Lab 1

Stat 426

2021

Instructions

Complete all questions. To prepare for the randomly collected lab, follow the instructions on the class website to prepare the work for submission. These submission rules will apply to all labs throughout the semester.

(1) Customize the appearance and functionality of the Enhanced Editor. There is no work to show for this question
   (a) Make sure an Editor window is active and then go to Tools, Options, Enhanced Editor. Select the Appearance tab to modify font types and sizes (this is where I increased the font size in class)
   (b) In the Help menu (icon is a little book), look up documentation for the Enhanced Editor. As a hint, it is located in the folder 'Using SAS Software in Your Operating Environment'

(2) Evaluate the following (yes, :-) with SAS; either in a dataset or `_null_` DATA step)
   (a) $\frac{93^3-164}{46^3+189}$
   (b) $376 - \frac{23^2}{4}$
   (c) $\frac{59+48^2}{-9+22^2} - \frac{-16+55^2}{13+29^2}$
   (d) $18^4 - 16^3 + 14^2 - 12$
   (e) $3^x \ for \ x = 1, 2, \ldots, 20$
   (f) $5^x \ for \ x = 1, 2, \ldots, 10$

(3) The following code is for a dataset that is annual measurements of the level of Lake Huron (in feet) from 1875-1972.
   (a) Copy, paste and run the provided code for you to read in the dataset (we will learn more about it soon). You can rename the `lake` and `time` variables if you want in the INPUT statement. Use PROC SGPLOT to make the following graphs
   (b) Construct a scatterplot of the level of Lake Huron (in feet) from 1875-1972 (remember timeplots are all about time... as in it is the independent variable)
   (c) Construct a timeseries plot of the level of Lake Huron (in feet) from 1875-1972
   (d) Construct a scatterplot *with* a timeseries line plotted on the same graph of the level of Lake Huron (in feet) from 1875-1972 (scatterplot with lineplot overlaid)

```
filname lhur url 'https://webpages.uidaho.edu/~renaes/Data/Lake.csv';

data huron;
infile lhur dsd missover firstobs=2;
input lake time;
run;
```