's topics, and Learning Objectives for each unit provide them with an overview of the key material that will be covered. Students can see the real-world applications of business math through *The Wall Street Journal* clips, which make the topics relevant to them. A new Vocabulary Preview has been added. (p. 202)

### chapter 8

## MARKUPS AND MARKDOWNS: PERISHABLES AND BREAKEVEN ANALYSIS

### LEARNING UNIT OBJECTIVES

**LU 8-1: Markups Based on Cost (100%)**

1. Calculate dollar markup and percent markup on cost (p. 205).
2. Calculate selling price when you know the cost and percent markup on cost (p. 206).
3. Calculate cost when dollar markup and percent markup on cost are known (p. 207).
4. Calculate cost when you know the selling price and percent markup on cost (p. 207).

**LU 8-2: Markups Based on Selling Price (100%)**

1. Calculate dollar markup and percent markup on selling price (p. 210).
2. Calculate selling price when dollar markup and percent markup on selling price are known (p. 210).
3. Calculate selling price when cost and percent markup on selling price are known (p. 211).
4. Calculate cost when selling price and percent markup on selling price are known (p. 212).
5. Convert from percent markup on cost to percent markup on selling price and vice versa (p. 212).

**LU 8-3: Markdowns and Perishables**

1. Calculate markdowns; compare markdowns and markups (p. 215).
2. Price perishable items to cover spoilage loss (pp. 215–216).

**LU 8-4: Breakeven Analysis**

1. Calculate contribution margin (p. 219).
2. Calculate breakeven point (p. 219).

### Money Tips

To conclude each Learning Unit, we include a Money Tip to help students find practical ways to work with their money.

### MONEY TIPS

A great credit score can do wonders for credit terms offered to you. Make certain to regularly check your credit report; you are entitled to a free one annually. To help build credit, establish a checking and savings account, pay your bills on time, be aware of how much of your available credit you use (30% of your credit limit is the maximum), apply for credit while you're a college student (apply for a secured credit card if you can't get a regular one), get a store credit card, get an installment loan, and use revolving accounts regularly but lightly.

### Partial Payments

Often buyers cannot pay the entire invoice before the end of the discount period. To calculate partial payments and outstanding balance, use the following steps:

**CALCULATING PARTIAL PAYMENTS AND OUTSTANDING BALANCE**

Step 1. Calculate the complement of a discount rate.

Step 2. Divide partial payments by the complement of a discount rate (Step 1). This gives the amount credited.

Step 3. Subtract Step 2 from the total owed. This is the outstanding balance.

**EXAMPLE** Molly McGrady owed \$400. Molly's terms were 2/10, n/30. Within 10 days, Molly sent a check for \$80. The actual credit the buyer gave Molly is as follows:

Step 1.  $100\% - 2\% = 98\% \rightarrow .98$

Step 2.  $\frac{\$80}{.98} = \$81.63$        $\frac{\$80}{1 - .02} \leftarrow$  Discount rate

Step 3.  $\$400.00$   
 $- 81.63$  partial payment—although sent in \$80  
\$318.37 outstanding balance

**Clear Explanations**

Explanations are given in a step-by-step format that is easy to follow and remember, followed by understandable examples. (p. 140)

CONVERTING FRACTIONAL PERCENTS TO DECIMALS

**Step 1.** Convert a single fractional percent to its decimal equivalent by dividing the numerator by the denominator. If necessary, round the answer.

**Step 2.** If a fractional percent is combined with a whole number (mixed fractional percent), convert the fractional percent first. Then combine the whole number and the fractional percent.

**Step 3.** Drop the percent symbol; move the decimal point two places to the left (this divides the number by 100).






**EXAMPLES**

$\frac{1}{5}\% = .20\% = \underline{.00.20} = \underline{.0020}$	<p>Think of <math>7\frac{3}{4}\%</math> as</p> $7\% = .07$ $+ \frac{3}{4}\% = + .0075$ <hr style="width: 50%; margin: 0;"/> $7\frac{3}{4}\% = .0775$
$\frac{1}{4}\% = .25\% = \underline{.00.25} = \underline{.0025}$	
$7\frac{3}{4}\% = 7.75\% = \underline{.07.75} = \underline{.0775}$	
$6\frac{1}{2}\% = 6.5\% = \underline{.06.5} = \underline{.065}$	

**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, ordinary annuities, and present value annuities.

## Practice Quizzes and New Extra Practice Quizzes

Practice Quizzes follow each Learning Unit in the book. These quizzes provide immediate feedback for students to check their progress. 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. 118) Extra Practice Quizzes follow the Practice Quizzes. Check figures and page references are included at the bottom of the Chapter Organizer.

### LU 5-1 PRACTICE QUIZ

Complete this Practice Quiz to see how you are doing.

