Lesson 21: Describing Bivariate Data: Scatterplots, Correlation, and Covariance

Preparation

Directions: Please fill in Part I as you study the Reading Assignment. Once you finish the reading, complete the questions on Part II. You may use your notes, the key, and the help videos. Be sure to take this completed assignment to your group meeting where you can ask and help answer questions on this assignment.

Problems

Part I: Use the information in the reading assignment to complete these questions.

1. Describe the role of the correlation coefficient. What does it measure? What are its bounds?

2. Sketch a graph of 10 (x,y) coordinates on an x-y plane where the data have a strong linear positive correlation.

Part II: To answer the following questions, use the Gharial Crocodiles Data.

3. The Correlation Coefficient between Head Length and Body Length of the Gharial Crocodiles is:

4. Does this correlation show a strong, moderate, or weak relationship between Head Lenght and Body Length of the Gharial Crocodiles?

5. Create a scatter plot representing the relationship between Head Length and Body Length of the Gharial Crocodiles. Paste your scatter plot below:

6. Discuss the relationship you see in the scatter plot between the two sets of bivariate data for the Gharial Crocodile.