Homework 3

Fisher Ankney

Stat 5193

*Note: this document was created using R Markdown. Dr. Habiger has confirmed that this is an acceptable way to turn in each assignment.

R code input will be of the form:

```
"this is R code input"
```

R code output will be of the form

```
## [1] "this is R code output"
```

Question 1a

```
library(readxl)
stud_dat <- read_excel("~/Downloads/StudentData.xlsx")

text.sent <- stud_dat$TxtSent
Fb.time <- stud_dat$Fbtime
gender <- stud_dat$Gender

mode(text.sent)
```

```
## [1] "numeric"
```

```
mode(Fb.time)
```

```
## [1] "numeric"
```

```
mode(gender)
```

```
## [1] "character"
```

Question 1b

```
fra <- data.frame(text.sent, Fb.time, gender)
fra[1:3,]
```

```
##   text.sent Fb.time gender
## 1         1      30      M
## 2        10      20      M
## 3       150      80      M
```

Question 1c

```
str(fra)
```

```
## 'data.frame':    35 obs. of  3 variables:
##  $ text.sent: num  1 10 150 18 30 100 20 100 150 75 ...
##  $ Fb.time  : num  30 20 80 45 20 60 5 20 20 20 ...
##  $ gender   : Factor w/ 2 levels "F","M": 2 2 2 1 1 1 2 1 1 1 ...
```

```
fra$gender
```

```
##  [1] M M M F F F M F F F F M M F M F F F F F M F F F F F M M F F M F M F F
## Levels: F M
```

```
"no"
```

```
## [1] "no"
```

Question 1d

```
summary(fra)
```

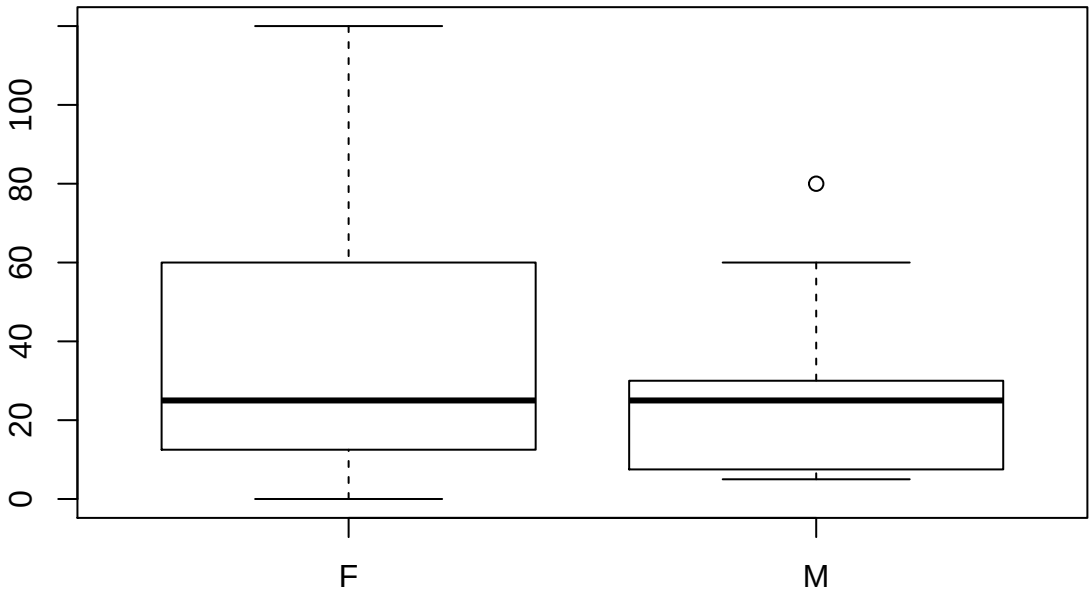
```
##    text.sent         Fb.time       gender
##  Min.   :  1.00   Min.   :  0.00   F:23
##  1st Qu.: 10.00   1st Qu.: 10.00   M:12
##  Median : 25.00   Median : 25.00
##  Mean   : 47.89   Mean   : 34.29
##  3rd Qu.: 87.50   3rd Qu.: 55.00
##  Max.   :200.00   Max.   :120.00
```

```
# male prop
sum(fra$gender == "M") / length(fra$gender)
```

```
## [1] 0.3428571
```

