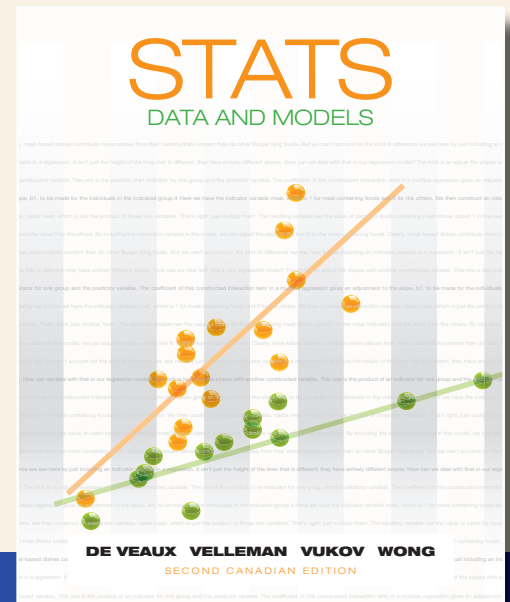


# Stats: Data and Models, Second Canadian Edition

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Text  
9780321828422

MathXL --  
Standalone Access Card  
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Unparalleled in its readability and ease of comprehension, **STATS: DATA AND MODELS**, Second Canadian Edition, focuses on statistical thinking and data analysis. Written in an approachable style without sacrificing rigor, this text incorporates compelling examples derived from the authors' wealth of teaching experience and encourages students to learn how to reason with data. **STATS: DATA AND MODELS** promotes conceptual understanding for applied statistics without overwhelming the reader with tedious calculations and complex mathematics.

## Available Instructor Resources

- Instructor's Edition
- Test Bank
- Image Library
- PowerPoint Presentation
- Classroom Response System
- Instructor's Solutions Manual
- TestGen®
- MyStatLab Ready to Go Course

## Available Student Resources

- Student Solutions Manual
- MyStatLab
- MathXL for Statistics Online Course
- StatCrunch

# Brief Contents

## PART I Exploring and Understanding Data

- Chapter 1 Stats Starts Here (old CH 02 with new title)
- Chapter 2 Displaying and Describing Categorical Data (old CH 03)
- Chapter 3 Displaying and Summarizing Quantitative Data (old CH 04)
- Chapter 4 Understanding and Comparing Distributions (old CH 05)
- Chapter 5 The Standard Deviation as a Ruler and the Normal Model (old CH 06)
- Review of Part I

## PART II Exploring Relationships Between Variables

- Chapter 6 Scatterplots, Association, and Correlation (old CH 07)
- Chapter 7 Linear Regression (old CH 08)
- Chapter 8 Regression Wisdom (old CH 09)
- Review of Part II

## PART III Gathering Data

- Chapter 9 Understanding Randomness (old CH 11)
- Chapter 10 Sample Surveys (old CH 12)
- Chapter 11 Experiments and Observational Studies (old CH 13)
- Review of Part III

## PART IV Randomness and Probability

- Chapter 12 From Randomness to Probability (old CH 14)
- Chapter 13 Probability Rules! (old CH 15)
- Chapter 14 Random Variables and Probability Models (combines old Chs. 16 and 17 from Ce)
- Review of Part IV

## PART V From the Data at Hand to the World at Large

- Chapter Sampling Distribution Models (old CH 18)
- Chapter 16 Confidence Intervals for Proportions (old CH 19)
- Chapter 17 Testing Hypotheses About Proportions (old CH 20)
- Chapter 18 More About Tests (old CH 21)
- Chapter 19 Comparing Two Proportions (old CH 22)
- Review of Part V

## PART VI Learning About the World

- Chapter 20 Inferences About Means (old CH 23)
- Chapter 21 Comparing Means (old CH 24)
- Chapter 22 Paired Samples and Blocks (old CH 25)
- Chapter 23 Comparing Counts (old CH 26)
- Review of Part VI

