Online Instructor’s Manual
to accompany

Business Mathematics
Twelfth Edition

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PREFACE


- Teaching suggestions, along with suggested problem assignments, are provided to assist instructors with course planning.

- Two pretests, one in basic mathematics and one in business mathematics, are supplied to assist faculty with student placement.

- Four open-response and two multiple-choice test forms are provided for each chapter. All test forms for a particular chapter are designed to be of equal difficulty.

- Two open-response forms of a final examination are provided.

- Test items are included for each chapter. These exercises can be used as a source of problems for exams or quizzes or as additional review exercises.

- Answers to all writing exercises are provided as a resource for instructors.

- For the instructor’s convenience, tables that may be needed to complete the exams can be found in the back of this supplement.
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TEACHING SUGGESTIONS
CHAPTERS 1-16
The twelfth edition of *Business Mathematics*, written by Gary Clendenen, Stanley A. Salzman, and Charles D. Miller, has been carefully revised to provide a complete course in those mathematical topics needed for success in modern business. More than enough topics are included for a full semester course. For shorter courses, the wide range of topics permits the selection of those chapters and sections which best fit individual instructor and class needs. Each section approximates the material covered in one classroom hour of instruction. This does vary, depending on the difficulty of the material and the ability of the student.

At the beginning of the course, it is usually beneficial to demonstrate to students the many features of the textbook and to share the benefits of using these features to the maximum advantage. The discussion should include the learning objectives at the beginning of each section. Be sure to point out the CASE in POINT section openers, the learning aids labeled QUICK TIP, the Quick Start exercises at the beginning of each exercise set, the Quick Review, Case Study, Case in Point Summary Exercise, and Test that conclude each chapter. The answers for odd-numbered exercises, the summary exercises, and all chapter tests are provided in the back of the text. Instructors may choose to make the solutions to all exercises available to students. Students should also be reminded that there is a complete glossary of key terms at the back of the textbook.

The chapter sequence is designed to be as flexible as possible. Each chapter stands alone, with chapters 1-3 presenting basic prerequisite material, allowing for a great deal of flexibility in course planning. The number of chapters covered and the specific chapters used in a course vary according to the time available (quarter or semester) and the ability of the students. Most business math courses include the topics covered in Chapters 1-10 and Chapter 13. As time permits, the remaining chapters are selected based on the individual instructor’s needs.

The teaching suggestions for each chapter are derived from the successful experiences of instructors who have taught business mathematics for many years. They are offered to give suggestions and ideas to help the instructor work more efficiently and achieve greater success in the classroom. Suggestions and comments are given for each chapter, along with a recommended exercise assignment for each section.

**To the Instructor**

This introductory section can be used the first day of class. Each student should be made aware of the importance of the material of this course as he/she begins and progresses in a career. Many students can benefit from the suggestions on how to become successful in this business mathematics course. The Basic Mathematics and the Business Mathematics Pretests included in this manual may be used for class testing to measure the overall abilities of the students. During the first class meeting, students may be assigned the Pretest in Business Mathematics found in the textbook. The pretest could be reviewed in the second class meeting and the results used to determine whether or not to cover Chapter 11.
Chapter 1  Whole Numbers and Decimals

Prerequisite: None

Sections

1.1 Whole Numbers
1.2 Application Problems
1.3 Basics of Decimals
1.4 Addition and Subtraction of Decimals
1.5 Multiplication and Division of Decimals

This chapter is a review for students. While the material is basic, many of the students have not worked with mathematics for several years. The most important review is in rounding numbers, reading and solving application problems, and practicing multiplication and division with decimals. While some instructors skip this chapter completely, others require students to work all problems in the chapter without the use of a calculator. Some instructors do not allow the use of a calculator in the first two or three chapters. In this chapter, as in all the others, students may work additional odd-numbered exercises for extra practice and then check the answers in the back of the book.

Suggested Assignments

Section 1.1, Exercises 8-68 even
Section 1.2, Exercises 2-20 even
Section 1.3, Exercises 14-66 even
Section 1.4, Exercises 18-32 even
Section 1.5, Exercises 4-12 even, 18-36 even
Summary Exercise
Chapter 2     Fractions

Prerequisite: None

Sections

2.1 Basics of Fractions
2.2 Addition and Subtraction of Fractions
2.3 Addition and Subtraction of Mixed Numbers
2.4 Multiplication and Division of Fractions
2.5 Converting Decimals to Fractions and Fractions to Decimals

Working with fractions often presents difficulties for students. Most people do not use fractions often, but it should be pointed out that fractions are used in the food services industry, the stock market, construction trades, real estate, accounting, and in many other fields. Special attention should be given to finding the lowest common denominator, borrowing when subtracting mixed numbers, reducing fractions when multiplying and dividing, and converting fractions to decimals. Class time spent reviewing fractions, along with assigned exercises, adds to students’ confidence and ability, and pays great dividends in regard to performance in later chapters.

Suggested Assignments

Section 2.1, Exercises 8-24 even, 34-48 even
Section 2.2, Exercises 12-40 even, 44-56 even
Section 2.3, Exercises 6-20 even, 24-30 even
Section 2.4, Exercises 8-28 even, 38-50 even
Section 2.5, Exercises 12-34 even
Summary Exercise