Stat 204 Quiz 3 Name:

1. The GPAs of the 345 students in the ***StudentSurvey*** dataset had an average of $\bar{x} = 3.16$ and a standard deviation of $s = 0.4$.

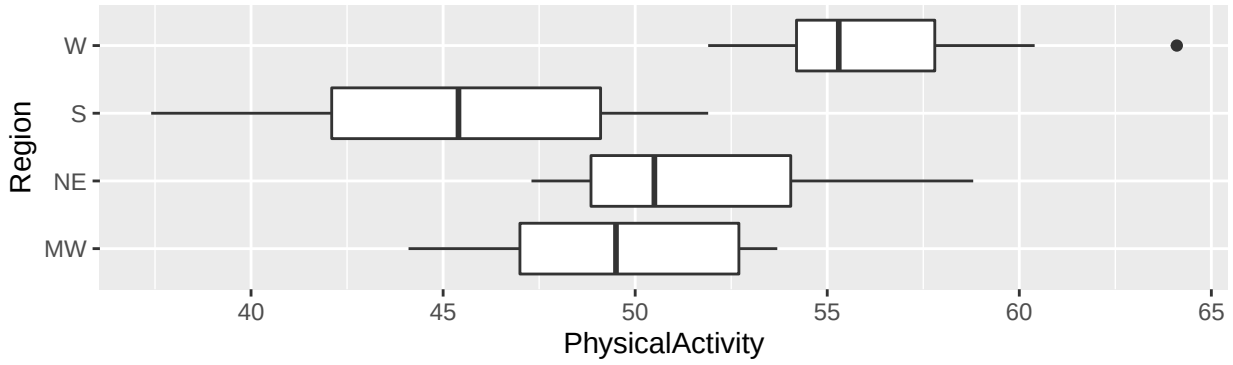
a. Compute the z-score for a 2.5 GPA.

b. Approximate the percentile rank for a 3.6 GPA.

c. About what percentage of the GPAs in this dataset are likely between 2.8 and 3.6?

d. Determine an interval of GPAs that likely contains about 95% of the GPAs in this dataset.

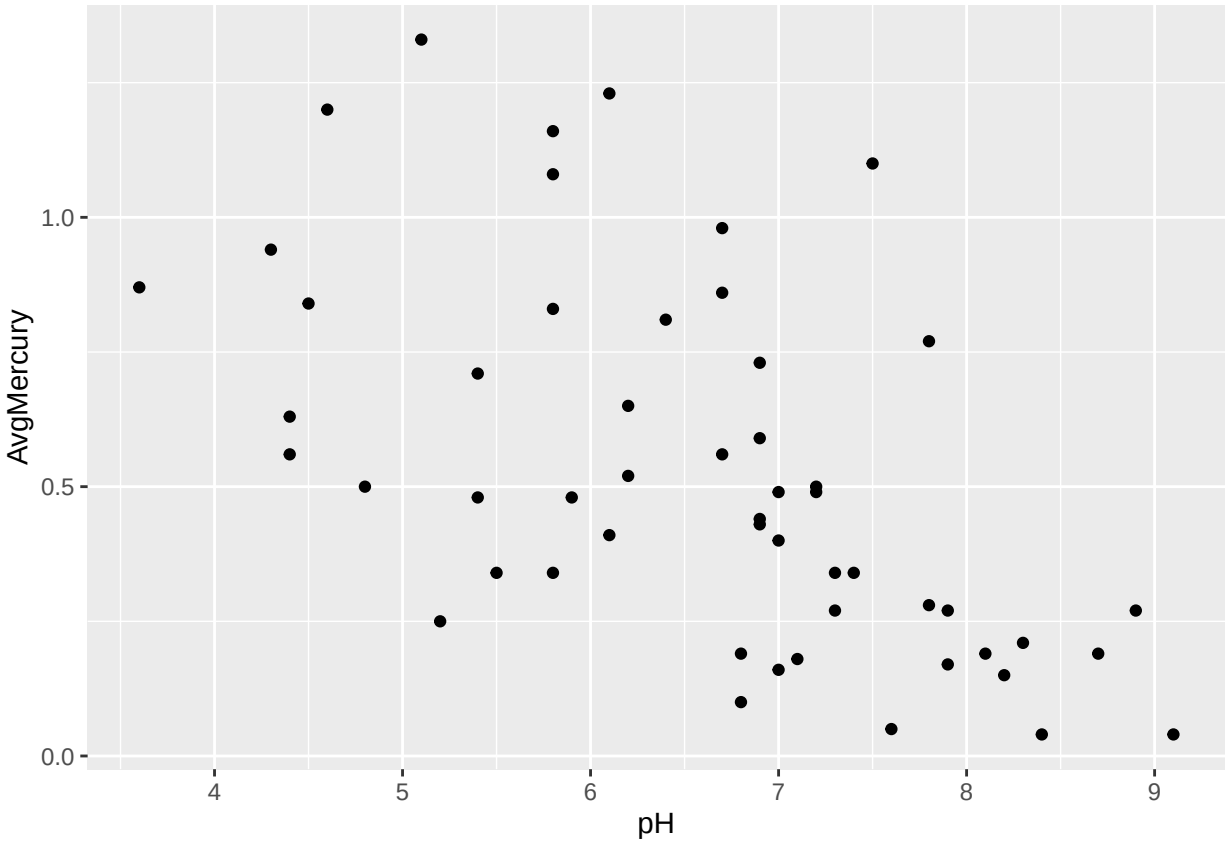
2. The ***USStates*** dataset includes the columns *Activity*, the percentage of people in each state who engage in at least 150 minutes of physical activity per week, and *Region*, the region of the country in which the state is located (West, South, Northeast, Midwest).



a. Which region shows the lowest level of physical activity? Estimate the median activity level for this region.

b. Which region shows the highest level of physical activity? Estimate the median activity level for this region.

3. Here is a scatterplot of the average mercury and pH levels of 53 lakes in Florida (taken from the aptly named ***FloridaLakes*** dataset):



a. Which of the following is the correlation between these two variables? Circle your choice.

-0.925 -0.575 -0.115 0.115 0.575 0.925

b. Explain your choice and what it says about the relationship between these two variables.