



ELEMENTARY

Algebra

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Elementary Algebra

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PREFACE

Elementary Algebra is the second book in a series that includes *Prealgebra*, *Intermediate Algebra*, and *Elementary and Intermediate Algebra*. Written in a relaxed, nonthreatening style, *Elementary Algebra* takes great care to ensure that students who have struggled with math in the past will be comfortable with the subject matter. Explanations are carefully developed to provide a sense of why an algebraic process works the way it does, instead of just an explanation of how to follow the process. In addition, problems from science, engineering, accounting, health fields, the arts, and everyday life link algebra to the real world. A complete study system with a learning-styles inventory and frequent learning strategies is also provided to give students extra guidance and to help them be successful. (See pages xv–xx.)

Upon completing the material in this text, students should be able to proceed successfully to an intermediate algebra course. This text is designed to be versatile enough for use in a standard lecture format, a self-paced lab, or even in an independent study format. A strong ancillary package provides a wealth of supplemental resources for both instructors and students.

Key Features

Study System A study system is presented in the *To the Student* section on pages xv–xviii. This system is then reinforced throughout the text. The system recommends color codes for taking notes. The color codes are consistent in the text itself: red for definitions, blue for procedures and rules, and black for notes and examples. In addition, the study system presents strategies for succeeding in the course. These Learning Strategies are revisited in the chapter openers and throughout the body of the text.

Learning Styles Inventory A learning styles inventory is presented on page xix to help students assess their particular learning style. Through the Learning Strategy boxes in the text, recommendations are presented with different learning styles in mind.

Learning Strategy Boxes Learning Strategy boxes appear where appropriate in the text to offer advice on how to effectively use the study system and how to study specific topics based on a student's learning style (see pages 7, 125, and 403).

The Algebra Pyramid An Algebra Pyramid is used throughout the text to help students see how the topic they are learning relates to the big picture of algebra—particularly focusing on the relationship between constants, variables, expressions, and equations (see pages 3, 396, and 736).

Chapter Openers Like the Algebra Pyramid, chapter openers are designed to help students see how the topics in the upcoming chapter relate to the big picture of the entire course. The chapter openers are more general than the Algebra Pyramid and give information about the importance of the topics in each

chapter and how they fit into the overall structure of the course (see pages 1, 193, and 383).

Connection Boxes Connection boxes bridge concepts and ideas that students have learned elsewhere in the text so they see how the concepts are interrelated and build on each other (see pages 19, 241, and 435).

Your Turn Practice Exercises Your Turn practice exercises are found after most examples to help give students an interactive learning environment and to prepare them for the exercise sets that lie ahead. This practice step provides immediate feedback so students can gain confidence in what they are learning (see pages 75, 248, and 321).

Real, Relevant, and Interesting Applications A large portion of application problems are taken from a real situation in science, engineering, health, finance, the arts, or just everyday life. The real-world applications illustrate the everyday use of basic algebraic concepts and often are followed by open-ended discussion questions where there is no one correct answer. These questions help students think beyond the numeric solution by encouraging them to apply mathematical concepts to solve problems (see pages 114, 205, and 454).

Thorough Explanations Great care is taken to explain not only how to do the math, but also why the math works the way it does, where it comes from, and how it is relevant to students' everyday lives. Knowing all of this gives students a context in which to remember the concept.

Problem-Solving Outline A five-step problem-solving outline is introduced on page 107 of Section 2.1 with the following headings:

1. Understand
2. Plan
3. Execute
4. Answer
5. Check


Application examples throughout the rest of the text follow the steps given in this outline, presenting the headings to model the thinking process clearly (see pages 109, 246, and 410).

Warning Boxes Warning boxes alert students to common mistakes and false assumptions that students often make and explain *why* these are incorrect (see pages 198, 348, and 434).

Of Interest Boxes Of Interest boxes are positioned throughout the text to offer a unique flavor to content that some students might otherwise consider ho-hum mathematics. Sometimes containing trivia and other times historical notes, Of Interest boxes are designed to enhance the learning process by making concepts fun, interesting, and memorable (see pages 117, 220, and 454).

Puzzle Problems These mathematical brainteasers, often solved without a formulaic approach, appear at the end of selected exercise sets to encourage critical thinking (see pages 41, 208, and 407).

Collaborative Exercises One to two collaborative exercises appear per chapter. These exercises encourage students to work in groups, discuss the mathematics, and use the topics from a particular section or sections to solve a problem (see pages 152, 222, and 417).

