ASSIGNMENT #7

#1 (NUMERIC FUNCTIONS) Here is a data step that creates the data set QUESTIONS...

```sas
data question;
input id : $3. q1-q8 gender : $1. test : mmdyy.;
format test mmdyy10.;
datalines;
101 2 3 . 2 3 3 3 M 011098
102 4 4 1 1 . 4 . 3 M 101198
103 4 3 4 2 3 3 3 F 111598
104 2 3 2 3 . 3 . 3 F 120498
105 2 3 2 3 4 3 . M 020399
106 4 2 . 4 4 4 4 4 M 040699
107 4 4 . 2 3 4 3 3 F 051599
108 3 . . 1 3 3 . 3 M 082099
109 2 . . 2 1 2 2 . F 101199
110 2 4 . 3 3 3 3 3 M 011000 ;
run;
```

Variables q1 through q8 are scores on eight questions asked to each of ten people.

A/ Use the data set QUESTIONS and add three new variables: mean score on the eight questions; total score on the eight questions; number of questions answered (non-missing values).

B/ What are the lowest and highest mean scores (mean of q1-q8 for each person) for only those people who answered at least seven questions?

C/ Find the mean score for each of the eight questions for those people who took the test before 1/1/1999 and for those who took the test on or after 1/1/1999.

#2 You have the following data...

```
12345,10,20,30,10,15,45,60,75
23456,09,05,31,23,12,99,20,54
34567,10,10,10,54,88,10,10,43
45678,12,47,14,87,43,12,34,23
56789,88,88,88,65,12,15,23,22
```

There's an ID number plus 8 numbers in each record. Write a SAS job that will...

A read the data and create a SAS data set
B find the mean of the 8 numbers for each person
C find the person with the highest and lowest mean score for the eight numbers
D find the difference for each person between the mean of the first two numbers and the mean of the last two numbers, then find the mean of that difference
E find the lowest and highest number in the data set

#3 The following creates a SAS data set named BIRTHS with four variables...

```sas
data births;
infile datalines dsd;
input bwt : $4.
ges : $3.
gender
test ;
label bwt = 'BIRTH WEIGHT (GRAMS)'
ges = 'GESTATION (DAYS)' ;
datalines;
3000,280,1,12203
1500,230,2,
2800,,12345
; run;
```

Write a SAS job that changes the variable types in data set BIRTHS: change BWT and GES to NUMERIC; change GENDER and ZIP to CHARACTER. NOTE: TRY TO KEEP THE SAME VARIABLE NAMES as in the original data set BIRTHS.