Rworksheet_Barrientos#A

Barrientos, Milfrance D.

10/23/2024

```r
#1. The table below shows the data about shoe size and height. Create a data frame.
household_data <- data.frame(
  Shoe_size = 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
  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, 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
)
household_data
```

```
##    Shoe_size 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
```

```r
#a. Describe the data
str(household_data)
```

```
## 'data.frame':    28 obs. of  3 variables:
##  $ Shoe_size: num  6.5 9 8.5 8.5 10.5 7 9.5 9 13 7.5 ...
##  $ Height   : num  66 68 64.5 65 70 64 70 71 72 64 ...
##  $ Gender   : chr  "F" "F" "F" "F" ...
```

```r
summary(household_data)
```

```
##    Shoe_size          Height         Gender
##  Min.   : 5.000   Min.   :59.00   Length:28
##  1st Qu.: 8.500   1st Qu.:65.75   Class :character
##  Median : 9.000   Median :69.50   Mode  :character
##  Mean   : 9.411   Mean   :68.57
##  3rd Qu.:10.500   3rd Qu.:71.25
##  Max.   :13.000   Max.   :77.00
```

```r
#b.Create a subset by males and females with their corresponding shoe size and height.
# What its result? Show the R scripts.
male <- subset(household_data, Gender == "M", select = c(Shoe_size, Height))

fem <- subset(household_data, Gender == "F", select = c(Shoe_size, Height))

male
```

```
##    Shoe_size 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
```

```r
fem
```

```
##    Shoe_size 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
```

```
#c.Find the mean of shoe size and height of the respondents. Write the R scripts and its result.
mean(household_data$Shoe_size)
```

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

```
mean(household_data$Height)
```

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

```
#d. Is there a relationship between shoe size and height? Why?
# yes, because the taller individuals tend to have larger shoe sizes.
```