Calculator Tips The relevant functions of calculators (scientific or graphing, depending on the topic) are explained and illustrated throughout the text in optional Calculator Tips. In addition, an occasional calculator icon  in the exercise sets indicates that the problem can be solved using a calculator, but a calculator is not required (see pages 62, 310, and 389).

Review Exercises Since continuous review is important in any mathematics course, this text includes review exercises at the end of each exercise set. These exercises review previously learned concepts not only to keep the material fresh for students, but also to serve as a foundational review for the discussion in the next section (see pages 26, 179, and 459).

Chapter Summaries and Review Exercises A summary at the end of each chapter provides a list of defined terms referenced by section and page number, a two-column summary of key concepts (procedures and rules on the left and key examples on the right), and a list of important formulas appearing in that chapter. A set of review exercises is also provided (see pages 180, 361, and 460).

Chapter Practice Tests A practice test follows each set of chapter review exercises. The problem types in the practice tests correlate to the short-answer tests in the Printed Test Bank. This is especially comforting for students who have math anxiety or who experience test anxiety (see pages 101, 189, and 376).

Cumulative Reviews Beginning with Chapter 2, cumulative review exercises appear after each practice test. These exercises help students stay current with all the material they have learned (see pages 191, 379, and 468).

Instructor Supplements

ANNOTATED INSTRUCTOR'S EDITION (ISBN 0-201-77163-2)

The *Annotated Instructor's Edition* includes answers to all exercises, including Puzzle Problems and Collaborative Exercises, near the corresponding problem. In addition, useful teaching tips are printed in the margin, and a ★ icon indicates especially challenging exercises in the exercise sets. All answers are printed in bright blue to make them easy to locate.

INSTRUCTOR'S SOLUTIONS MANUAL (ISBN 0-201-72980-6)

The *Instructor's Solutions Manual*, written by text coauthor Ellyn Gillespie, contains complete solutions to all even-numbered section exercises, puzzle problems, and collaborative exercises.

PRINTED TEST BANK/INSTRUCTOR'S RESOURCE GUIDE (ISBN 0-201-77164-0)

The *Printed Test Bank* portion of this manual contains a diagnostic pretest for each chapter; four free-response test forms for each chapter, one of which contains higher-level questions; one multiple-choice test per chapter; one free-response midterm exam; two free-response final exams; and one multiple-choice final exam. The *Instructor's Resource Guide* portion of the manual contains mid-chapter check-ups for each chapter.

TESTGEN WITH QUIZMASTER (ISBN 0-201-79500-0)

TestGen enables instructors to build, edit, print, and administer tests using a computerized bank of questions developed to cover all the objectives of the text.

Instructors can modify test bank questions or add new questions by using the built-in question editor, which allows users to create graphs, import graphics, insert math notation, and insert variable numbers or text. Tests can be printed or administered on-line via the Web or another network. TestGen comes packaged with QuizMaster, which allows students to take tests on a local area network. The software is available on a dual-platform Windows/Macintosh CD-ROM.

MATHXL® www.mathxl.com

MathXL is an on-line testing, homework, and tutorial system that uses algorithmically generated exercises correlated to the textbook. Instructors can assign tests provided by Addison-Wesley or create and customize their own tests and homework assignments. Instructors can also track their students' results and tutorial work in an on-line grade book.

Students can take sample chapter tests and receive personalized study plans that will diagnose weaknesses and link students to areas they need to study and retest. Students can also work unlimited practice problems and receive tutorial instruction for areas in which they need improvement. MathXL can be packaged with new copies of *Elementary Algebra*. Please contact your Addison-Wesley representative for details.

MyMATHLAB

MyMathLab is a complete on-line course for Addison-Wesley mathematics textbooks that provides interactive, multimedia instruction correlated to textbook content. MyMathLab is easily customized to suit the needs of students and instructors and provides a comprehensive and efficient on-line course-management system that allows for diagnosis, assessment, and tracking of students' progress.

