RWorksheet_Cabaña#3b

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R Markdown

This is an R Markdown document. Markdown is a simple formatting syntax for authoring HTML, PDF, and MS Word documents. For more details on using R Markdown see http://rmarkdown.rstudio.com.

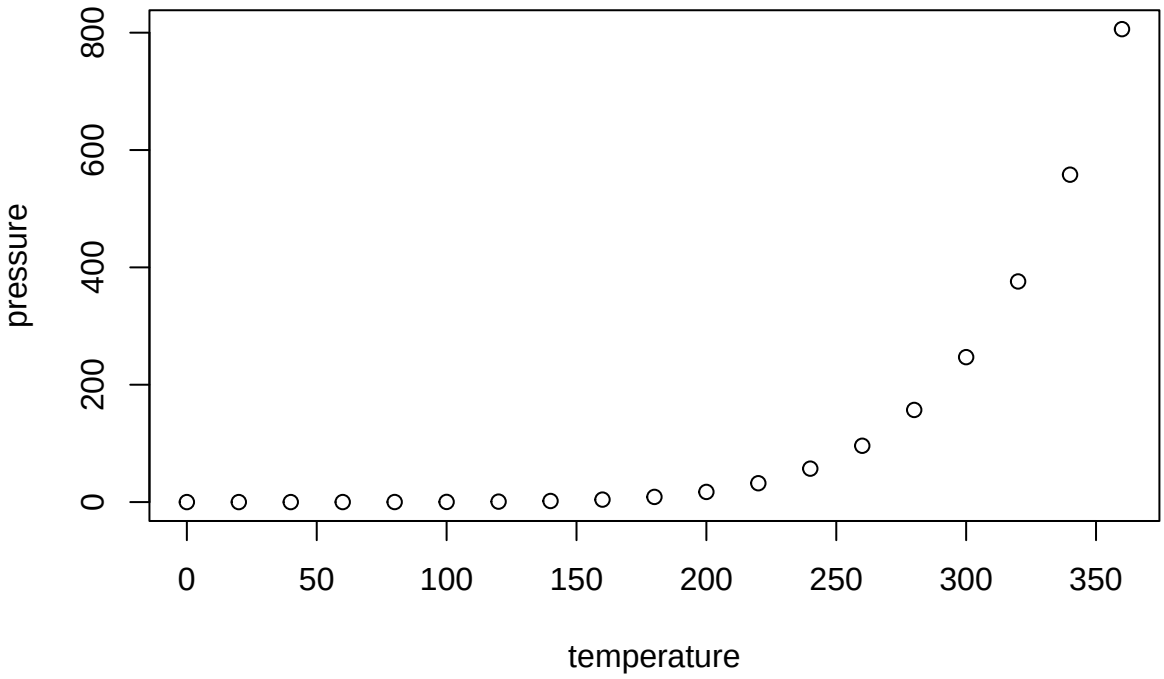
When you click the **Knit** button a document will be generated that includes both content as well as the output of any embedded R code chunks within the document. You can embed an R code chunk like this:

```
summary(cars)
```

```
##      speed           dist
##  Min.   : 4.0   Min.   :  2.00
##  1st Qu.:12.0   1st Qu.: 26.00
##  Median :15.0   Median : 36.00
##  Mean   :15.4   Mean   : 42.98
##  3rd Qu.:19.0   3rd Qu.: 56.00
##  Max.   :25.0   Max.   :120.00
```

Including Plots

You can also embed plots, for example:



