# Chapter by Chapter Material

* Tips from Jeff and Sharon on Teaching Business Math
* Chapter Outline
* The Pocket Calculator Workshop
* Suggested Solutions to Critical Thinking Discussion Questions
* My Money page summary
* Form for the *Kiplinger* Group Project and Teaching Guide
* Forms for videos cases (in chapters where videos are used)
* Additional Word Problems for Classroom Use and Solutions
* Worked-Out Solutions to Practice Quiz on website
* Crossword Puzzle and Solution

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|  | **TIPS FROM JEFF AND SHARON ON TEACHING BUSINESS MATH** |

Note: I go over what is in Connect. We talk about how to use my website.

## A Chapter-by-Chapter Approach

Keep in mind we all teach differently. These tips are only suggestions to com-  
plement your teaching style. For any specific questions, call me on my cell phone at 1-781-910-5875 or email me at [JeffSlater@aol.com](mailto:JeffSlater@aol.com). Or contact Sharon by cell phone at 1-719-323-1243 or email at sharonwittry@yahoo.com.

## Chapter 1

1. In the first class I go over the Learning Units. This gives me an idea of what I will be facing. I go over the chapter opener about merchants going cashless. I point out that in margin is a teaching tip for each Learning Unit.
2. As I pass the course syllabus, I go over what I expect as regards to class attendance, testing, etc. We talk about the role of the calculator and when it can be used. The Instructor’s Manual page of the Instructor Edition in Connect has instructions for several types of calculators. We also discuss the website.
3. Show students where they can find the LU and SPT videos on Connect. This walks students through the book and quizzes at the end of each learning unit. This is great for those missing class or needing extra reinforcement. I stress that there is an extra set of practice questions with check figure in the organizer. Worked out solutions are in Appendix B.
4. I introduce the Business Math Handbook and explain how it will be used.
5. Students are very interested in this. I point out the clip about McDonald’s. I point out in Chapter 1 the real world clips like Visa, Google, and Star Wars.
6. Since students have a tremendous fear of word problems, I spend a great deal of time on the section on how to dissect a word problem. I tell the better students that if they do not like the boxes, just skip them and go to the steps below. Most students need the work on gathering facts; what am I solving for; what do I need to know or calculate; as well as key points to remember. I stress that the more problems we dissect, the better they will get. I tell my class I used to be terrible at solving word problems. Be positive and upbeat!
7. I stress how important it is to try the practice quiz and check against the worked-out solutions. These are assignable in Connect. There are extra practice questions with check figure in the organizer.
8. I point out the Interactive Chapter Organizer and explain that this is really a set of students’ notes. You may want to assign some of the critical thinking discussion questions. I ask students to work on the You Try Its found in the Interactive Chapter Organizer.
9. Be sure to point out to students that the Summary Practice Test has LU references in case they get some wrong. I stress that they can watch the authors do all the worked out solutions to the Summary Practice Test in Connect.
10. You might want to break down your class into groups and discuss the *Kiplinger* article about bitcoin and cryptocurrency.
11. Keep in mind that Tests A and B of the individual chapter tests in the Test Bank are very similar to the summary practice set.
12. Check out our website at [www.mhhe.com/slater13e](http://www.mhhe.com/slater13e). Internet activities can be found on the website.

# Reminder of New items to this edition:

1. My Money page
2. More problems in Connect with guided examples
3. New clips, new *Kiplinger’s*, new word problems, new video cases, and new Challenge Problems

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|  | C  H  A  P  T  E  R |  |
| 1 | | | |
| WHOLE NUMBERS: HOW TO DISSECT AND SOLVE WORD PROBLEMS | | | |

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| OutlineLU 1-1 Reading, Writing, and Rounding Whole Numbers 1. a. State problem(s)   1. Decide best method to solve the problem(s) 2. Does solution make sense? 3. Evaluate results 4. Reading, writing, and rounding whole numbers. 5. Positions; units, tens, etc. 6. Use of commas and the word *and* 7. Steps to rounding 8. Identify place value of digit to be rounded 9. Increase identified digit by one if number to right of identified digit is 5 or greater 10. Change all digit to right of identified digit to zeros 11. Rounding all the way 12. How to dissect and solve word problems | Points to Stress Based on Typical Student Misconceptions Have students check out the McDonald’s clip relating to Twitter.  Rounding is a quick estimate. Point out the Google clip.  Rounding all the way means rounding to one significant digit.  Point out the Money Tips. |
| LU 1-2 Adding and Subtracting Whole Numbers   1. Addition 2. Adding and checking process 3. Addends (numbers being added) 4. Sum (the result) 5. Rounding all the way | Add top to bottom and check bottom to top.  Talk about overseas business travel cost.  Show alternate check. |

