**6304 Module 1 Lecture**

**R Script File**

**rm(list=ls())**

**#install.packages(ʺrioʺ)**

**#install.packages(ʺmomentsʺ)**

**library(rio)**

**library(moments)**

**grades=import(ʺ6304 Module 1 Data Set.xlsxʺ,sheet=ʺscoresʺ)**

**colnames(grades)=tolower(make.names(colnames(grades)))**

**attach(grades)**

**names(grades)**

**# Descriptive Statistics**

**mean(exam.1)**

**mean(grades$exam.1)**

**gilligan=mean(grades$exam.1)**

**gilligan**

**maryann=gilligan\*2**

**maryann**

**rm(gilligan,maryann)**

**median(exam.1)**

**sd(exam.1)**

**summary(exam.1)**

**grades$total.points=exam.1+exam.2+exam.3**

**attach(grades)**

**quantile(total.points,probs=seq(0,1,.25))**

**quantile(total.points,probs=seq(0,1,.2))**

**quantile(total.points,probs=seq(0,1,.15))**

**min(total.points)**

**max(total.points)**

**# Structure of the Data Frame**

**str(grades)**

**# Fundamental Graphics**

**hist(total.points)**

**hist(total.points,col="red",main="My Little Red Histogram")**

**plot(density(total.points),lwd=3)**

**boxplot(total.points,col="red",main="Total Points Boxplot",pch=19)**

**skewness(total.points)**

**kurtosis(total.points)**

**boxplot(exam.1,exam.2,exam.3)**

**boxplot(exam.1,exam.2,exam.3,**

**main="Scores for Three Statistics Exams",**

**col="red",pch=19,**

**names=c("Exam 1","Exam 2","Exam 3"))**

**boxplot(exam.1,exam.2,exam.3,**

**main="Scores for Three Statistics Exams",**

**col=c("red","green","blue"),pch=19,**

**names=c("Exam 1","Exam 2","Exam 3"))**

**plot(exam.1,exam.2)**

**plot(exam.1,exam.2,pch=19,**

**main="Exam 1 v. Exam 2",**

**xlim=c(0,100),ylim=c(0,100))**

**# Random Sample from Data**

**my.sample.grades=grades[sample(1:nrow(grades),10),]**

**mean(my.sample.grades$total.points)**

**set.seed(99)**

**my.sample.grades=grades[sample(1:nrow(grades),10),]**

**mean(my.sample.grades$total.points)**

**# Subsetting Data**

**my.subset.grades=subset(grades,total.points<250)**

**my.subset.grades**

**my.subset.grades=subset(grades,total.points==33)**

**my.subset.grades**