SOCL 300: USING STATISTICS IN SOCIOLOGY
COMPUTER ASSIGNMENT 3.

Please answer the following questions. You should type and double-space your answers. Your tables should be professionally done. Constitute them in such way that they look like they are meant for publication. Remember to clearly label your tables.

Use GSS98PFP_data set found on my website to answer the following questions.

1. Use SPSS to calculate the mean and standard deviation (standard error) for two interval-ratio variables of your choice from the GSS98PFP_data by selecting 25 percent, 50 percent, and 75 percent samples. Compare your descriptive statistics from these samples with descriptive statistics for the entire sample. What can you say about the accuracy of your random samples compared to the entire sample?

Create an appropriate table to represent your results. Your table must be properly and professionally constituted. A shoddy job will result in loss of valuable points.

(Point allocation: correct choice of interval-ratio variables (6 points), correctly formatted and labeled table with correct values (5 points), correct interpretation of the results (19 points).

2a. Examine the frequency distribution of the variable HRS1 (number of hours worked last week). What is the mean and standard deviation for this variable? (5 points).

b. Find the Z scores for the variable HRS1 for someone who worked 20, 40, 60 hours last week by hand (Must show your work clearly). You are free to present this part of the question in hand writing. (15 points)

c. Create histograms for HRS1 and the new variable ZHRS1. Explain why the two histograms have the same shape. (15 points)

3. Do males and females report the same average hours of television watching per day (TVHOURS)? Use the GSS98PFP_to investigate this question. State the null and the research hypothesis both in notation and in words. Perform a two-tailed t-test at the .05 alpha level. Write a brief statement describing your findings and conclusion and suggest several causes for the results.

Create an appropriate table to represent your results. All you need for this question is the mean, standard deviation, and N, for both male and female. Under the table, provide the t-statistic, degrees of freedom and the p-value. Your table must be properly and professionally constituted. A shoddy job will result in loss of valuable points.

(Point allocation: correctly stated null and research hypothesis (8 points), correctly formatted and labeled table with correct values (7 points), correct interpretation of the results (20 points).
COMPUTER INSTRUCTIONS

QUESTION 1
Click on Data from the main menu, then on Select Cases. The opening dialog box has four choices. Click on Random Sample of Cases button, then on the Sample button. A dialog box opens, type the value of the percentage you want in the box after Approximately. This tells the computer to analyze the percentage specified of all the cases. Click Continue then OK. After this, click analyze, then descriptive statistics, then descriptive. Highlight the variable you have chosen and click it into the Variable window. Click on Options located at the bottom of the Window and click on Mean, Standard Deviation and Standard Error (S.E. mean). Click Continue then OK. Repeat the same process for the other percentages. Remember to go back to data, select cases, and click on all cases to revert to the entire sample in order to calculate statistics for the entire sample. Remember also that if you don’t revert back to the entire sample, your answers to questions two and three will be based on the reduced sample. You want to avoid this!!!! You have to revert the data back to the entire sample before proceeding to the next question.

QUESTION 2
For parts (a) and (c), Click Analyze, Descriptive Statistics, then Descriptives. Place HRS1 in the Variable box. Click on the check box in the bottom left corner where “Save standardized values as variables” is written. This tells SPSS to create Z scores, as a new variable. The new variable has a new name ZHRS1 and appears not in the output, but is placed in a new column in the data editor. If you scroll down to the end of the variable window, you will see a variable named ZHRS1 (Z-score: Number of hours worked last week). This is the new variable that has been created. You can use this new variable for further analysis. The output lists only the mean, standard deviation, in addition to minimum and maximum values and number of valid cases.

For part (d), click Graphs, then Histogram. Click and move HRS1 into the variable window. Click on the box before Display normal curve. Click OK. Do the same for the variable ZHRS1.

Cut and paste these graphs into your text so that I can see them as I read your explanation. All you need to do is click on the graph in the output window, this highlights it, then click Edit, and Cut. After this, open up your Word Processor, click Edit and then Paste the graph in the appropriate location.

QUESTION 3
Click Analyze, Compare Means, Independent-sample t-test. Move the variable TVHOURS into the Test Variable Window and move the variable SEX into the grouping variable window. Click on Define Groups, located under the grouping variable. Type 1
in the space provided after group1 and 2 in space after group2. This basically helps distinguish men and women. Click Continue then OK.

Note:

a) Hand in your computer printouts.
b) Make sure you edit your work before handing it in.
c) No late assignments will be accepted.