Math 485, SAS on Windows Handout

SAS is a statistical software package that will be used in this course. You wmay want a flash drive. There are SAS manuals and books at the library, but they are not needed in this course. To use SAS on windows (PC), use the following steps.

1) Go to the webpage (http://parker.ad.siu.edu/Olive/M485SASRhw.txt) to copy and paste the program into *SAS*. (Click the Internet icon and search for David Olive. His personal page (http://parker.ad.siu.edu/Olive/Personal.html) has links, click on the link for *Some links for SIU students* and click on the link for *Here is R code and SAS programs for Math 485.*) Highlight the program for Problem 4.1. Hit Ctrl–c.

2) Type sas in the search window near the lower left icon. Double click the `SAS` icon. The editor window is the lower window. Click on that window, then hit Ctrl–v to paste in the program. Then run>submit. An output window will appear in a few minutes if successful. If your computer does not have SAS, go to another computer.

If you were not successful, look at the *log window* for hints on errors. A single typo can cause failure. Reopen your file in *Word* or *Notepad* and make corrections. Occasionally you can not find your error. Then find your instructor or wait a few hours and reenter the program.

3) Like Minitab a window with a split screen will open. The top screen says *Log-(Untitled)* while the bottom screen says *Editor-Untitled1*. Press the spacebar and an asterisk appears: *Editor-Untitled1**.

You could enter the SAS program given in point 4) below in *Notepad* or *Word.* You may want to save the program as *h4d1.sas* on your flash drive (J: drive, say). (On the top menu of the editor, use the commands "File > Save as". A window will appear. Use the upper right arrow to locate "Removable Disk (J:)" and then type the file name in the bottom box. Click on OK.)

4) Enter the following SAS program in *Notepad* or *Word.*

```
options ls = 70;
data aspirin;
* Agresti (1996, p. 268);
input group mi count @@;
cards;
1  1  189  1  2  10845
2  1  104  2  2  10933
;
proc print;
proc freq; weight count;
     tables group*mi/chisq expected measures;
run;
```

If you were not successful, look at the *log window* for hints on errors. A single typo can cause failure. Reopen your file in *Word* or *Notepad* and make corrections. Occasionally

you can not find your error. Then find your instructor or wait a few hours and reenter the program. *Word* seems to make better looking tables, and copying from *Notepad* to *Word* can completely ruin the table.

5) To copy and paste relevant output into *Word,* click on the output window and use the top menu commands "Edit>Select All" and then the menu commands "Edit>Copy".

(In *Notepad* use the commands "Edit>Paste". Then use the mouse to highlight the relevant output (**the table and statistics for the table**). Then use the commands "Edit>Copy".)

Finally, in *Word*, use the commands "Edit>Paste".

6) This point explains the SAS commands. The *ls* stands for linesize so *l* is a lowercase *L*, not the number one. The semicolon ";" is used to end SAS commands and the "options ls = 70;" command makes the output readable. (An "*" can be used to insert comments into the SAS program. Try putting an * before the options command and see what it does to the output.) The next step is to get the data into SAS. The command "data aspirin;" gives the name "aspirin" to the data set. The command "input group mi count @@;" says the first entry is variable group, the 2nd variable mi and the third variable count. The @@ means that there is more than one case of data per line while the command "cards;" means that the data is entered below. Then the data in entered and the isolated semicolon indicates that the last case has been entered. The command "proc print;" prints out the data. The commands "proc freq; weight count" and "tables group*mi/chisq expected measures;" tell SAS to perform a chi-square test on the 4 given counts. The command "run;" tells SAS to execute the program.

It may be easier to save output from each problem as a *Word* document, but you get an extra page printed if you use the printer.

Several SAS books are in the library and maybe in the computer room, and the following websites may be of interest. The back of HW 1 had some links.

SAS (www.sas.com) has a free SAS University Edition and free tutorials for SAS programming. You can request materials from the SAS institute as well. They make these available for free for professors to use in teaching. They have some nice examples and data sets. See SAS Global Academic Program (http://support.sas.com/learn/ap/prof/index.html) for information.

There are some nice examples in SAS Statistics 1, this is also now available free as an e-course for anyone. (https://support.sas.com/edu/elearning.html?ctry=us&productType=library) SAS Training in the United States – e-Learning

This includes a SAS programming course.

Google SAS>Ad (www.sas.com) >How to buy>academic

http://www.sas.com/en_us/software/trials-demos.html

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