PSY 3392 – Research Design & Analysis
Application & Statistics Assignment: Chapter 7

For this assignment, we are going to focus on learning to reverse-code data in an Excel spreadsheet, calculate a scale total using an Excel formula, conduct a correlation analysis using both Excel and JASP, and write up an APA-style results section. To complete this assignment, watch the videos posted with this week's materials, review the materials provided on eLearning, then follow the instructions below.

Research Question: Is there a relationship between GPA and students' perceived student academic achievement?

Thirty students were asked to self-report their GPA and to fill out a Student Achievement Scale (SAS). The SAS consists of 5 questions on a Likert scale from 1-5. Questions 2 and 4 must be reverse-coded before being added to the total SAS score for each participant. A higher total SAS score indicates higher perceived student academic achievement. (This is a fictional study.)

1. Open the file titled "Chapter 7 – A&S Sample Data (Correlation).csv".

2. Insert columns next to questions 2 and 4.

3. Write a formula to reverse code questions 2 and 4 for all 30 participants.

4. Write a formula to calculate the total Student Achievement Scale score for each participant, including the reverse-coded questions in place of the original ones. *(In other words, include questions 1, 2R, 3, 4R, and 5.)*

5. Calculate the mean and standard deviation for the GPA and SAS score variables in Excel.

6. Calculate the correlation coefficient for the relationship between GPA and SAS score using a formula in Excel.

7. Make a scatterplot in Excel with all labels and a title. Copy and paste your table into a Word document.

8. Type your name somewhere clearly visible in the Excel spreadsheet. (Make it obvious.)

9. Take a screen shot of your Excel spreadsheet and paste it in the same Word document you created in step 7. (You will be including it at the end of your write-up just like you did in Chapter 6.)

10. Save your spreadsheet. You will need it in the next part of the assignment.

11. Open JASP.

12. Open the same data file (with your changes) within JASP.

13. Run a correlation analysis in JASP, including descriptive statistics.

14. Copy and paste your output into the same Word document.

15. Write up your results in an APA formatted document.
    a) Page 1: Title page
    b) Page 2: Written results section
    c) Page 3: Figure 1 (Scatterplot) *Include the properly formatted title and description.*
    d) Page 4: Screenshot of Excel work and calculations from step 9 *(No need for a title or description on this one—just the screenshot is sufficient.)*
    e) Page 5: JASP output *(No need for a title or description—just the screenshot.)*