- Write equations for the following (use the letter  $Q$  as the variable). Do not solve for the unknown.
  - Nine less than one-half a number is fourteen.
  - Eight times the sum of a number and thirty-one is fifty.
  - Ten decreased by twice a number is two.
  - Eight times a number less two equals twenty-one.
  - The sum of four times a number and two is fifteen.
  - If twice a number is decreased by eight, the difference is four.
- Solve the following:
 

a. $B + 24 = 60$	b. $D + 3D = 240$	c. $12B = 144$
d. $\frac{B}{6} = 50$	e. $\frac{B}{4} + 4 = 16$	f. $3(B - 8) = 18$



Solutions with Step-by-Step Help on DVD

#### ✓ Solutions

- |                            |                     |                  |
|----------------------------|---------------------|------------------|
| a. $\frac{1}{2}Q - 9 = 14$ | b. $8(Q + 31) = 50$ | c. $10 - 2Q = 2$ |
| d. $8Q - 2 = 21$           | e. $4Q + 2 = 15$    | f. $2Q - 8 = 4$  |
- |  |  |  |
|--|--|--|
| a. $\frac{B + 24 = -60}{B} = \frac{-24}{36}$ | b. $\frac{4D = 240}{D} = \frac{60}{4}$ | c. $\frac{12B = 144}{B} = \frac{12}{12}$ |
|--|--|--|

## 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. 146)

**The Word Problem** Sales of Milk Chocolate M&M's® are \$320,000. Total sales of Milk Chocolate M&M's, Peanut, and other M&M's® chocolate candies are \$400,000. What percent of Peanut and other M&M's® chocolate candies are sold compared to total M&M's® sales?

The facts	Solving for?	Steps to take	Key points
Milk Chocolate M&M's® sales: \$320,000. Total M&M's® sales: \$400,000.	Percent of Peanut and other M&M's® chocolate candies sales compared to total M&M's® sales.	Identify key elements. Base: \$400,000. Rate: ? Portion: \$80,000 (\$400,000 - \$320,000). Rate = $\frac{\text{Portion}}{\text{Base}}$	Represents sales of Peanut and other M&M's® chocolate candies  When portion becomes \$80,000, the portion and rate now relate to same piece of base.

#### Steps to solving problem

- Set up the formula.
- Calculate rate.

$$\begin{aligned} \text{Rate} &= \frac{\text{Portion}}{\text{Base}} \\ R &= \frac{\$80,000}{\$400,000} (\$400,000 - \$320,000) \\ R &= \mathbf{20\%} \end{aligned}$$

**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, vocabulary, and new Check Figures for the Extra Practice Quizzes 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. 153)

CHAPTER ORGANIZER AND REFERENCE GUIDE		
Topic	Key point, procedure, formula	Example(s) to illustrate situation
Converting decimals to percents, p. 138–139	<ol style="list-style-type: none"> <li>1. Move decimal point two places to right. If necessary, add zeros. This rule is also used for whole numbers and mixed decimals.</li> <li>2. Add a percent symbol at end of number.</li> </ol>	$.81 = .81 = 81\%$ $.008 = .008 = .8\%$ $4.15 = 4.15 = 415\%$
Rounding percents, p. 139	<ol style="list-style-type: none"> <li>1. Answer must be in percent before rounding.</li> <li>2. Identify specific digit. If digit to right is 5 or greater, round up.</li> <li>3. Delete digits to right of identified digit.</li> </ol>	Round to the nearest hundredth percent. $\frac{3}{7} = .4285714 = 42.85714\% = 42.86\%$
Converting percents to decimals, p. 139–140	<ol style="list-style-type: none"> <li>1. Drop percent symbol.</li> <li>2. Move decimal point two places to left. If necessary, add zeros.</li> </ol> For fractional percents: <ol style="list-style-type: none"> <li>1. Convert to decimal by dividing numerator by denominator. If necessary, round answer.</li> <li>2. If a mixed fractional percent, convert fractional percent first. Then combine whole number and fractional percent.</li> <li>3. Drop percent symbol, move decimal point two places to left.</li> </ol>	$.89\% = .0089$ $95\% = .95$ $195\% = 1.95$ $8\frac{3}{4}\% = 8.75\% = .0875$ $\frac{1}{4}\% = .25\% = .0025$ $\frac{1}{5}\% = .20\% = .0020$
Converting fractions to percents, p. 141	<ol style="list-style-type: none"> <li>1. Divide numerator by denominator.</li> <li>2. Move decimal point two places to right; add percent symbol.</li> </ol>	$\frac{4}{5} = .80 = 80\%$

(continues)

**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, and so forth. (p. 246)

**Critical Thinking Discussion Questions**

1. Explain the difference between biweekly and semimonthly. Explain what problems may develop if a retail store hires someone on straight commission to sell cosmetics.
2. Explain what each column of a payroll register records (p. 240) and how each number is calculated. Social Security tax is based on a specific rate and base; Medicare tax is based on a rate but no base. Do you think this is fair to all taxpayers?
3. What taxes are the responsibility of the employer? How can an employer benefit from a merit-rating system for state unemployment?

