







Statistical Techniques in Business and Economics 18th Edition

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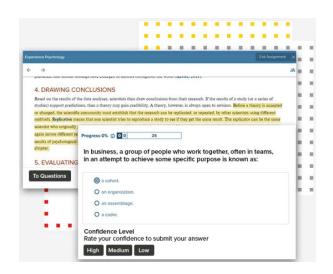
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CHAPTER 1: What Is Statistics?

- Updated graphic on data analytics.
- Updated examples.
- Newly revised Ethics and Statistics section.
- New exercise 17 requiring statistical software.
- Updated exercise 19.

CHAPTER 2: Describing Data: Frequency Tables, Frequency Distributions, and Graphic Presentation

- Updated examples.
- Updated exercises 33, 38, 47, 48.
- New exercise 44 using extensive data from the pizza industry requiring statistical software.

CHAPTER 3: Describing Data: Numerical Measures

- Updated examples.
- Revised example/solution showing the calculation of the sample mean.
- Revised example/solution showing the calculation of the geometric mean.
- Revised example/solution showing the calculation of the sample standard deviation.
- Updated Statistics in Action with most recent Major League Baseball data.
- The section of the relative positions of the mean, median, and mode as well as the concept of skewness has been rewritten with new illustrations.
- Updated exercises 21, 23, 25, 30, 31, 32, 33, 34, 73, 77, 82.

CHAPTER 4: Describing Data: Displaying and Exploring Data

- Updated examples.
- Revised section on computing quartiles.
- Box plots are generated with Excel with accompanying Connect tutorial.
- Updated exercise 16 with Boston Red Sox salary data.
- Updated Self-Review 4–5 that includes data.
- A new section on the correlation coefficient added to the major section, "Describing the Relationship Between Two Variables."
- Exercises 17, 18, and 32 provide data and asks the user to produce scatter plots with statistical software.
- New exercise 24.

CHAPTER 5: A Survey of Probability Concepts

- Updated examples.
- New exercises 90 and 93.
- Updated exercises 9, 10, and 58.
- Revised example/solution showing the calculation of empirical probability.
- New "Principles of Counting" example/solution based on blood type.

CHAPTER 6: Discrete Probability Distributions

- Updated examples.
- New exercises 9, 10, 17, 18, 24, 25, 49, 66, 67, 68, 69.
- Updated exercise 5, 7, 8, 24, 58.
- New example/solution using the binomial distribution to predict purchase behavior with debit and credit cards.

CHAPTER 7: Continuous Probability Distributions

- New opening page and exercise.
- Revised example/solution demonstrating the uniform probability distribution.
- For all uniform distribution examples and exercises, users are asked to compute the mean and standard deviation.
- Updated and revised exercise 1, 2, 5, 7, 8, 11, 12, 28.
- New exercises 15, 19, 20, 35, 36, 41, 43, 47, 55, 61.
- Added emphasis on defining the probability of a particular value of a continuous random variable to be zero.
- Removed the section: "The Normal Approximation to the Binomial."
- Using statistical software, there is no need for approximations.

CHAPTER 8: Sampling, Sampling Methods, and the Central Limit Theorem

- New chapter title: "Sample, Sampling Methods, and the Central
- Limit Theorem"
- New section titled: "Research and Sampling." This section now introduces the idea of sampling by discussing the research process (i.e., posing a research question, collecting data, processing the data, and making data-based inferences and conclusions). The section also discusses ethical
- guidelines for selecting representative samples from populations.
- Revised Self-Review 8-1.
- Revised Statistics in Action about biased sampling.
- New section: "Sample Mean as a Random Variable."
- Revised example/solution demonstrating sampling, the sample mean as a random variable, and the meaning and interpretation of sampling error.
- New section: "Standard Error of the Mean."
- New Exercises 14, 15, and 16.
- Updated exercises 12, 13, 18, 19, 20, 21, 25, 26, 31, 32, 36.

CHAPTER 9: Estimation and Confidence Intervals

- Introduction now connects Chapter 8 to Chapter 9 by discussing how sample data are used to estimate population parameters.
- More emphasis placed on the margin of error in the calculation and interpretation of a confidence interval.
- Revised example/solution demonstrating the calculation and interpretation of a confidence interval estimating a population mean.
- Revised example/solution demonstrating the calculation and interpretation of a confidence interval estimating a population proportion.
- Revised example/solution demonstrating the margin of error in computing a sample size.
- Section "Finite-Population Correction Factor" emphasizes the effect of finite populations on the margin of error.
- New exercises 17, 41, 42, 43, 44, 45, 46.
- Updated exercises 5, 11, 12, 19, 22, 25, 32, 33, 35, 37, 41, 42, 43, 44, 45, 46, 47, 51, 52, 54, 55, 58, 61.

CHAPTER 10: One-Sample Tests of Hypothesis

- The chapter now relies on statistical software to compute p-values.
- Revised example/solution demonstrating the hypothesis testing procedure with added emphasis on the significance level and the Type I error probability.
- Revised Self-Review 10-1.
- Revised section titled: p-value in hypothesis testing.

- Revised Self-Review 10-2.
- Revised example/solutions demonstrating hypothesis testing with the t-statistic.
- New exercises 33 and 34.

CHAPTER 11: Two-Sample Tests of Hypothesis

- Revised explanation comparing independent and dependent sampling.
- Updated exercises 4 and 9.
- Exercises 17 through 46 are now structured with multi-item responses providing users with directed questions.

CHAPTER 12: Analysis of Variance

- Revised Self-Review 12-2.
- Revised Self-Review 12-3.
- Revised Self-Review 12-4.
- Updated exercises 1 through 6, 9, 10, 13, 14, 29, 30, 31, 32, 34, 35, 36, 39, 40, 41, 42, 43, 44, 45.
- New Statistics in Action illustrating ANOVA.

CHAPTER 13: Correlation and Linear Regression

- Chapter encourages users to compute p-values with statistical software including on-line p-value calculators.
- New exercises 17, 35, 41, 43.
- Updated exercises 36, 47, 48, 49, 51, 52, 57, 58, 59.

CHAPTER 14: Multiple Regression Analysis

- New Statistics in Action describing spurious correlation.
- Updated exercises 1, 2, 26, 27, 28, 30.

CHAPTER 15: Nonparametric Methods: Nominal

- Level Hypothesis Test
- Revised chapter face page.
- Revised example/solution testing two population proportions.
- New Exercises 24 and 46.
- Updated Exercise 31.

CHAPTER 16: Nonparametric Methods: Analysis of Ordinal Data

- Revised chapter face page.
- Deleted section "Using the Normal Approximation to the Binomial."
- Revised example/solution: Hypothesis test of the median
- Revised example/solution: Rank correlation.
- New Exercises 4, 5, 6, 21.
- Updated exercises 28 and 29.

CHAPTER 17: Index Numbers

Entire chapter is updated with current dates and data.

CHAPTER 18: Forecasting with Time Series Analysis

• Completely rewritten to focus on time series forecasting.

CHAPTER 19 Statistical Process Control and Quality Management

• Updated 2018 Malcolm Baldridge National Quality Award winners.

CHAPTER 20: An Introduction to Decision Theory

• Updated exercises.



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