Midterm exam, NSG 817. 10/6/20. Due 10/14/20 by 1159pm

1. Name 5 nominal variables that you might use in an anesthesia study (5 points)
2. Name 5 interval variables that you might use in an anesthesia study (5 points)

The following questions are based on the attached data set looking at an elderly population & their medical problems. Using the data, answer the following (you will need to recode variables in order to run some of these analyses):

1. Researchers are interested in the relationship between BMI & education. They think there may be a difference in BMI between those who graduated high school & those who did not. Run an appropriate test to determine this, & report on the results. The researchers did not undertake an a priori power analysis, & are uncertain as to whether their study had a good sample size for the tests they ran. What information would they need to determine sample size for a future study (I am not asking for a calculation, just the factors involved)? (20 points)
2. Similarly, they have historical data that suggests height tends to decrease with age in elderly populations, but would like to analyze this hypothesis more methodically with their results. Run an appropriate test to determine if there is a negative relationship between height & age, & report on the results. (20 points)
3. A subgroup of the original researchers wants to know if there is a difference between BMI of different racial groups/ethnicities. Run an appropriate test to determine this, & comment on the results. As you will notice from your results, three of the groups are determined to have less than 5 members, so the researchers decide to examine only African American, White & Hispanic groups. Re-run the test & use post-hoc statistics to determine where the difference, if any, arises. Comment on your results. (30 points)
4. Next year, the researchers come back to their data to look at the relationship between race & marital status. They want to know more precisely how Whites & African Americans compare in their rates of divorce. Using SPSS, calculate the Odds Ratio that compares these two groups in the manner described. Show your results & comment on them. (20 points)

Some notes on creating/recoding variables.

In general, you will go to Transform>Recode into new variable, then drag in the variable you are starting with. Select old-new values, & type in the old value (eg “1”), & then put the new value (could be the same or different). Then give your new variable a name. If you want to select just 2 of the values (eg married, divorced), just don’t include the other values! Also, after you have created the variable, remember to add the new values in the variable view of your spreadsheet or your output will be confusing…

You can also (hypothetically speaking..) create a new variable by adding two variables together. For that case, you will first make a new variable in your data spreadsheet. Just select an empty box under the other variables & type in a name. Then select Compute variable>select target variable, then put your new variable (from the list) into that box. Now use the numeric expression box to tell SPSS how to calculate it eg Weight + Ht.