itle: “Rworksheet_Mijares#4b”
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ate: “2024-10-30”
utput: pdf_document

No. 1

```
vectorA <- c(1,2,3,4,5)
matrix5by5 <- matrix(nrow = 5, ncol = 5)

for(i in 1:5){
  for(j in 1:5){
    matrix5by5[i,j]<- abs(i-j)
 }
}

matrix5by5
```

```
##      [,1] [,2] [,3] [,4] [,5]
## [1,]    0    1    2    3    4
## [2,]    1    0    1    2    3
## [3,]    2    1    0    1    2
## [4,]    3    2    1    0    1
## [5,]    4    3    2    1    0
```

No. 2

```
x <- 5

for(i in 1:x){
  for(j in 1:i){
    cat("*")
  }
  cat("\n")
}
```

```
## *
## **
## ***
## ****
## *****
```

No. 3

```
## start_index <- as.integer(readline(prompt = "Enter the starting index for the Fibonacci sequence: ")

start_index <- 3
a <- 0
b <- 1
sequence <- c()

for (index in 1:1000) {
```

```r
  if (index >= start_index) {
    sequence <- c(sequence, a)
  }

  if (a > 500) {
    break
  }

  temp <- a + b
  a <- b
  b <- temp
}

print(sequence)
```

```
##  [1]   1   2   3   5   8  13  21  34  55  89 144 233 377 610
```

No.4

```r
## a.
ShoeSize <- read.csv("ShoeSizeData.csv")
ShoeSize
```

```
##    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
head(ShoeSize,6)
```

```
##   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
```

```r
## b.

male_subset <- subset(ShoeSize, Gender == "M")
male_subset
```

```
##    Shoe_Size Height Gender
## 5       10.5   70.0      M
## 9       13.0   72.0      M
## 11      10.5   74.5      M
## 13      12.0   71.0      M
## 14      10.5   71.0      M
## 15      13.0   77.0      M
## 16      11.5   72.0      M
## 19      10.0   72.0      M
## 22       8.5   67.0      M
## 23      10.5   73.0      M
## 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
female_subset <- subset(ShoeSize, Gender == "F")
female_subset
```

```
##    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
## 6        7.0   64.0      F
## 7        9.5   70.0      F
## 8        9.0   71.0      F
## 10       7.5   64.0      F
## 12       8.5   67.0      F
## 17       8.5   59.0      F
## 18       5.0   62.0      F
## 20       6.5   66.0      F
## 21       7.5   64.0      F
## 24       8.5   69.0      F
```

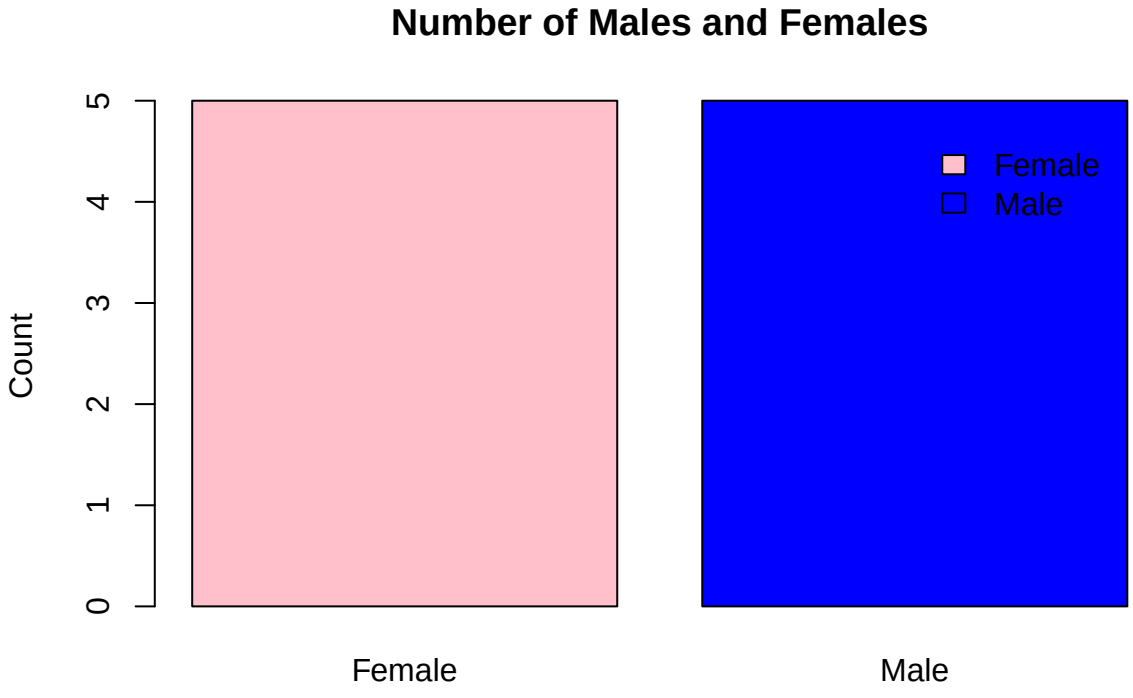
```r
## c.

HouseHold <- read.csv("HouseholdData.csv")

genderCount <-table(HouseHold$Sex)
```

```r
bplot <- barplot(genderCount, main = "Number of Males and Females", xlab = "Gender", ylab = "Count", col

legend("topright", legend = names(genderCount), fill = c("pink", "blue"), bty = "n", inset = c(0.05, 0.0
```

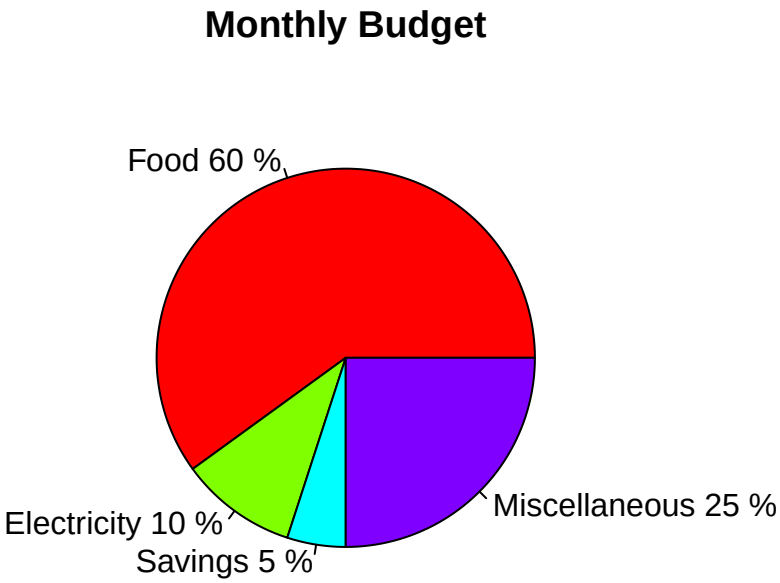


No. 5

```r
values <- c(60, 10, 5, 25)
incomeLabel <- c("Food", "Electricity", "Savings", "Miscellaneous")

percentages <- round(100 * values / sum(values), 1)
incomeLabel <- paste(incomeLabel, percentages, "%", sep = " ")

pie(
  values,
  labels = incomeLabel,
  main = "Monthly Budget",
  col = rainbow(length(values))
)
```


Monthly Budget
Food 60 %
Miscellaneous 25 %
Electricity 10 %
Savings 5 %