Note that the `echo = FALSE` parameter was added to the code chunk to prevent printing of the R code that generated the plot.

```
#1) Create a data frame using the table below
#1a

Household_Data <- data.frame(
  Respondents = c(1:20),
  Sex = c("Female","Female","Male","Female","Female","Female","Female","Female","Female","Female","Male
  Fathers_Occupation = c("Farmer","Others","Others","Others","Farmer","Driver","Others","Farmer","Farme
  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),
  TypesOfHouse = c("Wood","Semi-Concrete","Concrete","Wood","Wood","Concrete","Concrete","Wood","Semi-C

)
Household_Data
```

```
##    Respondents    Sex Fathers_Occupation PersonsAtHome SiblingsAtSchool
## 1            1 Female             Farmer             5                6
## 2            2 Female             Others             7                4
## 3            3   Male             Others             3                4
## 4            4 Female             Others             8                1
## 5            5 Female             Farmer             5                2
## 6            6 Female             Driver             9                1
## 7            7 Female             Others             6                5
## 8            8 Female             Farmer             7                3
## 9            9 Female             Farmer             8                1
## 10          10 Female             Farmer             4                2
## 11          11   Male             Others             7                3
## 12          12 Female             Driver             5                2
## 13          13 Female             Farmer             4                5
## 14          14 Female             Others             7                5
## 15          15 Female             Others             8                2
## 16          16 Female             Farmer             8                1
## 17          17 Female             Others             3                2
## 18          18 Female             Farmer            11                5
## 19          19   Male             Driver             7                3
## 20          20 Female             Farmer             6                2
##     TypesOfHouse
## 1           Wood
## 2  Semi-Concrete
## 3       Concrete
## 4           Wood
## 5           Wood
## 6       Concrete
## 7       Concrete
## 8           Wood
## 9  Semi-Concrete
## 10      Concrete
## 11 Semi-Concrete
## 12      Concrete
## 13 Semi-Concrete
## 14 Semi-Concrete
## 15      Concrete
## 16      Concrete
```

```
## 17      Concrete
## 18      Concrete
## 19      Concrete
## 20 Semi-Concrete
```

```
#1b

summary(Household_Data)
```

```
##   Respondents        Sex            Fathers_Occupation PersonsAtHome
##  Min.   : 1.00   Length:20          Length:20          Min.   : 3.0
##  1st Qu.: 5.75   Class :character   Class :character   1st Qu.: 5.0
##  Median :10.50   Mode  :character   Mode  :character   Median : 7.0
##  Mean   :10.50                                         Mean   : 6.4
##  3rd Qu.:15.25                                         3rd Qu.: 8.0
##  Max.   :20.00                                         Max.   :11.0
##  SiblingsAtSchool TypesOfHouse
##  Min.   :1.00     Length:20
##  1st Qu.:2.00     Class :character
##  Median :2.50     Mode  :character
##  Mean   :2.95
##  3rd Qu.:4.25
##  Max.   :6.00
```

```
#1c
Mean_Siblings <- mean(Household_Data$SiblingsAtSchool)
is_mean_5 <- Mean_Siblings == 5
print(is_mean_5)
```

