

RWORKSHEET_4

1. The table below shows the data about shoe size and height. Create a data frame..

a. Describe the data.

The data shows the shoe size, gender and height.

b. Find the mean of shoe size and height of the respondents. Copy the codes and results.

Codes: `s <- cbind(s_size1,s_size2)`

`s`

`mean(s)`

Output: 9.410714

Codes:

`h <- cbind(hght1,hght2)`

`h`

`mean(h)`

Output: 68.57143

c. Is there a relationship between shoe size and height? Why?

Yes, shoe size and height have relationship because the taller the height the bigger the shoes size.

2. Construct character vector months to a factor with `factor()` and assign the result to `factor_months_vector`. Print out `factor_months_vector` and assert that R prints out the factor levels below the actual values. Consider data consisting of the names of months

```
month <- 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_month <- factor(month)
factor_month
```

```
factor_months_vector <- factor_month
factor_months_vector
```

```
R 4.2.1 - ~/#
> month <- 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_month <- factor(month)
> factor_month
[1] March  April  January November January September October September November August January
[12] November November February May August July December August August September November
[23] February April
Levels: April August December February January July March May November October September
>
> factor_months_vector <- factor_month
> factor_months_vector
[1] March  April  January November January September October September November August January
[12] November November February May August July December August August September November
[23] February April
Levels: April August December February January July March May November October September
>
```

3. Then check the summary() of the months_vector and factor_months_vector.
 #Interpret the results of both vectors. Are they both equally useful in this case? - YES

```
summary(factor_month)
summary(factor_months_vector)
```

```
Levels: April August December February January July March May November October September
summary(factor_month)
  April  August  December  February  January  July  March  May  November  October  September
    2       4       1       2       3       1       1       1       5       1       3
summary(factor_months_vector)
  April  August  December  February  January  July  March  May  November  October  September
    2       4       1       2       3       1       1       1       5       1       3
```

4. Create a vector and factor for the table below.

```
Direction <- c("East", "West", "North")
```

```
Direction
```

```
Frequency <- c(1, 4, 3)
```

```
Frequency
```

```
vtor <- data.frame(Direction, Frequency)
```

```
vtor
```

```
factor_vtor <- factor(Direction)
```

```
factor_vtor
```

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

```
new_order_data
```

```
> Direction <- c("East", "West", "North")
> Direction
[1] "East" "West" "North"
> Frequency <- c(1, 4, 3)
> Frequency
[1] 1 4 3
>
> vtor <- data.frame(Direction, Frequency)
> vtor
  Direction Frequency
1      East         1
2      West         4
3      North         3
>
> factor_vtor <- factor(Direction)
> factor_vtor
[1] East West North
Levels: East North West
>
> new_order_data <- factor(factor_vtor, levels = c("East", "West", "North"))
> new_order_data
[1] East West North
Levels: East West North
>
```

5. Enter the data below in Excel with file name = import_march.csv

a. Import the excel file into the Environment Pane using read.table() function. Write the code.

```
setwd("C:/Users/Naomi/Documents/simpronworksheet")
```

```
getwd()
```

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

```
m_data
```

b. View the dataset. Write the code and its result

	respondents	sex	fathers_occupation	persons_at_home	siblings_at_school	types_of_houses
1	1	2	1	5	6	1
2	2	2	3	7	4	2
3	3	1	3	3	4	3
4	4	2	3	8	1	1
5	5	2	1	5	2	1
6	6	2	2	9	1	3
7	7	2	3	6	5	3
8	8	2	1	7	3	1
9	9	2	1	8	1	2
10	10	2	1	4	2	3
11	11	1	3	7	3	2
12	12	2	2	5	2	3
13	13	2	1	4	5	2
14	14	2	3	7	5	2
15	15	2	3	8	2	3
16	16	2	1	8	1	3
17	17	2	3	3	2	3
18	18	2	1	11	5	3
19	19	1	2	7	3	3
20	20	2	1	6	2	2