**Photos**

More than 50 photos are included to stimulate student interest and help students see business math with imagination and enthusiasm. Whether showing McDonald's Big Mac in Russia, inventory systems, or online banking and bill paying, business math becomes real to them.





**Khamzat Khasbulatov**



Martin Thomas Photography/Alamy

### As Burgers Boom in Russia, McDonald's Touts Discipline

*To Maximize Potential, Chain Rations Growth; Trimming Wait Lines*

By JANET ADAMY

MOSCOW—At lunch time on a recent day here, Khamzat Khasbulatov sat in the world's second-busiest McDonald's and watched as dozens of people lined up at its 26 cash registers. "I have too many customers," said Mr. Khasbulatov, chief executive of McDonald's Russia, as workers scrambled to assemble Big Macs and stuff french fries into red cartons. Of the 118 countries where McDonald's Corp. does business, none can boast more activity than Russia. On average, each location serves about 850,000 diners annually—more than twice the store traffic in McDonald's other markets. That has presented the world's largest restaurant chain with an unusual dilemma. Russia, with its burgeoning middle-class and consumer appetites

for all things American, is a jewel in the McDonald's system. But the company is being prudent about expansion here—due partly to Russia's famous bureaucracy and partly to the chair's own philosophical shift. Aggressive growth plans at McDonald's backfired badly in the past. During the 1990s, the company was fixated on adding restaurants throughout the chain—as many as 2,500 stores a year. But by 2000, the condition of its existing locations, as well as the appeal of certain menu items, deteriorated. Two years later, the company's flawed expansion strategy was hammering its profits and stock price.

Wall Street Journal © 2007

**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 New York Times* and magazines such as *BusinessWeek*, *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 or on the text Web site, 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. A Summary Practice Test concludes the problem section and covers all the Learning Objectives in the chapter.

**Drill Problems**

END-OF-CHAPTER PROBLEMS


[www.mhhe.com/slater10e](http://www.mhhe.com/slater10e)

6

Check figures for odd-numbered problems in Appendix C

Name \_\_\_\_\_ Date \_\_\_\_\_

DRILL PROBLEMS

Convert the following decimals to percents:

6-1. .66 <b>66%</b>	6-2. .943 <b>94.3%</b>	6-3. .8 <b>80%</b>
6-4. 8.00 <b>800%</b>	6-5. 3.561 <b>356.1%</b>	6-6. 6.006 <b>600.6%</b>

Convert the following percents to decimals:

6-7. 9% <b>.09</b>	6-8. 16% <b>.16</b>	6-9. $64\frac{3}{10}\%$ <b>.643</b>
6-10. 75.9% <b>.759</b>	6-11. 119% <b>1.19</b>	6-12. 89% <b>.89</b>



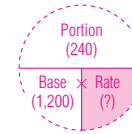
## Word Problems

### WORD PROBLEMS (First of Four Sets)

- 6–52.** At a local Dunkin' Donuts, a survey showed that out of 1,200 customers eating lunch, 240 ordered coffee with their meal. What percent of customers ordered coffee?

$$\frac{240}{1,200} = 20\%$$

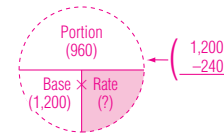
*Note: Portion and rate must refer to same piece of the base.*



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

$$\frac{960}{1,200} = 80\%$$

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



## Challenge Problems

### CHALLENGE PROBLEMS

- 6–94.** Kyle Drummond works as an auto mechanic. He just finished a job taking 3.25 hours of labor at \$60 per hour. The parts he used totaled \$55. If there is a 120% markup on parts, what was the customer charged?

$$\text{Labor: } 3.25 \times \$60 = \$195$$

$$\text{Parts: } \$55 \times 2.2 = \$121$$

$$\text{Total charge: } \$195 + 121 = \$316$$

- 6–95.** A local Dunkin' Donuts shop reported that its sales have increased exactly 22% per year for the last 2 years. This year's sales were \$82,500. What were Dunkin' Donuts sales 2 years ago? Round each year's sales to the nearest dollar.

$$\frac{\$82,500}{1.22} = \$67,623 \text{ sales last year}$$

$$\frac{\$67,623}{1.22} = \$55,429$$

## Summary Practice Test

The tenth edition DVD contains video tutorials of all Summary Practice Tests.

See Jeff on the DVD as he shows all worked out solutions to your students.



