MAT013 - Example Sheet

SAS: Chapter 1 + 2

1. Create a library entitled `mat008` (save this in a suitable location, perhaps your h: drive).

2. Create the data set `first_data_set` from the notes and export to csv.

3. Download the files JJJ.csv and MMM.csv import the files to your mat008 library.

4. Print the MMM and JJJ data sets using a print procedure.

5. View the contents of the MMM and JJJ data sets using a contents procedure.

6. Sort the MMM and JJJ by age. Separately sort the data sets by postcode.

7. Obtain the mean age, height in metres and weight in kg for the observations of the MMM and JJJ datasets.

8. Obtain the mean age, height in metres and weight in kg for the observations of the MMM and JJJ datasets compartmentalising your output by sex (you'll need to use a by statement).

9. Create a new data set called `summary_of_mmm` and `summary_of_jjj` that will contain the mean `life_savings_in_pounds` by sex for observations in the MMM and JJJ dataset (you'll need to use an output statement).

10. Download the file math_tests.csv import it in to SAS and output a frequency table of teachers against `pass_fail`.

11. Obtain (2) seperate correlation tables for all the numerical values in JJJ and MMM.

12. Obtain various univariate statistics for the variables savings_in_pounds and random_number for the data sets JJJ and MMM.

13. Do a regression analysis of the variable `height_in_metres` against `weight_in_kg` and `savings_in_pounds` for the data sets JJJ and MMM (do this two ways).

14. Download the data set math_tests.csv and run an ANOVA test to see if the grades depends on the professor (do this two ways).

15. Obtain a histogram for the variables `weight_in_kg` for the data sets JJJ and MMM.

16. Obtain a scatter plot of `weight_in_kg` against `height_in_metres` for the data sets JJJ and MMM.

17. Output all of the above to a pdf file.

The relevant data can be found here:

- JJJ.csv
- MMM.csv
- math_tests.csv
- math.csv