

# 1 MAT013 - Example Sheet

## 1.1 Chapter 4

1. Create a (single) data set containing the name of the observations from JJJ and MMM as well as a new variable which is Y if the individual is clinically obese and N otherwise.
2. Create a (single) data set containing the total number of birthday candles used throughout the lives of every individual from both JJJ and MMM.
3. Obtain the first even numbers less than 240.
4. Create a function that outputs a scatter plot of height against weight for observations in the JJJ and MMM data sets. Modify the function so that it outputs the plot to a pdf file.
5. Create a function that computes the left over life savings after a given quantity of spending on a given quantity of shopping trips from the JJJ data set.
6. Modify the above function so that a default value is given to spend of 430 and a default value of 3 trips.
7. Modify the above function so that a message is printed if the spend is 0 and no other output is given.
8. Create a function that creates 15 data sets each with updated savings in pounds for observations in the JJJ and MMM data sets for varying values for the number of trips (1 to 15).
9. Download the files [Files\\_1-200.zip](#) and create a function that automatically imports them.
10. Include the above code in a script file that could be run using the source command and re run whenever the above data sets get updated.

The relevant data can be found [here](#):

- [Files\\_1-200.zip](#)