

Problem 1.

- a) Read the AAUP data (dataset.txt) into SAS (name it yourself). The related description of the data can be found below. Please refer to “Read_Me.pdf” for how to import external data.
- b) Based on the dataset in (a), create a data set containing only FICE, State, all average salaries and average compensations.
- c) Based on the dataset in (b), create two subsets whose colleges are from AK or AL separately.
- d) Within each subsets created in c), create new variables which are the summation of salary and compensation (total income) for, respectively, full professors, associate professors, assistant professors, and all ranks, and drop all salary and compensation variables. (You can overwrite the original two subsets. It is up to you.)

data description

This dataset is taken from the March-April 1994 issue of Academe. Thanks to Maryse Eymonerie, Consultant to AAUP, for assistance in supplying the data. Faculty salary data are for the 1993-94 school year.

VARIABLE DESCRIPTIONS (AAUP.DAT)

FICE (Federal ID number)

College name

State (postal code)

Type (I, IIA, or IIB)

Average salary - full professors

Average salary - associate professors

Average salary - assistant professors

Average salary - all ranks

Average compensation - full professors

Average compensation - associate professors

Average compensation - assistant professors

Average compensation - all ranks
Number of full professors
Number of associate professors
Number of assistant professors
Number of instructors
Number of faculty - all ranks

All salary and compensation figures are yearly in \$100's.

Problem 2.

Read the following SAS code carefully. Do the following

1. Without running the code in SAS,
 - Make necessary corrections if you see any typos or mistakes;
 - Write out the SAS output on your own.
2. After completing Step 1
 - Run your corrected code in SAS and check the output;
 - If your code does not work through, continue to debug.

```
DATA 66SCORE_LIST;  
  INPUT SCHOOL MATH_BEFORE MATH_AFTER MATH_IMPROVE=  
MATH_AFTER- MATH_BEFORE;  
DATALINES  
UC 80 81 UC 80 80 UC 90 87  
OSU 70 80 OSU 78 80  
RUN;
```

```
DATA LIST-NEW  
  KEEP SCHOOL MATH_IMPROVE;  
RUN;
```

```
PROC SORT DATA=LIST-NEW OUT=LIST2;  
  BY MATH_IMPROVE
```

```
DATA LIST2;  
  SET LIST2;  
  IF MATH_IMPROVE>0 THEN GOOD=YES ELSE GOOD=NO;  
RUN;
```

```
PROC PRINT DATA=LIST2;  
RUN;
```