### DVD SUMMARY PRACTICE TEST

Convert the following decimals to percents. (p. 139)

1. .921 **92.1%**      2. .4 **40%**      3. 15.88 **1,588%**      4. 8.00 **800%**

Convert the following percents to decimals. (p. 139)

5. 42% **.42**      6. 7.98% **.0798**      7. 400% **4.0**      8.  $\frac{1}{4}\%$  **.0025**

Convert the following fractions to percents. Round to the nearest tenth percent. (p. 141)

9.  $\frac{1}{6}$  **16.7%**      10.  $\frac{1}{3}$  **33.3%**

## Personal Finance: A Kiplinger Approach

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. 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. 167)



# Personal Finance

## A KIPLINGER APPROACH

### LOWDOWN

## What You Need to Know About Your Credit Score

It's the key to many of life's major purchases.

BY JESSICA ANDERSON

### 1. LEARN THE COMBINATION.

The three-digit number that is your credit score predicts how likely you are to repay a loan, based on information in your credit report. The two major criteria, which account for up to two-thirds of your score, are your payment history and your outstanding debt. You should pay at least the minimum amount due each month—on time. The amount of debt relative to your credit limit is your credit utilization; it's best to keep it below 25%. How long you've had credit counts, too, and authorized-user accounts can help you build credit even if you're not the one paying the bills. (FICO reversed an earlier decision to drop authorized-user accounts.) Among other factors affecting your score are the number of inquiries on your account and your mix of credit.

**2. ALL CREDIT SCORES ARE NOT CREATED EQUAL.** The FICO score, which ranges from 300 to 850, is the only one you need to know. It's the basis for at least 75% of

mortgage decisions, and 90% of the largest banks rely on it. The credit-monitoring bureaus have created others, such as the VantageScore, but few lenders use them.

**3. ONE SCORE, THREE VERSIONS.** You actually have three FICO scores, one with each of the major credit bureaus: Equifax, Experian and TransUnion. Lenders often contract exclusively with one bureau, which in turn will give them a price break when they buy scores. Ask your lender which bureau it uses—you could get a leg up. Mortgage lenders are the exception: They obtain all three scores and have to resolve the differences among them. The crudest method, says Craig Watts, public affairs director for FICO, is for a lender to kick out the top and bottom scores and consider only the middle number.

**4. HOW TO GET A TWOFER.** The cheapest way to get your FICO score is to order one along with your request for

a free annual credit report from Equifax (go to [www.annualcreditreport.com](http://www.annualcreditreport.com)); it'll cost you \$8. Your FICO score and credit report from Equifax and TransUnion are available at [myFICO.com](http://myFICO.com), but you'll pay \$15.95 each. Of the three bureaus, Equifax is the only one that will sell you a credit report and FICO score from its main Web site (\$15.95). For TransUnion FICO scores, go to [www.transunioncs.com](http://www.transunioncs.com) (\$14.95). As of mid February, Experian had stopped selling FICO credit scores to consumers.

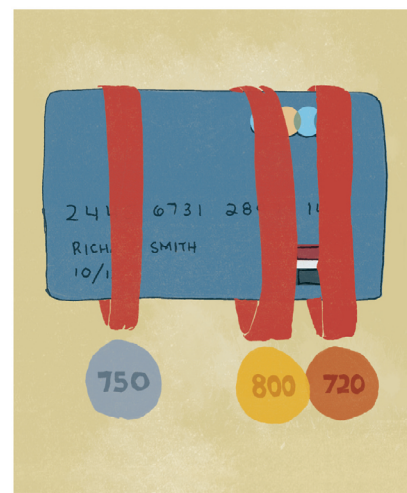
### 5. GARBAGE IN, GARBAGE OUT.

The credit bureaus are obligated to report correctly only what lenders report to them. So if an error affecting your score originates with your lender, complaining to the credit bureau

probably won't help and could be a waste of time—the bureaus typically have 30 to 45 days to respond to a complaint. If you think a mistake has been made, contact your lender immediately. And keep an eye on your credit report. An annual checkup using your free credit report should suffice, unless you're shopping for a large loan.

### 6. YOU CAN SCORE TOO HIGH.

A score of 820 to 830 could make you seem unprofitable, says John Ulzheimer, president of consumer education at [Credit.com](http://Credit.com). "Culprits" are usually at least in their forties, with long credit histories and little or no outstanding debt. You won't be turned down, but you may not receive new offers. "The sweet spot is 750 to 800," says Ulzheimer. ■



From *Kiplinger's Personal Finance*, August 2009, p. 69.

