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STAT 3210

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1/26/2018

**Homework 1 R Code and Output**

3. > ( miceID = c("A", "B", "C", "D", "E", "F", "G", "H", "I", "J", "K", "L") )

[1] "A" "B" "C" "D" "E" "F" "G" "H" "I" "J" "K" "L"

> sample(miceID)

[1] "F" "H" "J" "B" "L" "D" "C" "K" "A" "I" "E" "G"

5. > flares<-read.table("http://www.stat.uiowa.edu/~ernli/DOEdata/problem0228.txt",header = TRUE)

> flares

Type1 Type2

1 65 64

2 81 71

3 57 83

4 66 59

5 82 65

6 82 56

7 67 69

8 59 74

9 75 82

10 70 79

a) > var.test(flares$Type1, flares$Type2, ratio = 1)

F test to compare two variances

data: flares$Type1 and flares$Type2

F = 0.97822, num df = 9, denom df = 9, p-value = 0.9744

alternative hypothesis: true ratio of variances is not equal to 1

95 percent confidence interval:

0.2429752 3.9382952

sample estimates:

ratio of variances

0.9782168

b) > t.test(flares$Type1, flares$Type2, var.equal = TRUE)

Two Sample t-test

data: flares$Type1 and flares$Type2

t = 0.048008, df = 18, p-value = 0.9622

alternative hypothesis: true difference in means is not equal to 0

95 percent confidence interval:

-8.552441 8.952441

sample estimates:

mean of x mean of y

70.4 70.2

c) > par(mfrow=c(2,1))

> qqnorm(flares[,"Type1"], datax=FALSE);

> qqnorm(flares[,"Type2"], datax=FALSE);



d) > t.test(flares$Type1, flares$Type2, var.equal = FALSE)

Welch Two Sample t-test

data: flares$Type1 and flares$Type2

t = 0.048008, df = 17.998, p-value = 0.9622

alternative hypothesis: true difference in means is not equal to 0

95 percent confidence interval:

-8.552517 8.952517

sample estimates:

mean of x mean of y

70.4 70.2

e) > boxplot(flares)

