**Sociology 3155– Quantitative Research Methods & Analysis  
Homework #1 (WORK IN A GROUP OF 2-3)  
Due Tuesday, Sept. 21 at the beginning of class  
25 POINTS  
NOTE: PLEASE TYPE ALL ANSWERS & ATTACH TABLES ANALYZED & SPSS OUTPUT**

**PART A (10 points)**

1. Using the terminology presented in class, explain the difference between a concept and a variable. What does it mean to operationalize a concept? (2 pts)

2. Identify the level of measurement of the following variables (3 pts):

a. Number of months spent on welfare  
b. Population of a state  
c. Level of satisfaction (on a scale of 1-5) with Gov Pawlenty  
d. Major in school  
e . Astrological sign  
f . How strongly (on a scale of 1-5) you agree with the statement, "The best way to deal with the drug problem is to legalize all drugs."

3. Professor Pointyhead does a survey of all the students in his soc 3155 class. He wishes to determine whether the number of hours spent studying for an exam predicts exam performance. (3 pts)

a. What is the independent variable?  
b. What is the dependent variable?  
c. What is the level of measurement for “number of hours spent studying?”   
d. Operationalize “exam performance” so that it is measured at the nominal, ordinal, and   
interval-ratio levels.

4. Use the following table of data collected from the University Rhode Island-Quahog. Students across different majors were asked whether or not they like the T.V. show, “Family Guy.” (2 pts)

|  |  |  |  |
| --- | --- | --- | --- |
| **Major** | **Dislike Family Guy** | **Like Family Guy** | **TOTALS** |
| Humanities | 55 | 110 | **165** |
| Social Sciences | 10 | 200 | **210** |
| Natural Sciences | 111 | 82 | **193** |
| Business | 104 | 22 | **126** |
| Nursing | 204 | 18 | **222** |
| Education | 85 | 92 | **177** |
| **TOTALS** | **569** | **524** | **1093** |

a. What percent of social science majors like Family Guy?

b. What proportion of nursing majors like Family Guy?

c. For Humanities, what is the ratio of people who like Family Guy to people who dislike Family Guy?

d. Of all of the people who like Family Guy, what percent are Business majors?

**PART B (5 points)**

Using the Internet, select and interpret one table from either of the following Web sites:

* The Minnesota Department of Administration's "Minnesota Milestones" page: <http://server.admin.state.mn.us/mm/goal.html>
* The Sourcebook for Criminal Justice Statistics: [http://www.albany.edu/sourcebook/](http://www.albany.edu/sourcebook)

**Using complete sentences**, answer the following questions:

1. Describe the contents of the table. Where are the data that it contains from, and who collected it (for example, the U.S. Census Bureau)? What time period do the data cover? What is the population that it represents (for example, all adult Minnesotans, college students nationwide, etc.)? If the information is given, provide the sample size or population size on which the data are based.
2. Briefly discuss who might be interested in the contents of the table, and why they might be interested. To help you answer this question, consider who might interested in the policy area that your table deals with.
3. For each variable in the table (the table you find will contain at least two variables, but some may contain many more), name it and identify its level of measurement.

***Please attach to your homework a copy of the table you used for this assignment.***

**PART C, SPSS (10 points):  
  
To complete the following, you first will need to access the General Social Survey 2006 data set, which you can download from the web site for this class:**

<http://www.d.umn.edu/~jmaahs/> (Click on 3155 link--the data set is on the table on right side)

Use SPSS to create a frequency table for the variables DEGREE ("RS HIGHEST DEGREE") and GRASS ("SHOULD MARIJUANA BE MADE LEGAL"). Refer to the frequency table to answer the following questions. (**HINT:** Focus on the information in the "Frequency," "Valid Percent" and "Cumulative Percent" columns.) Note: "LT HIGH SCHOOL" means "less than high school."  
  
1) What percent of respondents' highest degree earned is a bachelor's degree?  
2) What percent of respondents earned a junior college degree or less?  
3) What is the ratio of respondents who favor legalizing marijuana to those who are against legalizing it?  
4) Referring to the frequency table for GRASS, why are the percentages in the "Percent" and "Valid Percent" columns so different?

Use SPSS to recode DEGREE ("RS HIGHEST DEGREE") so that it is a 3 category variable, with the attributes “less than high school,” “high school,” and “more than high school.” Create a frequency distribution (make sure the variables are constructed and labeled properly so that the frequency distribution can be interpreted).   
  
***Please remember to hand in a copy of the SPSS output that you created for this part of the assignment. Also remember than you can “clean up” the output to remove unwanted syntax or report. In other words, make your output neat/concise.***