### BUSINESS MATH ISSUE

**FICO scores should be used less by banks in loan decisions.**

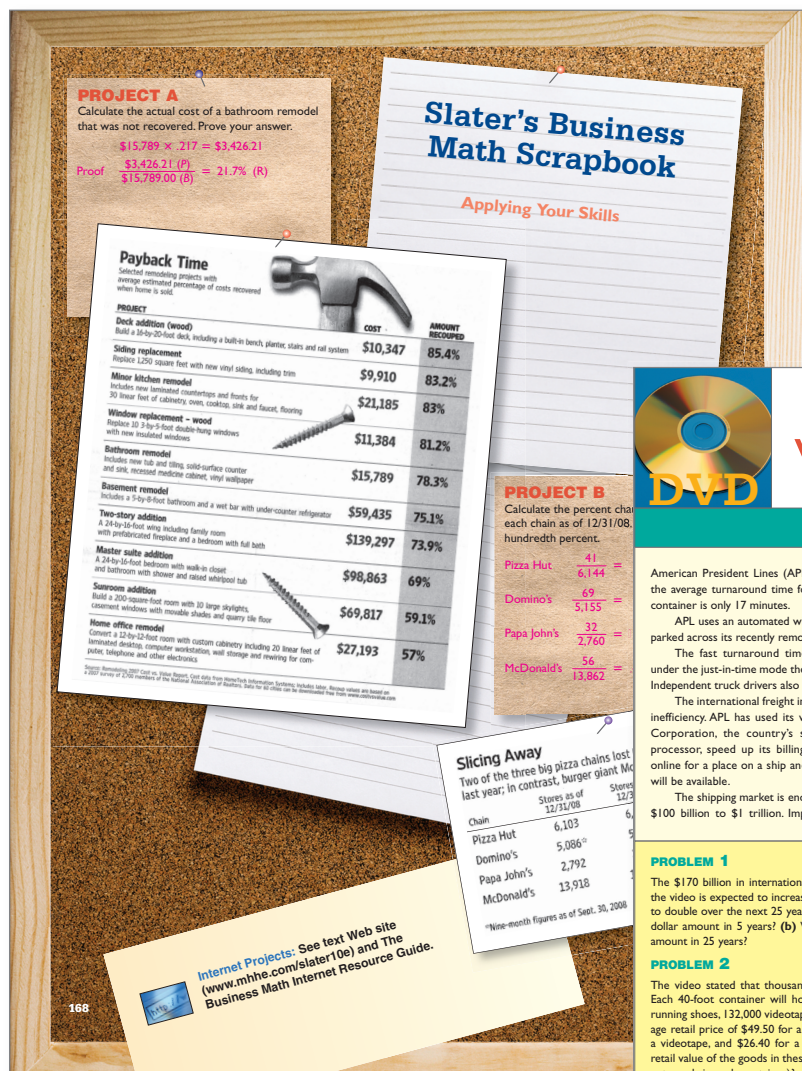
1. List the key points of the article and information to support your position.
2. Write a group defense of your position using math calculations to support your view.

**Business Math Scrapbook with Internet Application**

The Business Math Scrapbook 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. 168)

**Video Cases on DVD**

There are seven video cases applying business math concepts to real companies such as American President Lines, FedEx, Noodles Company, Washburn Guitars, Honda, Buycostumes.com, and Federal Signal Corporation. 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, 16, and 21.



## Video Case

AMERICAN PRESIDENT LINES

American President Lines (APL) has automated its terminal so the average turnaround time for a trucker picking up a 40-foot container is only 17 minutes.

APL uses an automated wireless system to track containers parked across its recently remodeled 160-acre facility in Seattle. The fast turnaround time gives customers who operate under the just-in-time mode the opportunity to make more trips. Independent truck drivers also benefit.

The international freight industry is plagued by red tape and inefficiency. APL has used its website to help clients like Excel Corporation, the country's second-largest beef packer and processor, speed up its billing time. Excel now wants to ask online for a place on a ship and for a call from APL when room will be available.

The shipping market is enormous, estimated anywhere from \$100 billion to \$1 trillion. Imports in the United States alone totaled 10 million containers, while exports totaled 6.5 million containers, together carrying \$375 billion worth of goods. One of the most difficult transactions is to source goods from overseas and have them delivered with minimal paperwork all the way through to the end customer. Shipping lines must provide real-time information on the location of ships and goods.

Most significant are attempts to automate shipping transactions online. The industry's administrative inefficiencies, which account for 4% to 10% of international trade costs, are targeted. Industry insiders peg error rates on documents even higher, at 25% to 30%. It's no secret that start-ups must overcome the reluctance of hidebound shipping lines, which have deep-seated emotional fears of dot-coms coming between them and their customers.

In conclusion, American President Lines needs to get on board by staying online, or it might go down with the ship.

**PROBLEM 1**

The \$170 billion in international trade volume per year given in the video is expected to increase by 50% in 5 years and expected to double over the next 25 years. (a) What is the expected total dollar amount in 5 years? (b) What is the expected total dollar amount in 25 years?

**PROBLEM 2**

The video stated that thousands of containers arrive each day. Each 40-foot container will hold, for example, 16,500 boxes of running shoes, 132,000 videotapes, or 25,000 blouses. At an average retail price of \$49.50 for a pair of running shoes, \$14.95 for a videotape, and \$26.40 for a blouse, what would be the total retail value of the goods in these three containers (assume different goods in each container)?

