Data and Chance notes
Chapter 14 and 15

Below are terms from the readings. Write definitions and examples in the spaces provided. Answer the questions where indicated.

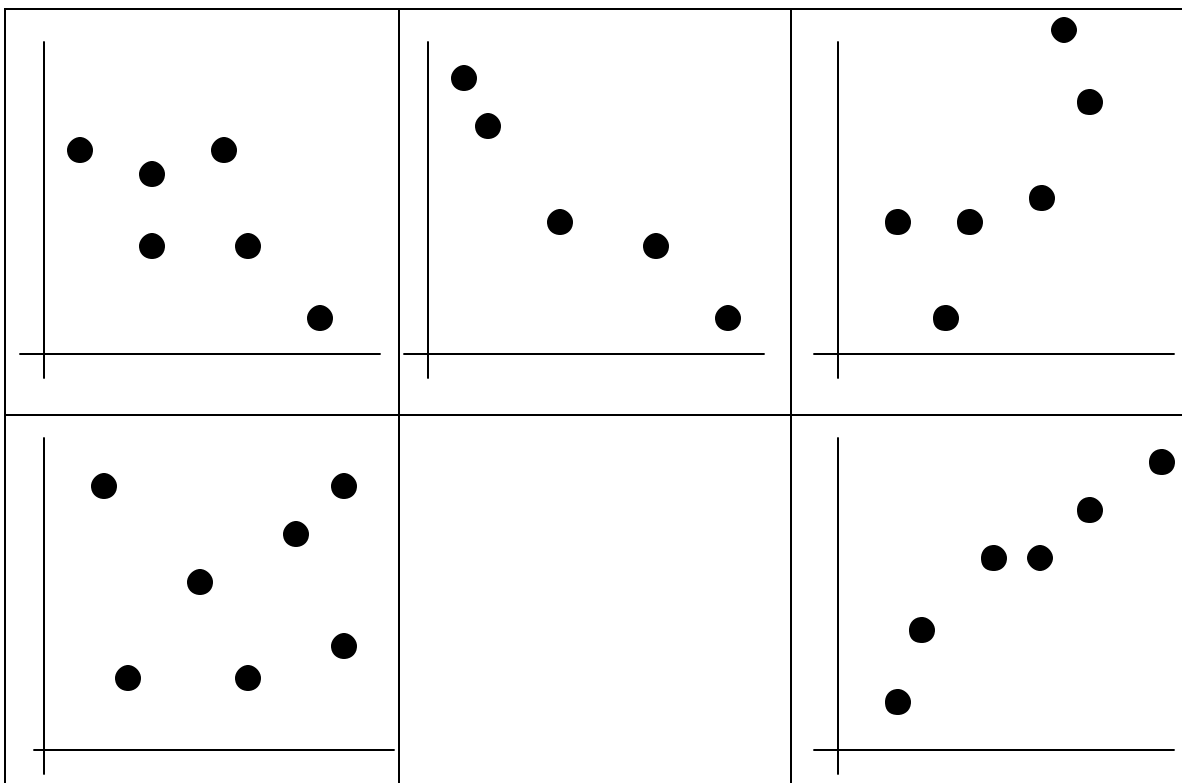**Chapter 14: Describing relationships: Scatterplots and correlation**

Draw a scatterplot where the variables (*x* and *y*) are **positively correlated**. Notice as the *x* values increase, the *y* values increase.

Draw a scatterplot where the variables (*x* and *y*) are **negatively correlated**. Notice as the *x* values increase, the *y* values decrease.

What are the possible values of *r*, the **correlation coefficient**? What does *r* measure?

What does it mean for the correlation coefficient to be negative? Positive? Zero?

For the following scatterplots, decide which of the following values of r best match each scatterplot. Values of r: -.8, -.5, 0, .5, .8

Chapter 15: Describing relationships: Regression, prediction, and causation

Draw in a **regression line** for the following scatterplot. What is the line (and its equation) supposed to show us?
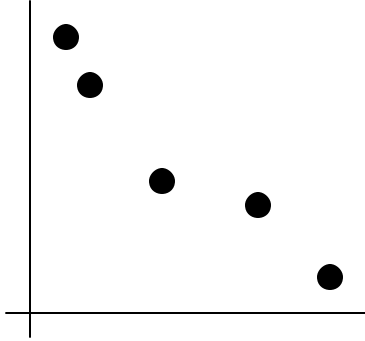
What does the square of the correlation tell us? You might want to site an example.

What does it mean to say "correlation does not imply causation"?