RWorksheet_SOCO-3_B

```r
#1. Create a data frame using the table below.
#a. Write the codes.
#b. Describe the data. Get the structure or the summary of the data

respondents <- c(1,2,3,4,5,6,7,8,9,10,
                 11,12,13,14,15,16,17,18,19,20)
sex <- c(2,2,1,2,2,2,2,2,2,2,
         1,2,2,2,2,2,2,2,1,2)
fathers_occupation <- c(1,3,3,3,1,2,3,1,1,1,
                        3,2,1,3,3,1,3,1,2,1)
persons_at_home <- c(5,7,3,8,5,9,6,7,8,4,
                     7,5,4,7,8,8,3,11,7,6)
siblings_at_school <- c(6,4,4,1,2,1,5,3,1,2,
                        3,2,5,5,2,1,2,5,3,2)
types_of_houses <- c(1,2,3,1,1,3,3,1,2,3,
                     2,3,2,2,3,3,3,3,3,2)

data <- data.frame(respondents, sex, fathers_occupation,
                   persons_at_home, siblings_at_school, types_of_houses)
data
```

```
##    respondents sex fathers_occupation persons_at_home siblings_at_school
## 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
##    types_of_houses
## 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
```

```r
#Getting the Structure and summary of the data.
str(data)
```

```
## 'data.frame':    20 obs. of  6 variables:
##  $ respondents      : num  1 2 3 4 5 6 7 8 9 10 ...
##  $ sex              : num  2 2 1 2 2 2 2 2 2 2 ...
##  $ fathers_occupation: num  1 3 3 3 1 2 3 1 1 1 ...
##  $ persons_at_home  : num  5 7 3 8 5 9 6 7 8 4 ...
##  $ siblings_at_school: num  6 4 4 1 2 1 5 3 1 2 ...
##  $ types_of_houses  : num  1 2 3 1 1 3 3 1 2 3 ...
```

```r
summary(data)
```

```
##   respondents         sex       fathers_occupation persons_at_home
##  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
##  siblings_at_school types_of_houses
##  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
```

```r
#c. Is the mean number of siblings attending is 5?
#No, since the mean based on the data is 2.95 as the display shown.
mean_siblings <- mean(data$siblings_at_school)
mean_siblings == 5
```

```
## [1] FALSE
```

```
mean_siblings
```

```
## [1] 2.95
```

```
#d. Extract the 1st two rows and all columns
```

```
data[1:2, ]
```

```
##   respondents sex fathers_occupation persons_at_home siblings_at_school
## 1           1   2                  1               5                  6
## 2           2   2                  3               7                  4
##   types_of_houses
## 1               1
## 2               2
```

```
#e. Extract 3rd and 5th rows with 2nd and 4th columns
data [c(3, 5), c(2, 4)]
```

```
##   sex persons_at_home
## 3   1               3
## 5   2               5
```

```
#f. Select the variable types of houses then store the vector that results as types_houses. Write the c
types_houses <- data$types_of_houses
types_houses
```

```
##  [1] 1 2 3 1 1 3 3 1 2 3 2 3 2 2 3 3 3 3 3 2
```

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

```
male_farmer <- subset(data, sex == 1 & fathers_occupation == 1)
male_farmer
```

```
## [1] respondents        sex                fathers_occupation persons_at_home
## [5] siblings_at_school types_of_houses
## <0 rows> (or 0-length row.names)
```

```
#h. Select only all females respondent that have greater than or equal to 5 number of siblings attendin
female_5plus <- subset(data, sex == 2 & siblings_at_school >= 5)
female_5plus
```

```
##    respondents sex fathers_occupation persons_at_home siblings_at_school
## 1            1   2                  1               5                  6
## 7            7   2                  3               6                  5
## 13          13   2                  1               4                  5
## 14          14   2                  3               7                  5
## 18          18   2                  1              11                  5
##    types_of_houses
## 1                1
## 7                3
## 13               2
## 14               2
## 18               3
```