Solutions for Business Statistics 3rd Edition by Donnelly

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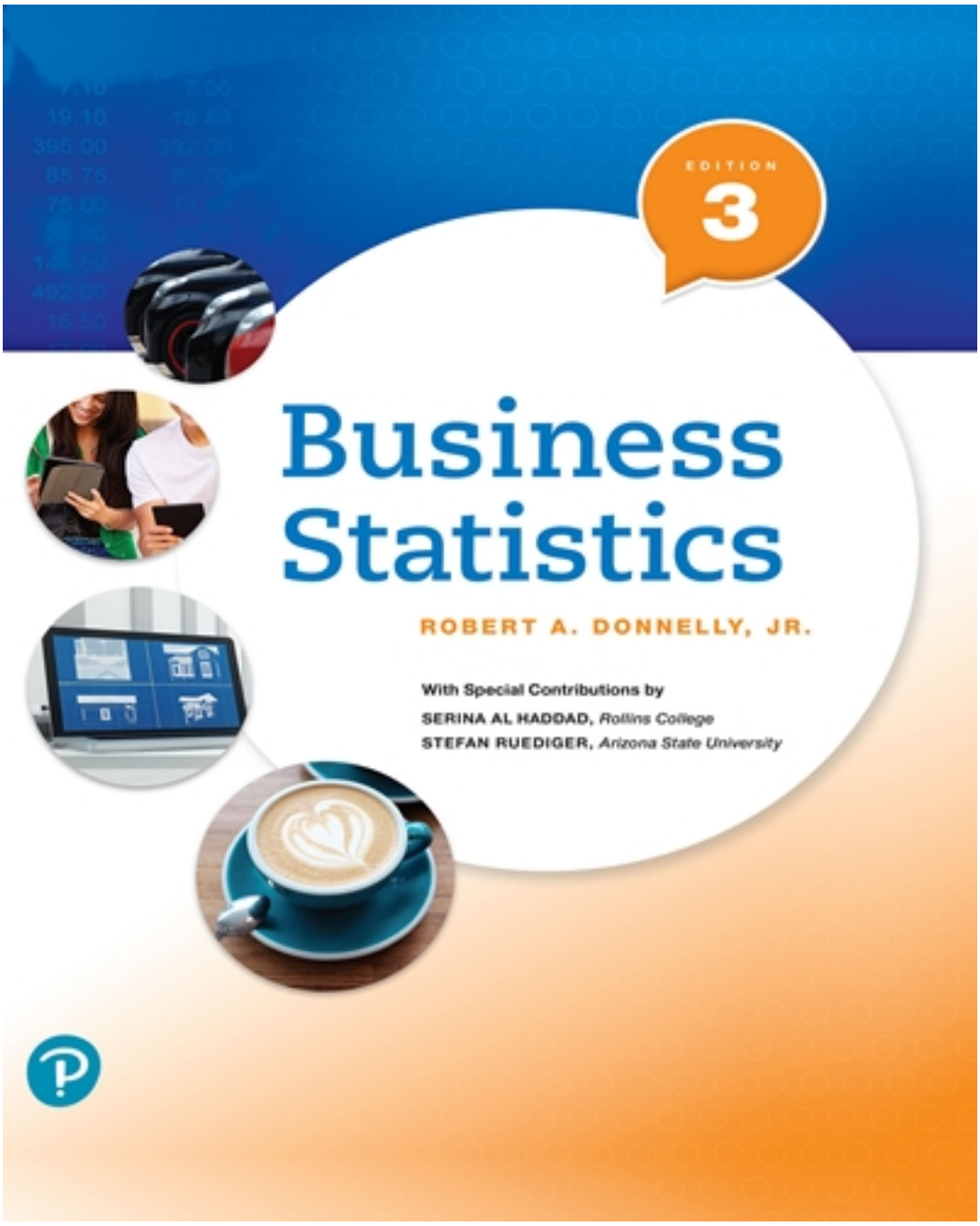

Solutions

CHAPTER 1
An Introduction to Business Statistics

1.1 Quantitative/Interval. The differences between average monthly temperatures are meaningful, but there is no true zero point, i.e., absence of temperature.

1.2 Quantitative/Ratio. The differences between average monthly rainfalls are meaningful, and there is a true zero point, because there may be a month without any rainfalls.

1.3 Qualitative/Ordinal. You can rank education level, but the differences between different educational levels cannot be measured.

1.4 Qualitative/Nominal. The marital status is just a label without a meaningful difference, or ranking.

1.5 Quantitative/Ratio. The differences between ages of respondents are meaningful and there is a true zero point: an age of the respondents that equals zero represents the absence of age.

1.6 Qualitative/Nominal. The genders are merely labels with no ranking or meaningful difference.

1.7 Quantitative/Interval. The differences between birth years are meaningful, but there is no true zero point with calendar years.

1.8 Qualitative/ Nominal. The political affiliations are merely labels with no ranking or meaningful difference.

1.9 Qualitative/ Nominal. The races of the respondents are merely labels with no ranking or meaningful difference.

1.10 Qualitative/ Ordinal. You can rank the performance rating, but the differences between different performance ratings cannot be measured.

1.11 Qualitative/ Nominal. The uniform numbers of each member of the school's sport team are labels with no ranking or meaningful difference.

1.12 Qualitative/ordinal. The differences in the data values between class ranks are not meaningful.

1.13 Quantitative/Ratio. The differences between final exam scores for your statistics class are meaningful, and there is a true zero point because a student who did not take the exam would have a score of zero.

1.14 Qualitative/Nominal. The state in which the respondents in a survey reside is a label and it is meaningless to talk about the rating of this value.

1.15 Quantitative/Interval. The differences between SAT scores for graduating high school students are meaningful, but there is no true zero point because a student with an SAT score equal to zero does not indicate the absence of a score.

1.16 Qualitative/Ordinal. You can rank movie ratings, but the differences between different ratings cannot be measured.

1.17 Qualitative/ordinal. The differences in the data values between ratings are not meaningful.

1.18 Qualitative/ordinal. The differences in the data values between ratings are not meaningful.

1.19 Cross-sectional

1.20 Time series

1.21 Time series: Men weekly earnings over the five years.
Time series: Women weekly earnings over the five years.

1.22 Cross-sectional data: Men and women workers weekly earnings for any one particular year.

1.23 Cross-sectional: The number of 8x10, 11x14 and 13x19 prints sold over a particular year.

1.24 Time series: the number of 8x10 prints sold over the four years.
Time series: the number of 11x14 prints sold over the four years.
Time series: the number of 13x19 prints sold over the four years.

1.25 Descriptive statistics, because it identifies a sample mean.

1.26 Inferential statistics, because the statements about comparing the average costs of a hotel room in two states was based on results from samples taken from two populations.

1.27 Inferential statistics, because it would not be feasible to get the credit card debt from every graduate student in the country. These results would be based on a sample of the population used to make an inference about the entire population.

1.28 Descriptive statistics, because we summarize reviewer scores without going into inference.

1.29 Inferential statistics, because it would not be feasible to survey every American in the country. These results are based on a sample of the population used to make an inference on the entire population.

1.30 Descriptive statistics, because this percentage represents the proportion of a specific group of customers arriving before 6 PM and is not making an inference about the entire population of customers.