**Research Questions**

**1. There are many variables in the Student Data set (Stat\_Grades.sav) that can be used to describe the students in the class. Consider the variable “Ethnicity” and answer the following questions:**

 **a. Using the Variable View in SPSS, write out how each ethnicity is labeled and note how many ethnic groups are included.**

 **b. What type of data does the “Ethnicity” variable represent? Is the data discrete or continuous? How can you tell? Is the data qualitative or quantitative? How can you tell? Is the data nominal, ordinal, ratio, or interval? How can you tell?**

 **c. Which descriptive numerical measure best describes the variable Ethnicity? Use SPSS to output ONLY that one numerical measure. Include it here. Why is that numerical measure the most appropriate? What information does that measure tell you about the students in the Statistics Class (Stat\_Grades.sav)?**

 **d. Which descriptive numerical measure is LEAST appropriate to describe the variable Ethnicity? Use SPSS to output ONLY that one numerical measure. Include it here. Why is that numerical measure the least appropriate? What information does that measure tell you about the students in the Statistics Class (Stat\_Grades.sav)?**

 **e. Choose the most appropriate graph to represent the variable ethnicity. Create the graph in SPSS and include it here. Be sure the graph is fully labeled. Discuss why you chose this graph type and what it tells you about the students in the class.**

**2. There are many variables in the Student Data set (Stat\_Grades.sav) that can be used to describe the students in the class. Consider the variable “Previous GPA” and answer the following questions:**

 **a. What type of data does the “Previous GPA” variable represent? Is the data discrete or continuous? How can you tell? Is the data qualitative or quantitative? How can you tell? Is the data nominal, ordinal, ratio, or interval? How can you tell?**

 **b. Which descriptive numerical measure best describes the variable Previous GPA? Use SPSS to output ONLY that one numerical measure. Include it here. Why is that numerical measure the most appropriate? What information does that measure tell you about the students in the Statistics Class (Stat\_Grades.sav)?**

 **c. Which descriptive numerical measure is LEAST appropriate to describe the variable Previous GPA? Use SPSS to output ONLY that one numerical measure. Include it here. Why is that numerical measure the least appropriate? What information does that measure tell you about the students in the Statistics Class (Stat\_Grades.sav)?**

 **d. Choose the most appropriate graph to represent the variable Previous GPA. Create the graph in SPSS and include it here. Be sure the graph is fully labeled. Discuss why you chose this graph type and what it tells you about the students in the class. Why is a Pie Graph an inappropriate option? Create a Pie Graph in SPSS and include it here. Compare both graphs and discuss why one graph is more appropriate than the other.**

**3. Choose any two other appropriate variables in the class (Stat\_Grades.sav) and use both to evaluate, describe, and discuss how the students are performing in the statistics class. Include both numerical measures and graphs in your conclusions and discussion.**