RWorksheet_Infiesto#4a

Infiesto

2024-10-22

1.

```
#1. The table below shows the data about shoe size and height.
#a. Describe the data.
#The table shows information about people's shoe size, height, and gender (M for male, F for female). I

#b. Create a subset by males and females with their corresponding shoe size and height. What its result
# Create the 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, 10.5, 10.5, 8.5, 10.5, 12.0, 10.5, 13.0,
  Height = c(66.0, 68.0, 64.5, 65.0, 70.0, 64.0, 70.0, 72.0, 72.0, 74.5, 67.0, 71.0, 71.0, 67.0, 71.0, 
  Gender = c('F', 'F', 'F', 'M', 'M', 'F', 'F', 'F', 'M', 'M', 'F', 'F', 'M', 'F', 'M', 'M', 'M', 'F',
)
md <- subset(household_data, Gender == "M")
fd <- subset(household_data, Gender == "F")
md
```

```
##    Shoe_Size Height Gender
## 4        8.5   65.0      M
## 5       10.5   70.0      M
## 9       13.0   72.0      M
## 10      10.5   74.5      M
## 13      10.5   71.0      M
## 15      10.5   71.0      M
## 16      13.0   77.0      M
## 17      11.5   72.0      M
## 20      10.0   72.0      M
## 24      10.5   73.0      M
## 25      10.5   72.0      M
## 26       9.0   69.0      M
## 27      13.0   71.0      M
## 29       9.0   69.0      M
## 30      13.0   70.0      M
```

```
fd
```

```
##    Shoe_Size Height Gender
## 1        6.5   66.0      F
## 2        9.0   68.0      F
## 3        8.5   64.5      F
## 6        7.0   64.0      F
## 7        9.5   70.0      F
## 8        9.0   72.0      F
## 11      10.5   67.0      F
## 12       8.5   71.0      F
```

```
## 14      12.0   67.0      F
## 18       8.5   59.0      F
## 19       5.0   62.0      F
## 21       6.5   66.0      F
## 22       7.5   64.0      F
## 23       8.5   67.0      F
## 28      11.0   69.0      F
```

```
#c. Find the mean of shoe size and height of the respondents. Write the R scripts and its result.
mean_shoe_size <- mean(household_data$Shoe_Size)
mean_height <- mean(household_data$Height)
mean_shoe_size
```

```
## [1] 9.683333
```

```
mean_height
```

```
## [1] 68.83333
```

```
#d. Is there a relationship between shoe size and height? Why?
correlation <- cor(household_data$Shoe_Size, household_data$Height)
correlation
```

```
## [1] 0.6790149
```