Question 1e

```
boxplot(fra$Fb.time~fra$gender)
```



Question 2a

```
set.seed(1)
x <- rpois(25,1)
x.f <- factor(x, order=T, levels = c(0,1,2,3,4,5))

x.f
```

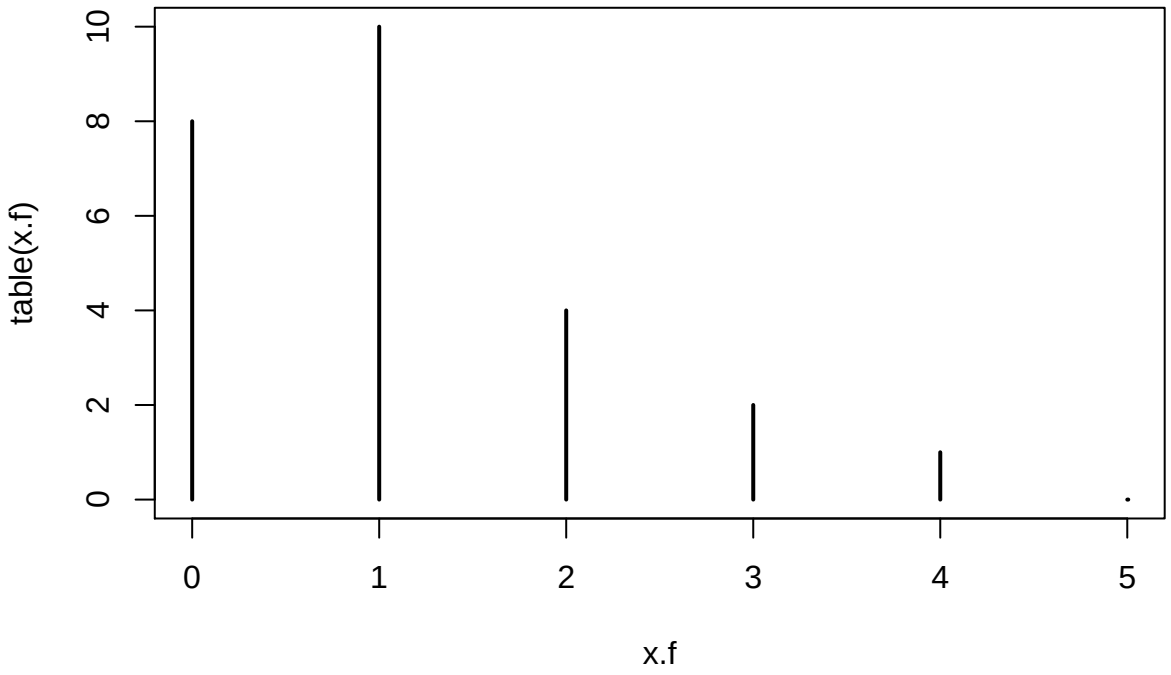
```
##  [1] 0 1 1 2 0 2 3 1 1 0 0 0 1 1 2 1 1 4 1 2 3 0 1 0 0
## Levels: 0 < 1 < 2 < 3 < 4 < 5
```

Question 2b

```
help(table)
"combination of factor"
```

```
## [1] "combination of factor"
```

```
plot(table(x.f))
```



Question 3a

```
fra <- list(first.name = "Fisher Ankney", matrix(c(1,0,0,1), nrow=2, ncol=2), summary(fra))
fra
```

```
## $first.name
## [1] "Fisher Ankney"
##
## [[2]]
##      [,1] [,2]
## [1,]    1    0
## [2,]    0    1
##
## [[3]]
##    text.sent         Fb.time       gender
##  Min.   :  1.00   Min.   :  0.00   F:23
##  1st Qu.: 10.00   1st Qu.: 10.00   M:12
##  Median : 25.00   Median : 25.00
##  Mean   : 47.89   Mean   : 34.29
##  3rd Qu.: 87.50   3rd Qu.: 55.00
##  Max.   :200.00   Max.   :120.00
```

Question 3b

```
fra <- fra[1:2]
fra[[2]]
```

```
##      [,1] [,2]
## [1,]    1    0
## [2,]    0    1
```