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

```
#No because the mean is 2.95

#1d
First_two_rows_all_col <- Household_Data[1:2, ]
print(First_two_rows_all_col)
```

```
##   Respondents    Sex Fathers_Occupation PersonsAtHome SiblingsAtSchool
## 1           1 Female             Farmer             5                6
## 2           2 Female             Others             7                4
##    TypesOfHouse
## 1          Wood
## 2 Semi-Concrete
```

```
#1e
Selected_rows_col <- Household_Data[c(3, 5), c(2, 4)]
print(Selected_rows_col)
```

```
##      Sex PersonsAtHome
## 3   Male             3
## 5 Female             5
```

```
#1f
Types_houses <- Household_Data$TypesOfHouse
Types_houses
```

```
##  [1] "Wood"          "Semi-Concrete" "Concrete"      "Wood"
##  [5] "Wood"          "Concrete"      "Concrete"      "Wood"
```

```
##  [9] "Semi-Concrete" "Concrete"      "Semi-Concrete" "Concrete"
## [13] "Semi-Concrete" "Semi-Concrete" "Concrete"      "Concrete"
## [17] "Concrete"      "Concrete"      "Concrete"      "Semi-Concrete"
```

```
#1g
Male_farmers <- Household_Data[Household_Data$Sex == "Male" & Household_Data$Fathers_Occupation == "Far
Male_farmers
```

```
## [1] Respondents        Sex                Fathers_Occupation PersonsAtHome
## [5] SiblingsAtSchool   TypesOfHouse
## <0 rows> (or 0-length row.names)
```

```
#1h

Female_greater_than_5_siblings <- Household_Data[Household_Data$Sex == "Female" & Household_Data$Siblin
print(Female_greater_than_5_siblings)
```

```
## [1] Respondents        Sex                Fathers_Occupation PersonsAtHome
## [5] SiblingsAtSchool   TypesOfHouse
## <0 rows> (or 0-length row.names)
```

```
#2)
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
```

```
#2a The data frame is empty

#3
Household_Data <- data.frame(
  Respondents = c(1:10),
  Sex = c("Male", "Female", "Female", "Male", "Male", "Female", "Female", "Male", "Female", "Male"),
  Fathers_Occupation = c(1, 2, 3, 3, 1, 2, 2, 3, 1, 3),
  PersonsAtHome = c(5, 7, 3, 8, 6, 4, 4, 2, 11, 6),
  SiblingsAtSchool = c(2, 3, 0, 5, 2, 3, 1, 2, 6, 2),
  TypesOfHouse = c("Wood", "Congrete", "Congrete", "Wood", "Semi-Congrete", "Semi-Congrete", "Wood", "S
)
Household_Data
```

```
##    Respondents    Sex Fathers_Occupation PersonsAtHome SiblingsAtSchool
## 1            1   Male                  1             5                2
```

```
## 2            2 Female                 2             7                3
## 3            3 Female                 3             3                0
## 4            4   Male                 3             8                5
## 5            5   Male                 1             6                2
## 6            6 Female                 2             4                3
## 7            7 Female                 2             4                1
## 8            8   Male                 3             2                2
## 9            9 Female                 1            11                6
## 10          10   Male                 3             6                2
##     TypesOfHouse
## 1           Wood
## 2       Congrete
## 3       Congrete
## 4           Wood
## 5  Semi-Congrete
## 6  Semi-Congrete
## 7           Wood
## 8  Semi-Congrete
## 9  Semi-Congrete
## 10      Congrete
```

```
#create a.csv file
write.csv(Household_Data, file = "Household_Data.csv", row.names = FALSE)

#3a
Imported_Household <- read.csv("Household_Data.csv")
Imported_Household
```

```
##    Respondents    Sex Fathers_Occupation PersonsAtHome SiblingsAtSchool
## 1            1   Male                 1             5                2
## 2            2 Female                 2             7                3
## 3            3 Female                 3             3                0
## 4            4   Male                 3             8                5
## 5            5   Male                 1             6                2
## 6            6 Female                 2             4                3
## 7            7 Female                 2             4                1
## 8            8   Male                 3             2                2
## 9            9 Female                 1            11                6
## 10          10   Male                 3             6                2
##     TypesOfHouse
## 1           Wood
## 2       Congrete
## 3       Congrete
## 4           Wood
## 5  Semi-Congrete
## 6  Semi-Congrete
## 7           Wood
## 8  Semi-Congrete
## 9  Semi-Congrete
## 10      Congrete
```

```
#3b
Imported_Household$Sex <- factor(Imported_Household$Sex, levels = c("Male", "Female"))
Imported_Household$Sex <- as.integer(Imported_Household$Sex)
```

```r
#3c
Imported_Household$TypesOfHouse <- factor(Imported_Household$TypesOfHouse)
Imported_Household$TypesOfHouse <- as.integer(factor(Imported_Household$TypesOfHouse, levels = c("Wood"

#3d
Imported_Household$Fathers_Occupation <- as.integer(factor(Imported_Household$Fathers_Occupation, levels

#3e
FemaleRes <- Imported_Household[Imported_Household$Sex == 2 & Imported_Household$FathersOccupation == 2
FemaleRes
```

```
## [1] Respondents        Sex                Fathers_Occupation PersonsAtHome
## [5] SiblingsAtSchool   TypesOfHouse
## <0 rows> (or 0-length row.names)
```

```r
#3f
GreaterThan5 <- Imported_Household[Imported_Household$SiblingsAtSchool>=5, ]
GreaterThan5
```

```
##   Respondents Sex Fathers_Occupation PersonsAtHome SiblingsAtSchool
## 4           4   1                  3             8                5
## 9           9   2                  1            11                6
##   TypesOfHouse
## 4            1
## 9            3
```

```r
#4. Interpret the graph

# The graph in figure 3 represents the sentiments of people every day that has a major impact on our wo
```