MyMathLab features the following:

- Fully interactive multimedia chapter and section folders from the textbook contain a wide range of instructional content, including videos, software tools, audio clips, animations, and electronic supplements.
- Hyperlinks take you directly to on-line testing, diagnosis, tutorials, and grade books in MathXL—Addison-Wesley's tutorial and testing system for mathematics and statistics.
- Instructors can create, copy, edit, assign, and track all tests for their course as well as track student tutorial and testing performance.
- With push-button ease, instructors can remove, hide, or annotate Addison-Wesley's preloaded content, add their own course documents, or change the order in which material is presented.
- Using the communication tools found in MyMathLab, instructors can hold on-line office hours, host a discussion board, create communication groups within their class, send e-mails, and maintain a course calendar.
- Print supplements are available on-line, side by side with the textbook.

For more information, visit our Web site at www.mymathlab.com or contact your Addison-Wesley sales representative for a demonstration.

Student Supplements

STUDENT'S SOLUTIONS MANUAL (ISBN 0-201-72977-6)

The *Student's Solutions Manual*, written by Ellyn Gillespie, contains complete solutions to the odd-numbered exercises in each section and to all the section-level review exercises, chapter review exercises, practice tests, and cumulative review exercises.

VIDEOTAPES (ISBN 0-321-17901-3)

The videotape series features an engaging team of mathematics instructors who present comprehensive coverage of each section of the text in a student-interactive format. Ellyn Gillespie, a coauthor of the text, presents a major portion of the content in the videos, keeping the presentation of content consistent with the text. The lecturers' presentations include examples and problems from the text and support an approach that emphasizes visualization and problem solving. A video symbol at the beginning of each exercise set references the appropriate videotape or CD number (see *Digital Video Tutor*, below).

DIGITAL VIDEO TUTOR (ISBN 0-321-17900-5)

The video lessons for this text are also available on CD-ROM, making it easy and convenient for students to watch video segments from a computer at home or on campus. The complete digitized video set, affordable and portable for students, is ideal for distance learning or supplemental instruction.

INTERACT MATH[®] TUTORIAL CD-ROM (ISBN 0-201-79502-7)

This interactive tutorial software provides algorithmically generated practice exercises that correlate at the objective level to the odd-numbered exercises in the text. Each practice exercise is accompanied by both an example and a guided solution designed to involve students in the solution process. Selected problems also include a video clip that helps students visualize concepts. The software recognizes common student errors and provides appropriate feedback.

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ADDISON-WESLEY MATH TUTOR CENTER (ISBN 0-201-72170-8)

The Addison-Wesley Math Tutor Center is staffed by qualified college mathematics instructors who tutor students on examples and exercises from the textbook. Tutoring is provided via toll-free telephone, toll-free fax, e-mail, and the Internet. Interactive Web-based technology allows students and tutors to view and listen to live instruction in real-time over the Internet! The Math Tutor Center is accessed through a registration number that can be packaged with a new textbook or purchased separately. (Note: MyMathLab students obtain access to the Tutor Center through their MyMathLab access code.)

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Tom Carson
Ellyn Gillespie Stewart



TO THE STUDENT

Why do I have to take this course?

Often this is one of the first questions students ask when they find out they must take an algebra course, especially when they believe that they will never use the math again. You may think that you will not use algebra directly in daily life, and you may assume that you can get by knowing enough arithmetic to balance a checkbook. So, what is the real point of education? Why don't colleges just train students for the jobs they want? The purpose of education is not just job training but also exercise—mental exercise. An analogy that illustrates this quite well is the physical training of athletes.

During the off-season, athletes usually develop an exercise routine that may involve weight lifting, running, swimming, aerobics, or maybe even dance lessons. Athletes often seek out a professional trainer to push them further than they might push themselves. The trainer's job is not to teach an athlete better technique in his or her sport, but to develop the athlete's raw material—to work the body for more strength, stamina, balance, etc. Educators are like physical trainers, and going to college is like going to the gym. An educator's job is to push students mentally and work the “muscle” of the mind. A college program is designed to develop the raw material of the intellect so the student can be competitive in the job market. After the athlete completes the off-season exercise program, he or she returns to the coach and receives specific technique training. Similarly, when students complete their college education and begin a job, they receive specific training to do that job. If the trainer or teacher has done a good job with hard-working clients, the coaching or job training should be absorbed easily.

Taking this analogy a step further, a good physical trainer finds the athlete's weaknesses and designs exercises that the athlete has never performed before, and then pushes him or her accordingly. Teachers do the same thing—their assignments are difficult in order to work the mind effectively. If you feel “brain-strained” as you go through your courses, that's a good sign that you are making progress, and you should keep up the effort.

