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The Mathematics of Description

9.1 Information Design

- ▶ Use stacked area graphs to represent the changing parts of a whole.
- ▶ Use a radar graph and an area graph to represent data.
- ▶ Graphically represent data sets that have several variables.

9.2 Describing “Average”

- ▶ Use mean, median, and mode to describe the average value of a data set.
- ▶ Read and understand box-and-whisker plots and histograms.
- ▶ Understand the effect of outliers on averages.

9.3 Describing Dispersion

- ▶ Use standard deviation to describe the dispersion of a data set.
- ▶ Use standard deviation to describe a data set that is normally distributed.
- ▶ Compare different types of distributions.

9.4 Describing by Sampling

- ▶ Use a randomly chosen sample to describe a population.
- ▶ Determine whether a sample is representative of a population.
- ▶ Determine a sample size to obtain valid inferences.