

Rworksheet_Mabalina#4a

Kristian B. Mabalina

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#1

a

```
shoe_size <- c(8, 9, 10, 6, 7)
height <- c(170, 180, 175, 160, 165)
gender <- c("M", "M", "M", "F", "F")

data <- data.frame(ShoeSize = shoe_size, Height = height, Gender = gender)
print(data)
```

```
##   ShoeSize Height Gender
## 1         8     170      M
## 2         9     180      M
## 3        10     175      M
## 4         6     160      F
## 5         7     165      F
```

b

```
male_data <- subset(data, Gender == "M")
female_data <- subset(data, Gender == "F")

print(male_data)
```

```
##   ShoeSize Height Gender
## 1         8     170      M
## 2         9     180      M
## 3        10     175      M
```

```
print(female_data)
```

```
##   ShoeSize Height Gender
## 4         6     160      F
## 5         7     165      F
```

c

```
mean_shoe_size <- mean(data$ShoeSize)
mean_height <- mean(data$Height)

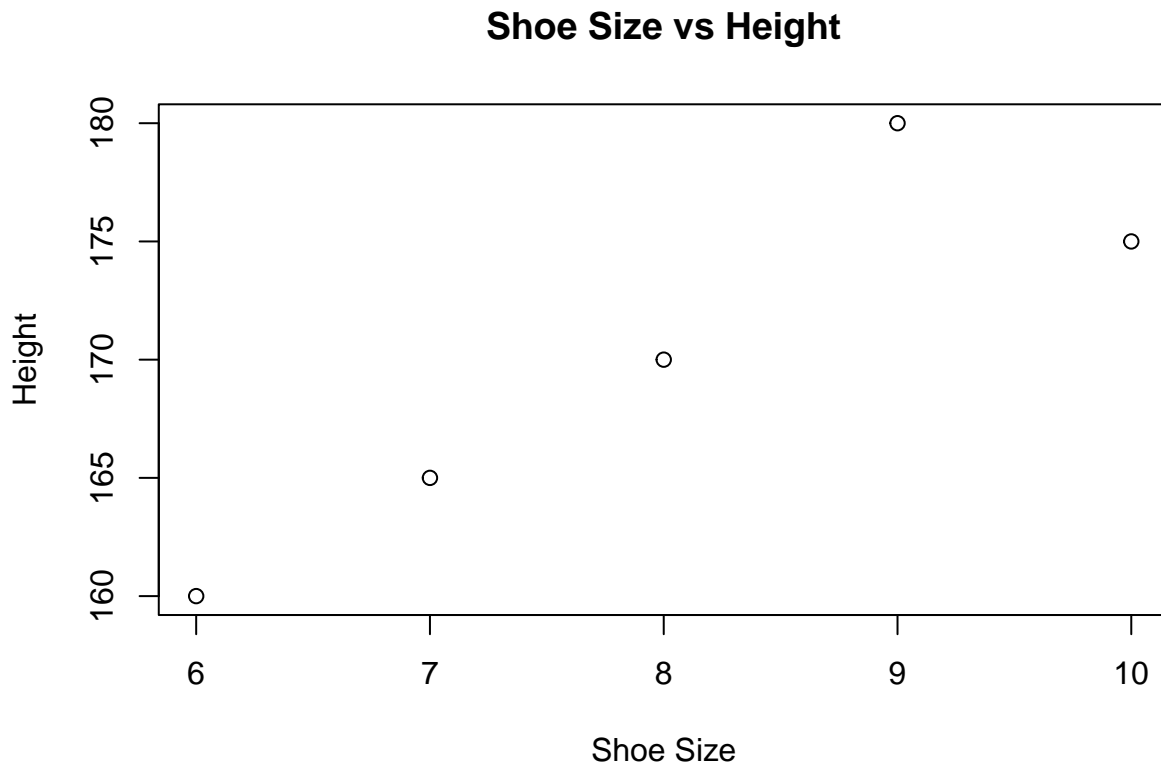
print(paste("Mean Shoe Size:", mean_shoe_size))
```

```
## [1] "Mean Shoe Size: 8"
```

```
print(paste("Mean Height:", mean_height))
```

```
## [1] "Mean Height: 170"
```

```
# d
plot(data$ShoeSize, data$Height, main="Shoe Size vs Height", xlab="Shoe Size", ylab="Height")
```



```
#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)
print(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
```

```
direction <- c("East", "West", "North", "West", "North")
frequency <- c(1, 4, 3, 2, 1)

factor_direction <- factor(direction, levels = c("East", "West", "North"))
print(factor_direction)
```

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

```
#4
```

```

factor_data <- c("East", "West", "North")
frequency_vector <- c(1, 4, 3)
new_order_data <- factor(factor_data, levels = c("East", "West", "North"))
print(new_order_data)

```

```

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

```

5

```

#a
data <- read.table("import_march.csv", header = TRUE, sep = ",")

```

```

#b
data

```

```

##   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

```

```

#6

```

```

exhaustive_search <- function() {
  # Get input from the user and check if it's a valid number
  number <- suppressWarnings(as.integer(readline(prompt = "Please select a number between 1 and 50: ")))
  if (is.na(number)) {
    print("Invalid input. Please enter a number.")
  } else if (number < 1 || number > 50) {
    print("The number selected is beyond the range of 1 to 50")
  } else if (number == 20) {
    print(TRUE)
  } else {
    print(number)
  }
}
exhaustive_search()

```

```

## Please select a number between 1 and 50:
## [1] "Invalid input. Please enter a number."

```