



Intro to Stats

Graphing Data

The Use of Figures

- ▶ Visual representations of data are much easier to interpret than raw data or descriptive statistics
- ▶ Look at the '10 ways to a great figure' in your book! (pg. 49)

Frequency Distributions

- ▶ Represents how often scores occur
- ▶ Scores grouped into ranges of numbers

- ▶ First, choose a class interval
- ▶ Second, count the number of scores in each interval
- ▶ Third, put the information in a table or figure

Choose a Class Interval

- ▶ A range of numbers to be used in a frequency distribution

- 1. Select class intervals that have meaning (A,B, etc. for grades) and/or easily interpreted numbers (5,10,20)
- 2. Select interval that will allow 10–20 to cover all data
- 3. Start list with multiple of interval (e.g., 0)
- 4. Largest interval is placed at the top of the frequency distribution

Creating a Histogram

- ▶ Visual representation of frequency distribution
- ▶ The frequencies are the bars

Skewness

- ▶ Measure of lack of symmetry (a long tail)
- ▶ Positive or negative in the direction of the tail

- ▶ Mean $>$ Median, then positive skew
- ▶ Mean $<$ Median, then negative skew

Kurtosis

- ▶ The flatness of the distribution
- ▶ Platykurtic – flat relative to a bell
- ▶ Leptokurtic – peaked relative to a bell

Column Charts / Bar Graph

- ▶ Used to compare the frequency of different categories
- ▶ Categories on X, frequency/number on Y

Column Charts / Bar Graph

- ▶ Between group comparisons of means

Line Charts / Line Graph

- ▶ Used to show trends in the data

Pie Chart

