"worksheet3b"

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1. Create a data frame using the table below. a.Write the codes.

```
Respondents <- c(seq(1,20))
Sex <- c(2,2,1,2,2,2,2,2,2,2,1,2,2,2,2,2,2,2,1,2)
FathersOccupation <- c(1,3,3,3,1,2,3,1,1,1,3,2,1,3,3,1,3,1,2,1)
Personsathome <- c(5,7,3,8,5,9,6,7,8,4,7,5,4,7,8,8,3,11,7,6)
Siblingsatschool <- c(6,4,4,1,2,1,5,3,1,2,3,2,5,5,2,1,2,5,3,2)
Typesofhouses <- c(1,2,3,1,1,3,3,1,2,3,2,3,2,2,3,3,3,3,3,2)

DataFrame <- data.frame(Respondents,Sex,FathersOccupation,Personsathome,Siblingsatschool,Typesofhouses)
DataFrame
```

```
##    Respondents Sex FathersOccupation Personsathome Siblingsatschool
## 1            1   2                 1             5                6
## 2            2   2                 3             7                4
## 3            3   1                 3             3                4
## 4            4   2                 3             8                1
## 5            5   2                 1             5                2
## 6            6   2                 2             9                1
## 7            7   2                 3             6                5
## 8            8   2                 1             7                3
## 9            9   2                 1             8                1
## 10          10   2                 1             4                2
## 11          11   1                 3             7                3
## 12          12   2                 2             5                2
## 13          13   2                 1             4                5
## 14          14   2                 3             7                5
## 15          15   2                 3             8                2
## 16          16   2                 1             8                1
## 17          17   2                 3             3                2
## 18          18   2                 1            11                5
## 19          19   1                 2             7                3
## 20          20   2                 1             6                2
##    Typesofhouses
## 1              1
## 2              2
## 3              3
## 4              1
## 5              1
## 6              3
## 7              3
## 8              1
```

```
## 9              2
## 10             3
## 11             2
## 12             3
## 13             2
## 14             2
## 15             3
## 16             3
## 17             3
## 18             3
## 19             3
## 20             2
```

b.Describe the data. Get the structure or the summary of the data

```
summary(DataFrame)
```

```
##   Respondents          Sex       FathersOccupation Personsathome
##  Min.   : 1.00   Min.   :1.00   Min.   :1.00      Min.   : 3.0
##  1st Qu.: 5.75   1st Qu.:2.00   1st Qu.:1.00      1st Qu.: 5.0
##  Median :10.50   Median :2.00   Median :2.00      Median : 7.0
##  Mean   :10.50   Mean   :1.85   Mean   :1.95      Mean   : 6.4
##  3rd Qu.:15.25   3rd Qu.:2.00   3rd Qu.:3.00      3rd Qu.: 8.0
##  Max.   :20.00   Max.   :2.00   Max.   :3.00      Max.   :11.0
##  Siblingsatschool Typesofhouses
##  Min.   :1.00     Min.   :1.0
##  1st Qu.:2.00     1st Qu.:2.0
##  Median :2.50     Median :2.5
##  Mean   :2.95     Mean   :2.3
##  3rd Qu.:4.25     3rd Qu.:3.0
##  Max.   :6.00     Max.   :3.0
```

c. Is the mean number of siblings attending is 5? No

d. Extract the 1st two rows and then all the columns using the subsetting functions. Write the codes and its output.

```
C1 <- subset(DataFrame[1:2, 1:6, drop = FALSE])
C1
```

```
##   Respondents Sex FathersOccupation Personsathome Siblingsatschool
## 1           1   2                 1             5                6
## 2           2   2                 3             7                4
##   Typesofhouses
## 1             1
## 2             2
```

e. Extract 3rd and 5th row with 2nd and 4th column. Write the codes and its result.

```
C2 <- subset(DataFrame[c(3,5),c(2,4)])
C2
```

```
##   Sex Personsathome
## 3   1             3
## 5   2             5
```

f. Select the variable types of houses then store the vector that results as types_houses. Write the codes.

```
C3 <- DataFrame[c(6)]

types_houses <- C3
```

g. Select only all Males respondent that their father occupation was farmer. Write the codes and its output.

```
C22 <- subset(DataFrame[c(3,11),c(2,3)])
C22
```

```
##    Sex FathersOccupation
## 3    1                 3
## 11   1                 3
```

h. Select only all females respondent that have greater than or equal to 5 number of siblings attending school. Write the codes and its outputs

```
C5 <- subset(DataFrame[c(1:20), c(2,5)])
Fem <- C5[DataFrame$Siblingsatschool >= 5,]
Fem
```

```
##    Sex Siblingsatschool
## 1    2                6
## 7    2                5
## 13   2                5
## 14   2                5
## 18   2                5
```

2. Write a R program to create an empty data frame. Using the following codes:

```
  df = data.frame(Ints=integer(),
             Doubles=double(), Characters=character(),
             Logicals=logical(),
             Factors=factor(),
             stringsAsFactors=FALSE)

print("Structure of the empty dataframe:")
```

```
## [1] "Structure of the empty dataframe:"
```

```
print(str(df))
```

```
## 'data.frame':    0 obs. of  5 variables:
##  $ Ints      : int
##  $ Doubles   : num
##  $ Characters: chr
##  $ Logicals  : logi
##  $ Factors   : Factor w/ 0 levels:
## NULL
```

a. Describe the results. There is no data available in the table.

3. Interpret the graph.