## PART VII Inference When Variables Are Related

- Chapter 24 Inferences for Regression (old CH 27)
- Chapter 25 Analysis of Variance (old CH 28)
- Chapter 26 Multifactor Analysis of Variance (old CH 29)
- Chapter 27 Multiple Regression (old CH 30)
- Chapter 28 Multiple Regression Wisdom (old CH 31)
- Review of Part VII

## PART VIII Inference by Other Means

- Chapter 29 Rank-Based Nonparametric Tests (old CH 32)
- Chapter 30 The Bootstrap (old CH 33; online only)
- Index



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### Features

- **New and improved pedagogical tools:** A new section head list at the beginning of each chapter provides a road map. Section heads within each chapter are numbered and reworded to be clear and specific. Chapter study materials now include Learning Objectives as well as terms. Students who understand the objectives and know the terms are well on their way to being ready for any tests. We have added single-concept exercises identified with each major section of each chapter to help assess students' knowledge of the chapter's basic concepts.
- **Streamlined design:** Our goal has always been an accessible text. This edition sports an entirely new design that clarifies the purpose of each text element. The major theme of each chapter is more linear and easier to follow without distraction. Essential supporting material is clearly boxed and shaded, so students know where to focus their study efforts. Enriching—and often entertaining—side material is boxed, but not shaded.
- **Streamlined content:** Our reorganization has shortened the book from 33 to 30 chapters. Each chapter is still a focused discussion, and most can be taught in one lesson. The authors have combined topics that are conceptually similar and reduced time spent on secondary topics. We've grouped important concepts, often in new presentation orders. The result is a more readable text.
- **Exercises:** We have updated many of the exercises that use real-world data, retired some that were getting old, and added new exercises. As in the previous edition, over 100 exercises feature Canadian content and data with up-to-date references to Aboriginal peoples, sports, health care, education, the environment, and other social and political issues.
- **Content changes:**
  - a. Chapter 1 now gets down to business immediately rather than just providing an introduction to the book's features.
  - b. The discussion of Randomness is now in Chapter 9—two chapters earlier than the previous edition.
  - c. The discussions of probability and random variables are tighter—and a chapter shorter.



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### Enhancing Understanding

- **Where Are We Going?** Each chapter starts with a paragraph that points out the kinds of questions students will learn how to answer in the chapter. A new chapter outline helps organize major topics for the students.
- Each chapter ends with a **What Have We Learned?** summary, which includes new learning objectives and definitions of terms introduced in the chapter. Students can think of these as study guides.
- In each chapter, our innovative **What Can Go Wrong?** sections highlight the most common errors that people make and the misconceptions they have about Statistics. One of our goals is to arm students with the tools to detect statistical errors and to offer practice in debunking misuses of statistics, whether intentional or not.
- **Margin and in-text boxed notes.** Throughout each chapter, boxed margin and in-text notes enhance and enrich the text. Boxes with essential information are screened. Conversational notes that enhance the text and entertain the reader are unscreened.
- **By Hand.** Even though we encourage the use of technology to calculate statistical quantities, we realize the pedagogical benefits of occasionally doing a calculation by hand. The By Hand boxes break apart the calculation of many simpler formulas to help the student through the calculation of a worked example.
- **Reality Check.** We regularly remind students that Statistics is about understanding the world with data. Results that make no sense are probably wrong, no matter how carefully we think we did the calculations. Mistakes are often easy to spot with a little thought, so we ask students to stop for a reality check before interpreting their result.
- **Notation Alert.** Throughout this book, we emphasize the importance of clear communication, and proper notation is part of the vocabulary of Statistics. We've found that it helps students when we are clear about the letters and symbols statisticians use to mean very specific things, so we've included Notation Alerts whenever we introduce a special notation that students will see again.
- **Connections.** Each chapter has a Connections feature to link key terms and concepts with previous discussions and to point out the continuing themes. Connections help students fit newly learned concepts into a growing understanding of Statistics.