Math 124 Spring 2005
Assignment 1
Due: Mar 15, 2005

Dr Ben Bolstad

bolstad_math124@bmbolstad.com

http://math124sfsu.bmbolstad.com

Introduction and important notices

This assignment is intended to give you practice using Excel to perform some of the numerical and graphical methods for examining data. You should submit your solution to this assignment as a written **typed** report. **Do not** submit print outs of raw Excel spreadsheets (ie I do not want to see a print out of all the data). You should **copy and paste** your graphs and other analysis results into your report. **Do not** wait until the last moment to start this assignment, rushing on the last day will result in a poor report. **Do** ask questions about the assignment if you need help. **Do** feel free to work with your friend to learn Excel, but **do not** try to hand in the same report. Your final report should be your own work.

Exploratory Data Analysis of Body measurements

On the website you will find a data file containing 27 variables, measured for 507 individuals. These variables include frame size measurements (or skeletal measurements), girth (or circumference) measurements all measured in cm, age (years), weight (kg), height (cm), and gender. The frame size measurements are typically diameters while the girth measuements are circumference measurements. Note that frame size measurements remain fairly constant as a person ages (after becoming an adult) while the girth measurements can fluctuate. Note that on the website you will find longer descriptions about how the data was collected and more detailed descriptions of each of the variables.

Data Source: Jour. Stat. Ed. Vol 11, No 2 (2003)

Your task

Explore this dataset using the techniques discussed in class. You are welcome to do this anyway you wish, but some guidelines are below.
A satisfactory report (ie at the "B" level) will, at the least, include the following:

- Appropriately labeled plots (ie good titles and axes labels).

- Summary statistics (mean, median, standard deviation, LQ, UQ etc) on at least four of the variables (put your results in a table).

- Histograms of several variables.

- Boxplots of several variables.

- At least two scatterplots.

- Written descriptions and interpretations of what you see in each plot or table.

A stellar report (ie at the "A" level) will include all of the above plus

- Histogram of a variable broken down by gender.

- Boxplots of a variable broken down by gender.

- Boxplots of a variable broken down age group.

- A scatterplot which uses different symbols for the two genders.

- A bit of pizzaz in the presentation.

Using Excel on SFSU Campus

If you do not have access to Excel at home, or elsewhere, you may use it in a lab on campus. This means that you **do not** have any excuse about not having suitable access to the software.

Name	Location
Math Dept Computer Lab	TH 404
`http://userwww.sfsu.edu/~ralex/drafts/mathlab.htm`	
John F. True Computer Lab	1st Floor - J. Paul Leonard Library
`http://www.sfsu.edu/~doit/labs/24hour.htm`	
Media Access Center	3rd Floor - J. Paul Leonard Library
`http://www.sfsu.edu/~doit/labs/mac.htm`	