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| 2. Subtraction   1. Minuend (larger number) 2. Subtrahend (amount being taken away) 3. Difference | Rounding all the way doesn’t replace actual calculations.  Difference plus subtrahend equals the minuend.  Talk about the Major Money clip. |
| LU 1-3 Multiplying and Dividing Whole Numbers   1. Multiplication 2. Product = Multiplicand × Multiplier 3. Proving multiplication 4. Division shortcuts by zero 5. Division   a. Divisor (number used to divide), dividend (number we are dividing), quotient (result), remainder (left-over amount)  b. Short and long division  c. Division shortcuts by a zero | Multiplication is a shortcut to addition.  Disregard zeros, multiply, and attach the number of zeros at end of your answer.  Division is the reverse of multiplication.  For this chapter, all remainders are expressed as whole numbers.  Talk about the Star Wars clip. |

Note: Stress the importance of doing the practice quiz at the end of each unit and extra practice quiz if needed. Connect and LearnSmart are additional assessment tools you may want to consider.

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| CHAPTER 1 | **THE POCKET CALCULATOR WORKSHOP HANDOUT** |

## Solve using memory.

Add the following columns horizontally and vertically:

**Production Report**

**Monday Tuesday Wednesday Thursday Friday**

Software packages 290 96 157 24 40

Laptops 359 68 44 77 30

Video 192 41 22 44 18

Computer monitors 49 17 51 66 50

**Step 1:** Adding across

290 [+] 96 [+] 157 [+] 24 [+] 40 [=] [M+]

359 [+] 68 [+] 44 [+] 77 [+] [=] [M+]

192 [+] 41 [+] 22 [+] 44 [+] 18 [=] [M+]

49 [+] 17 [+] 51 [+] 66 [+] 50 [=] [M+] [MR]

The equal signs display the line totals of 607, 578, 317, 233. Each time the M+ is hit it accumulates the line total. When MR is hit at end, the total 1,735 is displayed, the sum of all the M+s.

**Step 2:** Adding down

(Be sure to clear memory [MR].)

290 [+] 359 [+] 192 [+] 49 [=] [M+]

96 [+] 68 [+] 41 [+] 17 [=] [M+]

157 [+] 44 [+] 22 [+] 51 [=] [M+]

24 [+] 77 [+] 44 [+] 66 [=] [M+]

40 [+] 30 [+] 18 [+] 50 [=] [M+] [MR]

The equal signs display the line totals of 890, 222, 274, 211, and 138. The MR displays the total of 1,735, the sum of all the M+s.

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| CHAPTER 1 | **SUGGESTED SOLUTIONS TO CRITICAL THINKING DISCUSSION QUESTIONS WITH CHAPTER CONCEPT CHECK** |

1. State the problem; decide the best method(s) to solve the problem(s); does the solution make sense and evaluate results. Often companies may not follow these steps; for example, in the production of computers there may not be enough time to make detailed analysis. If a product is not introduced at the right time it could be obsolete before it reaches the marketplace. Some of the best business decisions have been made from “gut” feelings. The steps to the decision-making process have to be evaluated in terms of the industry (internal and external) competitors, as well as what the marketplace is demanding. Look at how things can change since the economic downturn in 2008, and 2009. Many competitors now have to reevaluate their competing strategies.
2. Step 1: Identify the place value of the digit you want to round.

Step 2: If the digit to the right of the identified digit in step 1 is 5 or more, increase the identified digit by 1 (round up).

Step 3: Change all the digits to the right of the rounded identified digit to zeros.

If, for example, I had 81 tickets to go to the basketball game, I would not round this to 80. We need an exact amount or someone would be left out. Rounding is a good estimate.

Rounding all the way rounds to the first digit of the number (the left-most digit) and has only one nonzero digit remaining in the number.

Rounding all the way could be used by employers to estimate their total payroll requirements. As for the paycheck, rounding all the way would not work. Deductions from one’s paycheck is exact. Many of the deductions are required by specific state and federal regulations.

1. Checking subtraction requires adding the difference to the subtrahend to arrive at the minuend.

If you go to a move and pay with a $10 bill for a $7 show, you receive change of $3. This $3 is the difference. If you take the ticket stub ($7) and add it to the difference, you get back to the $10 (the minuend).

