

Exercises

Many exercises require the *interpretation* of results. Great care has been taken to ensure their usefulness, relevance, and accuracy. Exercises are arranged in order of increasing difficulty and by dividing them into two groups: (1) Basic Skills and Concepts and (2) Beyond the Basics. Beyond the Basics exercises address more difficult concepts or require a stronger mathematical background. In a few cases, these exercises introduce a new concept.

Real data

Hundreds of hours have been devoted to finding data that are real, meaningful, and interesting to students. All of the Chapter Problems are based on real data, 91% of the examples are based on real data, and 89% of the exercises are based on real data. Some exercises refer to the 23 large data sets listed in Appendix B, and 10 of those data sets are new to this edition. Exercises requiring use of the Appendix B data sets are located toward the end of each exercise set, where they are clearly identified.

Flexible Syllabus

This book's organization reflects the preferences of most statistics instructors, but there are two common variations:

- **Early coverage of correlation and regression:** Some instructors prefer to cover the basics of correlation and regression early in the course. *Sections 10-2 ("Correlation") and 10-3 ("Regression") can be covered early.* Simply limit coverage to Part 1 ("Basic Concepts") in each of those two sections.
- **Minimum probability:** Some instructors prefer extensive coverage of probability, while others prefer to include only basic concepts. Instructors preferring minimum coverage can include Section 4-2 while skipping the remaining sections of Chapter 4, as they are not essential for the chapters that follow. Many instructors prefer to cover the fundamentals of probability along with the basics of the addition rule and multiplication rule, and those topics can be covered with Sections 4-1 through 4-4.

Hallmark Features

Great care has been taken to ensure that each chapter of *Elementary Statistics* will help students understand the concepts presented. The following features are designed to help meet that objective:

Chapter-opening features:

- A list of chapter sections previews the chapter for the student.
- A chapter-opening problem, using real data, motivates the chapter material. Examples and exercises that further explore the ideas presented in the opening problem are marked with an icon.
- The first section is a brief review of relevant earlier concepts and previews the chapter's objectives.

End-of-chapter features:

A chapter Review summarizes the key concepts and topics of the chapter.

A Chapter Quick Quiz provides 10 review questions that require brief answers.

Review Exercises offer practice on the chapter concepts and procedures.

Cumulative Review Exercises reinforce earlier material.

A Technology Project provides an activity for STATDISK, Minitab, Excel, a TI-83/84 Plus calculator, or StatCrunch.