**PROBLEM 3**

APL spent \$600 million to build a 230-acre shipping terminal in California. The terminal can handle 4 wide-body container ships. Each ship can hold 4,800 20-foot containers, or 2,400 40-foot containers. (a) What was the cost per acre to build the facility? (b) How many 20-foot containers can the terminal handle at one time? (c) How many 40-foot containers can the terminal handle at one time?

**PROBLEM 4**

According to *Shanghai Daily*, the recent decline in China's export container prices (which fell by 1.4%) has not taken its toll on the general interest in this sector. China's foreign trade grew by 35%, reaching \$387.1 billion. APL reported that it would increase its services from Asia to Europe to take advantage of China's growth in exports. What was the dollar amount of China's foreign trade last year?

**PROBLEM 5**

APL has expanded its domestic fleet to 5,100 53-foot containers; it is expanding its global fleet to 253,000 containers. The 5,100 containers represent what percent of APL's total fleet? Round to the nearest hundredth percent.

**PROBLEM 6**

The cost of owning a shipping vessel is very high. Operating costs for large vessels can run between \$75,000 and \$80,000 per day. Using an average cost per day, what would be the operating costs for one week?

**PROBLEM 7**

The Port of Los Angeles financed new terminal construction through operating revenues and bonds. They will collect about \$30 million a year in rent from APL, who signed a 30-year lease on the property. What is APL's monthly payment?

**PROBLEM 8**

According to port officials, APL expanded cargo-handling capabilities at the Los Angeles facility that are expected to generate 10,500 jobs, with \$335 million in wages and annual industry sales of \$1 billion. What would be the average wage received? Round to the nearest dollar.

**PROBLEM 9**

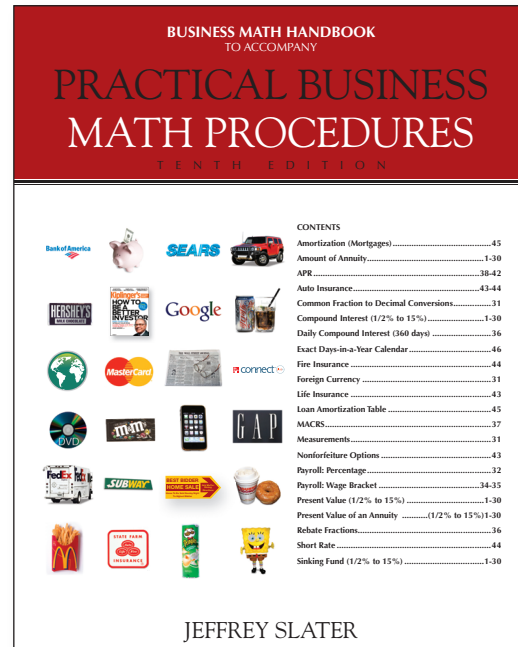
APL has disclosed that it ordered over 34,000 containers from a Chinese container manufacturer. With 253,000 containers in its possession, what will be the percent increase in containers owned by APL? Round to the nearest hundredth percent.

Internet Projects: See text Web site ([www.mhhe.com/slater10e](http://www.mhhe.com/slater10e)) and The Business Math Internet Resource Guide.

# Supplements Package

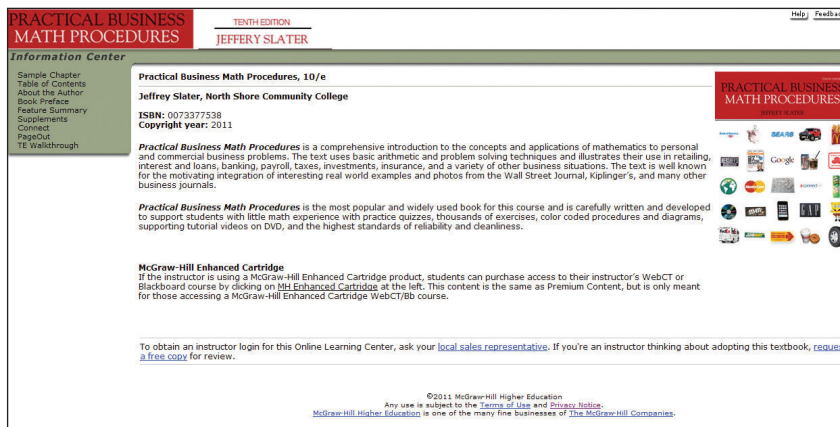
## Business Math Handbook

This reference guide contains all tables found in the text and is included free with the text.



