

STAT 107 Business Statistics

Readings and Practice Exercises

The readings and practice exercises for the course are in the *Business Statistics, 3rd Edition* by Robert A. Donnelly, Jr. with special contributions by Serina Al Haddad and Stefan Ruediger. You must purchase MyStatLab (also referred to as MyLab Statistics) access in order to complete the MyStatLab assignments. Through MyStatLab, you may access the textbook and MyStatLab assignments as well as various resources including additional worked examples, videos, supplementary practice exercises, practice quizzes/tests, and the student solutions manual to accompany the textbook.

The practice exercises are the *Your Turn* problems in each section, the *Section Problems* at the end of each section, and the problems at the end of each chapter.

Chapter 1 An Introduction to Business Statistics

1.1 Business Statistics and Their Uses

Read pages 2 – 4.

1.2 Data

Read pages 4 – 12.

1.3 Branches of Statistics

Read pages 12 – 15.

1.4 Ethics and Statistics—It's a Dangerous World of Data Out There

Read pages 15 – 16.

Chapter Summary and Key Terms

Read pages 17 – 18.

Chapter 2 Displaying Descriptive Statistics

2.1 The Role Technology Plays in Statistics

Read pages 24 – 26.

2.2 Displaying Quantitative Data

Read pages 26 – 42.

2.3 Displaying Qualitative Data

Read pages 43 – 54.

2.4 Contingency Tables

Read pages 55 – 59.

2.5 Stem and Leaf Display

Read pages 60 – 61.

2.6 Scatter Plots

Read pages 62 – 67.

Chapter Summary and Key Terms

Read pages 68 – 69.

Chapter 3 Calculating Descriptive Statistics

3.1 Measures of Central Tendency

Read pages 79 – 91.

3.2 Measures of Variability

Read pages 93 – 101.

3.3 Using the Mean and Standard Deviation Together

Read pages 103 – 112.

3.4 Working with Grouped Data

Read pages 113 – 116.

3.5 Measures of Relative Position

Read pages 117 – 126.

3.6 Measures of Association Between Two Variables

Read pages 128 – 133.

Chapter Summary and Key Terms

Read pages 135 – 137.

Chapter 4 Introduction to Probabilities

4.1 An Introduction to Probabilities

Read pages 149 – 156.

4.2 Probability Rules for More Than One Event

Read pages 157 – 177.

4.3 Counting Principles

Read pages 180 – 186.

Chapter Summary and Key Terms

Read pages 187 – 188.

Chapter 5 Discrete Probability Distributions

5.1 Introduction to Discrete Probability Distributions

Read pages 200 – 210.

5.2 Binomial Distributions

Read pages 212 – 220.

5.3 Poisson Distributions

Read pages 222 – 229.

5.4 The Hypergeometric Distribution

Read pages 230 – 235.

Chapter Summary and Key Terms

Read pages 236 – 237.

Chapter 6 Continuous Probability Distributions

6.1 Continuous Random Variables

Read pages 249 – 251.

6.2 Normal Probability Distributions

Read pages 251 – 266.

6.3 Exponential Probability Distributions

Read pages 269 – 272.

6.4 Uniform Probability Distributions

Read pages 273 – 277.

Chapter Summary and Key Terms

Read pages 280 – 281.

Chapter 7 Sampling and Sampling Distributions

7.1 Why Sample?

Read pages 291 – 292.

7.2 Types of Sampling

Read pages 292 – 299.

7.3 Sampling and Nonsampling Errors

Read pages 299 – 302.

7.4 The Central Limit Theorem

Read pages 303 – 316.

7.5 The Sampling Distribution of the Proportion

Read pages 318 – 322.

Chapter Summary and Key Terms

Read pages 325 – 326.

Chapter 8 Confidence Intervals

8.1 Point Estimates

Read pages 336 – 337.

8.2 Calculating Confidence Intervals for the Mean When the Standard Deviation (σ) of a Population is Known

Read pages 337 – 347.

8.3 Calculating Confidence Intervals for the Mean When the Standard Deviation (σ) of a Population is Unknown

Read pages 349 – 354.

8.4 Calculating Confidence Intervals for Proportions

Read pages 355 – 358.

8.5 Determining the Sample Size

Read pages 359 – 363.

8.6 Calculating Confidence Intervals for Finite Populations

Read pages 364 – 367.

Chapter Summary and Key Terms

Read pages 368 – 369.

Chapter 9 Hypothesis Testing for a Single Population

9.1 An Introduction to Hypothesis Testing

Read pages 381 – 387.

9.2 Hypothesis Testing for the Population Mean When σ is Known

Read pages 388 – 398.

9.3 Hypothesis Testing for the Population Mean When σ is Unknown

Read pages 400 – 405.

9.4 Hypothesis Testing for the Proportion of a Population
Read pages 407 – 409.

9.5 Type II Errors
Read pages 411 – 417.

Chapter Summary and Key Terms
Read pages 420 – 421.

Chapter 10 Hypothesis Tests Comparing Two Populations

10.1 Comparing Two Means with Known Standard Deviations

- Independent Samples
 - Known Population Standard Deviations (σ_1 and σ_2)
- Read pages 433 – 441.

10.2 Comparing Two Population Means with

- Independent Samples
 - Unknown Population Standard Deviations (σ_1 and σ_2)
- Read pages 442 – 457.

10.3 Hypothesis Testing with Dependent Samples
Read pages 460 – 468.

10.4 Comparing Two Population Proportions with Independent Samples
Read pages 470 – 475.

Chapter Summary and Key Terms
Read pages 478 – 479.

Chapter 14 Correlation and Simple Linear Regression

14.1 Dependent and Independent Variables
Read page 642

14.2 Correlation Analysis
Read pages 642 – 648.

14.3 Simple Linear Regression Analysis
Read pages 649 – 662.

14.4 Using a Regression to Make a Prediction
Read pages 664 – 668.

14.5 Testing the Significance of the Slope of the Regression Formula

Read pages 669 – 672.

14.6 Assumptions for Regression Analysis

Read pages 674 – 677.

14.7 A Simple Regression Example with a Negative Correlation

Read pages 677 – 684.

14.8 Some Final (but Very Important) Thoughts

Read page 687

Chapter Summary and Key Terms

Read pages 688 – 689.