The following study system is designed to help you in your academic workouts. As teachers, we find that most students who struggle with mathematics have never really studied math. A student may think, “Paying attention in class is all I need to do.” However, when you watch a teacher do math, keep in mind that you are watching a pro. Going back to the sports analogy, you can't expect to shoot a score of 68 in golf by watching Tiger Woods. You have to practice golf yourself in order to learn and improve. The study system outlined in the following pages will help you get organized and make efficient use of your time so that you can maximize the benefits of your course work.

What do I need to do to succeed?

We believe there are four prerequisites one must have or acquire in order to succeed in college:

1. **Positive Attitude**
2. **Commitment**
3. **Discipline**
4. **Time**

A **POSITIVE ATTITUDE** is most important because commitment and discipline flow naturally from it. Consider Thomas Edison, inventor of the lightbulb. He tried more than 2000 different combinations of materials for the filament before he found the successful combination. When asked by a reporter about all his failed attempts, Edison replied, “I didn’t fail once, I invented the lightbulb. It was just a 2000-step process.” Recognize that learning can be uncomfortable and difficult, and mistakes are part of the process. So, embrace the learning process with its discomforts and difficulties, and you’ll see how easy it is to be committed and disciplined.

COMMITMENT means giving everything you’ve got with no turning back. Consider Edison again. Imagine the doubts and frustrations he must have felt trying material after material for the filament of his lightbulb without success. Yet he forged ahead. In Edison’s own words, “Our greatest weakness lies in giving up. The most certain way to succeed is always to try just one more time.”

DISCIPLINE means doing things you should be doing even when you don’t want to. According to author W. K. Hope, “Self-discipline is when your conscience tells you to do something and you don’t talk back.” Staying disciplined can be difficult given all the distractions in our society. The best way to develop discipline is to create a schedule and stick to it.

Make sure you have enough **TIME** to study properly, and make sure that you manage that time wisely. Too often, students try to fit school into an already full schedule. Take a moment to complete the exercise that follows under “How do I do it all?” to make sure you haven’t over-committed yourself. Once you have a sense of how much time school requires, read on about the study system that will help you maximize the benefits of your study time.

How do I do it all?

Now that we know a little about what it takes to be successful, let’s make sure that you have enough time for school. In general, humans have a maximum of 60 hours of productivity per week. Therefore, as a guide, let’s set the maximum number of work hours, which means time spent at your job(s) and at school combined, at 60 hours per week. Use the following exercise to determine the time you commit to your job and to school.

EXERCISE: Calculate the time that you spend at your job and at school.

1. Calculate the total hours you work in one week.
2. Calculate the number of hours you are in class each week.
3. Estimate the number of hours you should expect to spend outside of class studying. *A general rule is to double the number of hours spent in class.*

4. Add your work hours, in-class hours, and estimated out-of-class hours to get your total time commitment.
5. Evaluate the results. *See below.*

EVALUATING THE RESULTS:

- a. If your total is greater than 60 hours, you will probably find yourself overwhelmed. It may not occur at first, but doing that much for an extended period of time will eventually catch up with you, and something may suffer. It is in your best interest to cut back on work or school until you bring your time commitment under 60 hours per week.
- b. If your total is under 60 hours, good. Be sure you consider other elements in your life, such as your family's needs, health problems, commuting, or anything that could make demands on your time. Make sure that you have enough time for everything you put in your life. If you do not have enough time for everything, consider what can be cut back. It is important to note that it is far better to pass fewer classes than to fail many.

How do I make the best use of my time? How should I study?

We've seen many students who had been making Ds and Fs in mathematics transform their grades to As and Bs by using the study system that follows.

The Study System

YOUR NOTEBOOK

1. Get a loose-leaf binder so that you can put papers in and take them out without ripping any pages.
2. Organize the notebook into four parts:
 - a. Class notes
 - b. Homework
 - c. Study sheets (a single piece of paper for each chapter onto which you will transfer procedures from your notes)
 - d. Practice test

IN CLASS

Involve your mind completely.

1. **Take good notes.** Use three different colors. Most students like using red, blue, and black (pencil).
 - Use the **red** pen to write *definitions*. Also, use this color to mark problems or items that the instructor indicates will be covered on a test.
 - Use the **blue** pen to write *procedures* and *rules*.
 - Use the pencil to write *problems* and *explanations*.