## Web site and Online Learning Center

The Business Math Web site at [www.mhhe.com/slater10e](http://www.mhhe.com/slater10e) offers an interactive environment for teachers and students. The password-protected instructor section contains text updates, the electronic version of Student Solutions



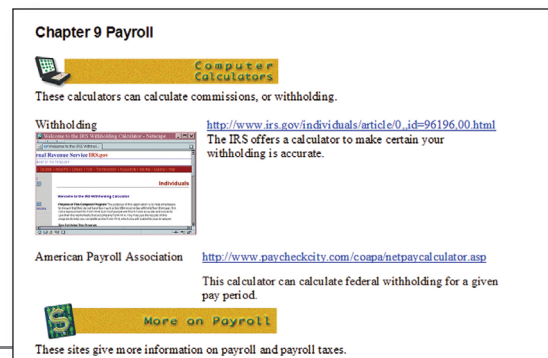
Manual and Study Guide, the Instructors Resource Guide, odd-numbered solutions even-numbered solutions, test bank, and PowerPoint slides.

For students, the Online Learning Center, another name for the text Web site, takes the pedagogical features and supplements of the book and places them online. It includes interactive self-grading quizzes, PowerPoint slides, chapter outlines, Excel Workbook, Excel templates, Internet Resource Guide, Measurement System Metric supplement, Fractions Extra Practice Worksheet, Handbook tables and more.

All of this content is also available on cartridges for local use on WebCT or Blackboard.

## 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.**

## 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 and Summary Practice Tests 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 Video cases. The cases apply business math concepts to real companies such as Hotel Monaco, Louisville Slugger, and others.



## Instructor's Resource CD-ROM

The Instructor's Resource CD-ROM contains the Test Bank, E-Z Test computerized testing system, PowerPoint Lecture Slides, Instructor's Resource Guide, and solutions files.

## Instructor's Resource Guide

This resource manual includes:

- Syllabus Preparation; Self-Paced Syllabus; Student Progress Chart
- Integrating the Electronic Calculator; Suggestions for Using Computers and Videos
- Suggestions for Regrouping Chapters
- Suggestions on Teaching Using the Business Math Internet Resource Guide
- Tips on Teaching Group Activities with *Kiplinger's Personal Finance* magazine
- Your Course versus Math Anxiety
- Sample Civil Service Exam with worked-out solutions
- Insight into Proportions supplement
- Excel Template Fact Sheet
- Check Figures for even-numbered end-of-chapter drill and word problems
- Appendix B Solutions (Chapters 13–22)

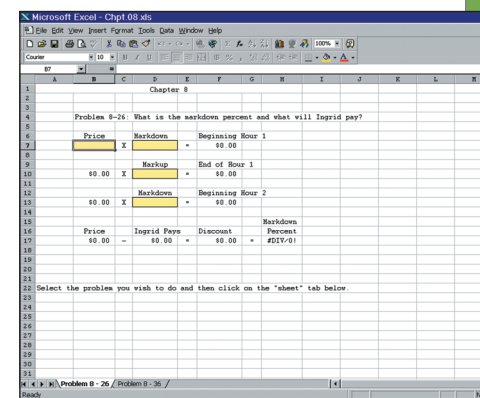
Each chapter includes:

- Teaching Tips from Jeff Slater
- Lecture Outline
- The Pocket Calculator Workshop
- Suggested Solution to Critical Thinking Discussion Questions
- Teacher's Guide to Kiplinger Group Activity
- Additional Word Problems (not in the text)
- Worked-Out Solutions to Practice Quiz found in the *Student Solutions Manual and Study Guide*
- *Vocabulary Crossword Puzzles* with solutions

## 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.**



## Calculator Guides

### 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.

### 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.

### TI-83/TI-84 Graphing Calculator Guide

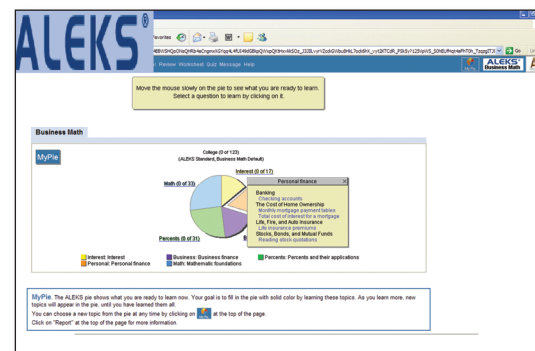
This new updated and enhanced supplement is now found both online and in print, available for packaging with the text. For every chapter covered there are key strokes with notes on how to use the graphing calculator, Practice Sets and Problems, as well as coverage on how to solve the Summary Practice Tests.

### Student Solutions Manual and Study Guide

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. The manual includes the Study Guide which provides self-paced worksheets that review chapter material. The worksheets cover vocabulary, theory and math applications, as well as extra word problem quizzes and a section on how to use the calculator.

### ALEKS for Business Math

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](http://www.business.aleks.com).



### McGraw-Hill Connect™ Business Math



#### Less Managing. More Teaching. Greater Learning.

McGraw-Hill *Connect Business Math* is an online assignment and assessment solution that connects students with the tools and resources they'll need to achieve success.

