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Statistics 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)
student_data <- read_excel("~/Downloads/StudentData.xlsx")
```

```
text_sent <- student_data$TxtSent
text_recieve <- student_data$TxtRec
facebook_time <- student_data$Fbtime
```

Question 1b.

```
text_sent[c(1,3)]
```

```
## [1]   1 150
```

```
text_recieve[c(1,3)]
```

```
## [1]   1 150
```

```
facebook_time[c(1,3)]
```

```
## [1] 30 80
```

Question 1c.

```
storage.mode(text_sent)
```

```
## [1] "double"
```

```
class(text_sent)
```

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

Question 2a.

```
id_num <- 1:35
sm <- matrix(c(text_sent, text_recieve, facebook_time), nrow=35, ncol=3)
colnames(sm) <- c("text_sent", "text_recieved", "facebook_time")
rownames(sm) <- id_num

sm[4,]
```

```
##     text_sent text_recieved facebook_time
##            18            28            45
```

Question 2b.

```
is.matrix(sm)
```

```
## [1] TRUE
```

```
dim(sm)
```

```
## [1] 35  3
```

Question 2c.

```
male <- student_data$Gender == "M"
female <- student_data$Gender == "F"

median(student_data[male, ]$Fbtime)
```

```
## [1] 25
```

```
median(student_data[female, ]$Fbtime)
```

```
## [1] 25
```

Question 2d.

median and mean for difference between text sent and text recieved

```
text_diff <- text_sent - text_recieve

mean(text_diff)
```

```
## [1] -3.685714
```

```
median(text_diff)
```

```
## [1] 0
```

Question 3.

```
SM.Array <- as.array(sm)
SM.Array[c(1,35),]
```

```
##    text_sent text_recieved facebook_time
## 1          1             1            30
## 35        25            25            40
```

Question 4.

```
help(mean)
help(letters)
```

The mean function only works for objects that are of the storage mode numeric / logical vectors, dates, date-times, and time intervals. Letters are characters, and not on this list of viable data types.