When taking notes, don't just write the solutions to the problems that the instructor works out, but write the explanations as well. To the side of the problem, make notes about each step so that you remember the significance of the steps. Pay attention to examples or issues the instructor emphasizes: they will

usually appear on a test, so make an effort to include them in your notes. Include common errors that the instructor points out or any words of caution. If you find it is difficult to write and pay attention at the same time, ask your instructor if you can record the lectures with a tape recorder. If your instructor follows the text closely, when he or she points out definitions or procedures in the text, highlight them or write a page reference in your notes. You can then write these referenced items in their proper place in your notes after class.

- 2. Answer the instructor's questions.** This does not mean you have to answer every question verbally, but you should think through every question and answer in your mind, write an answer in your notes, or answer out loud.
- 3. Ask questions.** You may find it uncomfortable to ask questions in front of other people, but keep in mind that if you have a question, then it is very likely that someone else has the same question. If you still don't feel like asking in class, then be sure to ask as soon as class is over. The main thing is to get that question answered as soon as possible because in mathematics, one misconception can grow and cause confusion in the future.

AFTER CLASS

Prepare for the next class meeting as if you were going to have a test on everything covered so far.

To make the most of your time, set aside a specific time that is reserved for math. Since there are often many distractions at home, study math while on campus in a quiet place such as the library or tutorial lab. Staying on campus also allows you to visit your instructor or tutorial services if you have a question that you cannot resolve. Here is a systematic approach to organizing your math study time outside of class:

1. As soon as possible, go over your notes. Clarify any sentences that weren't quite complete. Fill in any page-referenced material.
2. Read through the relevant section(s) in the text again, and make sure you understand all the examples.
3. Transfer each new procedure or rule to your study sheet for that chapter. You might also write down important terms and their definitions. Make headings for each objective in the section(s) you covered that day. Write the procedures and definitions in your own words.
4. Study the examples worked in class. Transfer each example (without the solution) to the practice test section of your notebook, leaving room to work it out later.
5. Use your study sheet to do the assigned practice problems. As soon as you finish each problem, check your answer in the back of the book or in the *Student's Solutions Manual*. If you did not get it correct, then immediately revisit the problem to determine your error (see the box on troubleshooting). If you are asked to do even-numbered problems, then work odd-numbered problems that mirror the even problems. That way you can check your answers for the odd-numbered problems and then work the even-numbered problems with confidence.
6. After completing the homework, prepare a quiz for yourself. Select one of each type of homework problem. Don't just pick the easy ones! Set the quiz aside for later.

Troubleshooting: For the problems that you do not get correct, first look for simple arithmetic errors. If you find no arithmetic errors, then make sure you followed the procedure rules correctly. If you followed the rules correctly, then you have likely interpreted something incorrectly either with the problem or the rules. Read the instructions again carefully and try to find similar examples in your notes or in the book. If you still can't find the mistake, go on to something else for a while. Often after taking a fresh look you will see the mistake right away. If all these tips fail to resolve the problem, then mark it as a question for the next class meeting.

7. After making the quiz, study your study sheet. To test your understanding, write the rules and procedures in your own words. Do not focus on memorizing the wording in the textbook.
8. Now it is time to begin preparing for the next class meeting. Read the next section(s) to be covered. Don't worry if you do not understand everything. The idea is to get some feeling for the topics to be discussed so that the class discussion will actually be the second time you encounter the material, not the first. While reading, you might mark points that you find difficult so that if the instructor does not clear them up, you can ask about them. Also, attempt to work through the examples. The idea is for you to do as much as possible on your own before class so that the in-class discussion merely ties together loose ends and solidifies the material.
9. After you have finished preparing for the next day, go back and take the quiz that you made. If you get all the answers correct, then you have mastered the material. If you have difficulty, return to your study sheet and repeat the exercise of writing explanations for each objective.

How do I ace the test?

PREPARING FOR A TEST

If you have followed all of the preceding suggestions, then preparing for a test should be quite easy.

