

## Chapter 7: Scatterplots, Association, and Correlation



### Key Vocabulary:

- scatterplot
- association
- direction
- form
- scatter
- explanatory variable
- response variable
- correlation coefficient

### Calculator Skills:

- r-value
- linear regression
- make a scatterplot

1. What type of graph is used to show the relationship between two quantitative variables?
2. When describing a *scatterplot*, what four things should you always mention?
3. What is meant by an *explanatory variable*?
4. What is meant by a *response variable*?
5. What does *correlation* measure?
6. Explain the difference between *association* and *correlation*?
7. What three conditions are necessary in order to use *correlation* as a measure of *association*?
8. What does the sign of the *correlation coefficient* tell you about the association?
9. What does a *correlation* near 1 or  $-1$  indicate?

10. What does a *correlation* near 0 indicate?
11. Sketch an example of a scatterplot that shows two variables with a strong *association* but a weak *correlation*.
12. Is correlation *resistant* or *nonresistant* to outliers? Explain.