1. Multiplication can be checked by addition. For example, if I bought 4 boxes of Special K at $4 per box, it would cost me $16 ($4 + $4 + $4 + $4) or   
   4 × $4 = 16.
2. $16 divided by 4 boxes of cereal equals $4 per box. We could have arrived at this figure by subtracting $16 – $4, $12 – $4, etc. Keep in mind that division is a shortcut to subtraction, while multiplication is a shortcut to addition.
3. Chapter Concept Check: Answers will vary depending on student data.

# My Money page

The My Money page covers content related to the chapter material providing students some key facts they need to know. In addition, information is provided on how students would use the information. Finally, an activity is provided at the end for students to apply what is presented in the My Money segment. Answers will vary by student.

The Chapter 1 My Money segment covers establishing a budget. College students may not see the value of creating and maintaining a budget when their current earnings may be low. However, the habits they create now in managing their money will insure they are budgeting effectively after graduation and beyond.

# Kiplinger Worksheet

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| Date |  |  | Name |  |

## A Group Project

In your group you will have to either defend or reject the following business math issue based on the *Kiplinger’s Personal Finance Magazine* article just presented:

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|  | The Business Math Issue |  |
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| Bitcoin is a worthwhile investment. | | |

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| 1. List the key points of the article and information to support your position. |
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| 1. Write a group defense of your position using math calculations to support your view. If you are in an online course, post to a discussion board. |
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# Teaching Guide to Kiplinger Chapter 1

Points to consider:

Investment goals

Level of investment risk

Tax implications

Security of your investments

Potential for growth

Competing “e-coins”

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| CHAPTER 1 | **ADDITIONAL WORD PROBLEMS FOR CLASSROOM USE** |

1. American Airlines spent over $6,651,297,000 on the direct maintenance of its planes. How would this number be written in verbal form? What would the cost of maintenance be if it were rounded all the way? If American rounded its maintenance cost to the nearest hundred million, what would it be?
2. The average monthly income for individuals who have earned an associate’s degree is $1,188. Those earning a high school degree have monthly earnings of $415. How much more a month is the associate’s degree worth? In a year how much more will the individual with the associate’s degree earn compared to the one with a high school degree?
3. Last year 850 million Valentine’s Day cards were sold compared to 140 million Mother’s Day cards. How many more Valentine’s Day cards were sold than Mother’s Day cards? Prove your answer. Assuming each state sells an equal amount of Valentine’s Day cards, how many were sold by each state?
4. Tootsie Roll Industries bought Charms Industries for $65 million. If Charms produces 24,000 lollipops per an eight-hour shift and runs three shifts per day, how many lollipops will be produced in a five-day work week? If Charms has 40 delivery trucks, how many lollipops per week will each truck transport? Please assume each truck carries an equal amount.
5. The college bookstore received the following bill from Irwin publishers (price is per book):

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|  | 170 Business Math | $24 |  |
|  | 150 Marketing | $27 |  |
|  | 355 Accounting | $22 |  |

What is the total amount due Irwin-McGraw-Hill? If the bookstore sells these books for $18,530, what would its profit be?

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| CHAPTER 1 | **SOLUTIONS FOR ADDITIONAL WORD PROBLEMS FOR CLASSROOM USE** |

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| Solution 1 | Six billion, six hundred fifty-one million, two hundred ninety-seven thousand | | |
|  | 7,000,000,000 | ,651,297,000 |
|  | 6,700,000,000 | 6, 51,297,000 |

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| Solution 2 | $ 1,188 |  |
|  | –  415 |  |
|  | $  773 | × 12 = $9,276 |

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| Solution 3 | 850 | Check 710 + 140 = 850 | = 17 million per state |
|  | – 140 |
|  | 710 |

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| Solution 4 | 24,000 × 3 = 72,000 × 5 = 360,000 per week divided by 40 trucks equals 9,000 lollipops per truck |

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| Solution 5 | 170 × $24 = | $ 4,080 | $18,530 |
|  | 150 × $27 = | $ 4,050 | –15,940 |
|  | 355 × $22 = | $ 7,810 | $ 2,590 |
|  |  | $15,940 |  |

Chapter 1 Crossword Puzzle

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|  | Across |  | Down |
| **1** | The number (bottom) by which one multiplies | **1 2** | Number being multiplied (top) Number being subtracted |
| **3** | Answer to a division problem | **4** | Positions of units, tens, etc. |
| **5** | Leftover amount | **7** | Answer to subtraction |
| **6** | In addition, one of the numbers being added | **8 9** | Number we divide by Answer to multiplication |
| **8** | Number being divided |  |  |
| **10** | Larger number in subtraction process |  |  |
| **11** | Answer to addition |  |  |

Chapter 1 Solution

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