1. **Read.** In one sitting, read through all of your notes on the material to be tested. In the same sitting, read through the book, observing what the instructor has highlighted in class. To guide your studies, look at any information or documents provided by your instructor that address what will be on the test. The examples given by the instructor will usually reflect the test content.
2. **Study.** Compare your study sheet to the summary in the book at the end of the chapter. Use both to guide you in your preparation, but keep in mind that the sheet you made from your notes reflects what the instructor has emphasized. Make sure you understand everything on your study sheet. Write explanations of the objectives until you eliminate all hesitation about how to approach an objective. The rules and procedures should become second nature.
3. **Practice.** Create a game plan for the test by writing the rule, definition, or procedure that corresponds to each problem on your practice tests. (Remember, one practice test is in your book and the other you made from your notes.) Next, work through the practice tests without referring to your study sheet or game plan.
4. **Evaluate.** Once you have completed the practice tests, check them. The answers to the practice tests in the book are in the answer section in the back of the book. Check the practice test that you made using your notes.
5. **Repeat.** Keep repeating steps 2, 3, and 4 until you get the right answer for every problem on the practice tests.

TAKING A TEST

1. When the test hits your desk, don't look at it. Instead, do a memory dump. On paper, dump everything you think you might forget. Write out rules, procedures, notes to yourself, things to watch out for, special instructions from the instructor, and so on. This will help you relax while taking the test.



LEARNING STYLES INVENTORY

What is your personal learning style?

A learning style is the way in which a person processes new information. Knowing your learning style can help you make choices in the way you focus on and study new material. Below are fifteen statements that will help you assess your learning style. After reading each statement, rate your response to the statement using the scale below. There are no right or wrong answers.

3 = Often applies

2 = Sometimes applies

1 = Never or almost never applies

- 1. I remember information better if I write it down or draw a picture of it.
- 2. I remember things better when I hear them instead of just reading or seeing them.
- 3. When I receive something that has to be assembled, I just start doing it. I don't read the directions.
- 4. If I am taking a test, I can "visualize" the page of text or lecture notes where the answer is located.
- 5. I would rather the professor explain a graph, chart, or diagram to me instead of just showing it to me.
- 6. When learning new things, I want to do it rather than hear about it.
- 7. I would rather the instructor write the information on the board or overhead instead of just lecturing.
- 8. I would rather listen to a book on tape than read it.
- 9. I enjoy making things, putting things together, and working with my hands.
- 10. I am able to conceptualize quickly and visualize information.
- 11. I learn best by hearing words.
- 12. I have been called hyperactive by my parents, spouse, partner, or professor.
- 13. I have no trouble reading maps, charts, or diagrams.
- 14. I can usually pick up on small sounds like bells, crickets, frogs, or distant sounds like train whistles.
- 15. I use my hands and gesture a lot when I speak to others.

Write your score for each statement beside the appropriate statement number below.

Then add the scores in each column to get a total score for that column.

	1. ____	2. ____	3. ____
	4. ____	5. ____	6. ____
	7. ____	8. ____	9. ____
	10. ____	11. ____	12. ____
	13. ____	14. ____	15. ____
Total:			
	↑	↑	↑
	Visual	Auditory	Tactile

The largest total of the three columns indicates your dominant learning style.

Visual learners learn best by seeing. If this is your dominant learning style, you should focus on learning strategies that involve seeing. The color coding in the study system (see page xv) will be especially important. The same color coding is used in the text. Draw lots of diagrams, arrows, and pictures in your notes to help you see what is happening. Reading your notes, study sheets, and text repeatedly will be an important strategy.

Auditory learners learn best by hearing. If this is your dominant learning style, you should use learning strategies that involve hearing. After getting permission from your instructor, bring a tape recorder to class to record the discussion. When you study your notes, play back the tape. Also, when you learn rules, say the rule over and over. As you work problems, say the rule before you do the problem. You may also find the video tapes beneficial in that you can hear explanations of problems taken from the text.

Tactile (also known as kinesthetic) learners learn best by touching or doing. If this is your dominant learning style, you should use learning strategies that involve doing. Doing lots of practice problems will be important. Make use of the Your Turn exercises in the text. These are designed to give you an opportunity to do problems like the examples as soon as the topic is discussed. Writing out your study sheets and doing your practice tests repeatedly will be important strategies for you.

Note that the study system developed in this text is for all learners. Your learning style will help you decide what aspects and strategies in the study system to focus on, but being predominantly an auditory learner does not mean that you shouldn't read the textbook, do lots of practice problems, or use the color-coding system in your notes. Auditory learners can benefit from seeing and doing, and tactile learners can benefit from seeing and hearing. In other words, do not use your dominant learning style as a reason for not doing things that are beneficial to the learning process. Also, remember that the Learning Strategy boxes presented throughout the text provide tips to help you use your personal learning style to your advantage.

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