McGraw-Hill *Connect Business Math* helps prepare students for their future by enabling faster learning, more efficient studying, and higher retention of knowledge.

### McGraw-Hill Connect Business Math Features

Connect™ *Business Math* offers a number of powerful tools and features to make managing assignments easier, so faculty can spend more time teaching. With *Connect™ Business Math*, students can engage with their coursework anytime and anywhere, making the learning process more accessible and efficient. *Connect™ Business Math* offers you the features described below.

### Simple Assignment Management

With *Connect™ Business Math*, creating assignments is easier than ever, so you can spend more time teaching and less time managing. The assignment management function enables you to:

- Create and deliver assignments easily with selectable end-of-chapter questions and test bank items.

- Streamline lesson planning, student progress reporting, and assignment grading to make classroom management more efficient than ever.
- Go paperless with the eBook and online submission and grading of student assignments.

### Smart Grading

When it comes to studying, time is precious. *Connect™ Business Math* helps students learn more efficiently by providing feedback and practice material when they need it, where they need it. When it comes to teaching, your time also is precious. The grading function enables you to:

- Have assignments scored automatically, giving students immediate feedback on their work and side-by-side comparisons with correct answers.
- Access and review each response; manually change grades or leave comments for students to review.
- Reinforce classroom concepts with practice tests and instant quizzes.

### Instructor Library

- The *Connect™ Business Math* Instructor Library is your repository for additional resources to improve student engagement in and out of class. You can select and use any asset that enhances your lecture.

### Student Study Center

The *Connect™ Business Math* Student Study Center is the place for students to access additional resources. The Student Study Center:

- Offers students quick access to related content such as data files, check answers, Excel, calculator supplements and more.
- Provides instant practice material and study questions, easily accessible on the go.

### Student Progress Tracking

*Connect™ Business Math* keeps instructors informed about how each student, section, and class is performing, allowing for more productive use of lecture and office hours. The progress-tracking function enables you to:

- View scored work immediately and track individual or group performance with assignment and grade reports.
- Access an instant view of student or class performance relative to learning objectives.

### McGraw-Hill Connect Plus Business Math

McGraw-Hill reinvents the textbook learning experience for the modern student with *Connect Plus Business Math*. A seamless integration of an eBook and *Connect Business Math*, *Connect Plus Business Math* provides all of the *Connect Business Math* features plus the following:

- An integrated eBook, allowing for anytime, anywhere access to the textbook.
- Dynamic links between the problems or questions you assign to your students and the location in the eBook where the related concept or example is presented.
- A powerful search function to pinpoint and connect key concepts in a snap.

In short, *Connect Business Math* offers you and your students powerful tools and features that optimize your time and energies, enabling you to focus on course content, teaching, and student learning. *Connect Business Math* also offers a wealth of content resources for both instructors and students. This state-of-the-art, thoroughly tested system supports you in preparing students for the world that awaits.

For more information about Connect, go to [www.mcgrawhillconnect.com](http://www.mcgrawhillconnect.com), or contact your local McGraw-Hill sales representative.

### Tegrity Campus: Lectures 24/7



Tegrity Campus is a service that makes class time available 24/7 by automatically capturing every lecture in a searchable format for students to review when they study and complete assignments. With a simple one-click start-and-stop process, you capture all computer screens and corresponding audio. Students can replay any part of any class with easy-to-use browser-based viewing on a PC or Mac.

To learn more about Tegrity watch a 2-minute Flash demo at <http://tegritycampus.mhhe.com>.

### McGraw-Hill Customer Care Contact Information

At McGraw-Hill, we understand that getting the most from new technology can be challenging. That's why our services don't stop after you purchase our products. You can e-mail our Product Specialists 24 hours a day to get product-training online. Or you can search our knowledge bank of Frequently Asked Questions on our support website. For Customer Support, call **800-331-5094**, e-mail [hmsupport@mcgraw-hill.com](mailto:hmsupport@mcgraw-hill.com), or visit [www.mhhe.com/support](http://www.mhhe.com/support). One of our Technical Support Analysts will be able to assist you in a timely fashion.

### Comprehensive Testing Package

The Manual of Tests contains four optional, pre-formatted exams per chapter. The computerized testing system featuring E-Z Test Software is networkable for LAN test administration, online, and is included on the Instructor's CD-ROM. Tests and Quizzes can also be printed for your standard delivery or posted to a Web site for student access.

## Alternate Choice

### *Practical Business Math Procedures, Brief Tenth Edition*

The Brief Edition of *Practical Business Math Procedures* is modified, not just shortened. This is the ideal text for a balanced, shorter business math course. The teaching aids have also been revised to ensure your course flows smoothly and all of your teaching objectives are met. The Brief Edition includes Chapters 1–12 from the Tenth Edition, with modifications to Chapter 8.

Note: DVD comes with the Brief Edition.

