RWorksheet_Layson#4a

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#1. #a.

```
ShoeSize <- c(6.5, 9, 8.5, 8.5, 10.5, 7, 9.5, 9, 13, 7.5, 10.5, 8.5, 12, 10.5, 13, 11.5, 8.5, 5, 10, 6.5
Height <- c(66.0,68.0,64.5,65.0,70.0,64.0,70.0,71.0,72.0,64.0,74.5,67.0,71.0,71.0,77.0,72.0,59.0,62.0,7
Gender <- c("F","F","F","F","M","F","F","F","M","F","M","F","M","M","M","M","F","F","M","F","F","M","M"

House_Hold <- data.frame(ShoeSize, Height, Gender)
House_Hold
```

```
##    ShoeSize Height Gender
## 1       6.5   66.0      F
## 2       9.0   68.0      F
## 3       8.5   64.5      F
## 4       8.5   65.0      F
## 5      10.5   70.0      M
## 6       7.0   64.0      F
## 7       9.5   70.0      F
## 8       9.0   71.0      F
## 9      13.0   72.0      M
## 10      7.5   64.0      F
## 11     10.5   74.5      M
## 12      8.5   67.0      F
## 13     12.0   71.0      M
## 14     10.5   71.0      M
## 15     13.0   77.0      M
## 16     11.5   72.0      M
## 17      8.5   59.0      F
## 18      5.0   62.0      F
## 19     10.0   72.0      M
## 20      6.5   66.0      F
## 21      7.5   64.0      F
## 22      8.5   67.0      M
## 23     10.5   73.0      M
## 24      8.5   69.0      F
## 25     10.5   72.0      M
## 26     11.0   70.0      M
## 27      9.0   69.0      M
## 28     13.0   70.0      M
```

#b.

```
male <- subset(House_Hold, Gender == "M")
male
```

```
##    ShoeSize Height Gender
## 5      10.5   70.0      M
## 9      13.0   72.0      M
## 11     10.5   74.5      M
## 13     12.0   71.0      M
## 14     10.5   71.0      M
## 15     13.0   77.0      M
## 16     11.5   72.0      M
## 19     10.0   72.0      M
## 22      8.5   67.0      M
## 23     10.5   73.0      M
## 25     10.5   72.0      M
## 26     11.0   70.0      M
## 27      9.0   69.0      M
## 28     13.0   70.0      M
```

```
female <- subset(House_Hold, Gender == "F")
female
```

```
##    ShoeSize Height Gender
## 1       6.5   66.0      F
## 2       9.0   68.0      F
## 3       8.5   64.5      F
## 4       8.5   65.0      F
## 6       7.0   64.0      F
## 7       9.5   70.0      F
## 8       9.0   71.0      F
## 10      7.5   64.0      F
## 12      8.5   67.0      F
## 17      8.5   59.0      F
## 18      5.0   62.0      F
## 20      6.5   66.0      F
## 21      7.5   64.0      F
## 24      8.5   69.0      F
```

#c.

```
mean(ShoeSize)
```

```
## [1] 9.410714
```

```
mean(Height)
```

```
## [1] 68.57143
```

#d. #Shoe size and height are both characteristics of a person, they are independent of each other. There's no direct connection between how big someone's feet are and how tall they are.

#2.

```
months <- c("March", "April", "January", "November", "January", "September", "October", "September", "N
factor_months_vector <- factor(months)
factor_months_vector
```

```
##  [1] March     April     January   November  January   September October
##  [8] September November  August    January   November  November  February
## [15] May       August    July      December  August    August    September
## [22] November  February  April
## 11 Levels: April August December February January July March May ... September
```

#3.

```
summary(months)
```

```
##    Length     Class      Mode
##        24 character character
```

```
summary(factor_months_vector)
```

```
##     April    August  December  February   January      July     March       May
##         2         4         1         2         3         1         1         1
##  November   October September
##         5         1         3
```

#4.

```
factor_data <- c("East", "West", "North")
freq <- c(1,4,3)

new_order_data <- factor(factor_data, levels = c("East", "West", "North"))
new_order_data
```

```
## [1] East  West  North
## Levels: East West North
```

```
f_data <- data.frame(Direction = factor_data, Frequency = freq)
f_data
```

```
##   Direction Frequency
## 1      East         1
## 2      West         4
## 3     North         3
```

#5.

```
import_march <- read.table("C:\\Users\\User\\OneDrive\\Desktop\\Rworksheet\\Worksheet_4\\import_march.cs
import_march
```

```
##   Students Strategy.1 Strategy.2 Strategy.3
## 1     Male          8         10          8
## 2                   4          8          6
## 3                   0          6          4
## 4   Female         14          4         15
## 5                  10          2         12
## 6                   6          0          9
```