

Rworksheet_Rabago#4a

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1.

```
data <- data.frame(  
  ShoeSize = c(6.5,9.0,8.5,8.5,10.5,7.0,9.5,9.0,13.0,7.5,10.5,8.5,12.0,10.5,13.0,11.5,8.5,5.0,10.0,6.5,7.5,  
  Height = c(66.0,68.0,64.5,65.0,70.0,64.0,70.0,71.0,72.0,64.0,74.5,67.0,71.0,71.0,77.0,72.0,59.0,62.0,72.0,72.0,72.0,  
  Gender = c("F","F","F","F","M","F","F","F","M","F","M","F","M","M","M","M","M",  
             "F","F","M","F","F","M","M","F","M","M","M","M") )
```

data

##	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

1.a.

The data contains three variables. The first variable is shoe size, which is numeric and shows the respondents' shoe sizes. The second variable is height, also numeric, representing the respondents' height in inches. The third variable is gender, which is categorical and represented as "M" for male and "F" for female.

1.b.

```
fshoesize <- subset(data, Gender == "F", select = c(ShoeSize, Height))
mshoesize <- subset(data, Gender == "M", select = c(ShoeSize, Height))
```

fshoesize

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

mshoesize

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

1.c.

```
meanshoesize <- mean(data$ShoeSize)
meanheight <- mean(data$Height)
```

meanshoesize

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

meanheight

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

1.d.

-There is no relationship between shoe size and height because they are separate physical traits. Even though both vary from person to person, one does not directly affect the other. People of the same height can have different shoe sizes, and vice versa.

2.

```
months_vector <- c("March", "April", "January", "November", "January",
                  "September", "October", "September", "November", "August",
                  "January", "November", "November", "February", "May", "August",
                  "July", "December", "August", "August", "September", "November",
                  "February", "April")

factor_months_vector <- factor(months_vector)

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_vector)

##      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.

```
direction <- c("East", "West", "North")
frequency <- c(1, 4, 3)

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

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

5.a.

```
import_march <- read.table("import_march.csv", header = TRUE, sep = ",")
```

5.b.

```
import_march

##      Students Strategy1 Strategy2 Strategy3
## 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