Statistical Computing Homework: Intro to SAS

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1 Enroll Subjects

First, create a dataset with subject ID numbers for 75 subjects. Make ID=1 to 75.

2 Get Baseline Information

Now, we're going to assign genders and weights to these 75 subjects. Use a uniform random variable with *seed=15* to assign genders. Assume the genders are equally likely (each having a 50% probability of occurring). Gender=0 means female, Gender=1 means male. Now, assign baseline weights (weight1) to each subject. Assume weight1 is distributed as normal (μ=165, σ^2=25) for women, and normal(μ=210, σ^2=25) for men. *Use seed=15 for these random number generations.*

3 Treatment Effect

Use a uniform random variable with *seed=20* to determine treatment allocation. If the random variable is <1/3, then treatment group is 0 (placebo). Otherwise, treatment group is 1 (active treatment). Simulate a treatment effect by creating a weight2 variable, where weight2=weight1-weightloss. Assume weightloss is distributed as normal (μ=2, σ^2=4) for placebo subjects, and normal(μ=5, σ^2=4) for active treatment subjects. *Use seed=15 for these random number generations.*

4 Create a Permanent Dataset and Formats

Format the gender and treatment variables appropriately. Store the dataset in a permanent library, with the name of your choice. Eliminate any of the random variables you used to create gender, weight, or treatment assignment so that only relevant information is in this dataset. Also delete the weightloss variable. Print the first 5 observations from the dataset.

5 Subset Active Treatment Group

You're curious about the members of the active treatment group. Subset the previous dataset to include just active treatment subjects. Now, convert this dataset from short form to long form (multiple observations per subject). Only keep ID, visit, and weight. Print the first 10 observations.

Submit your SAS code and *only* the 2 requested printouts above (the first 5 observations from Problem 4 and the first 10 observations from Problem 5). Use ODS to output these prints, and copy them into a single file for submission. Remember, formatting is as important as the material presented! Submission of messy or excess SAS output will result in deduction of points.