

Rworksheet_Fegidero#3a

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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>.

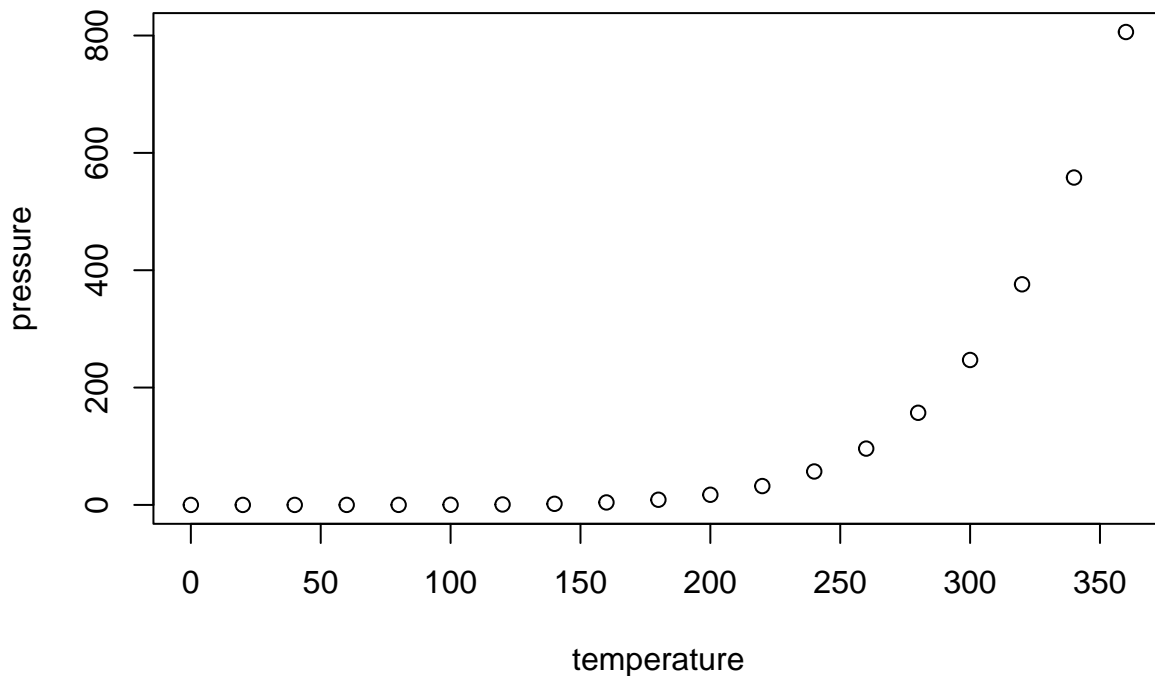
When you click the **Knit** button a document will be generated that includes both content as well as the output of any embedded R code chunks within the document. You can embed an R code chunk like this:

```
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

```
#A.
```

```
LETTERS[1:11]
```

```
## [1] "A" "B" "C" "D" "E" "F" "G" "H" "I" "J" "K"
```

```
#B.
```

```
LETTERS[seq(1, 26, by = 2)]
```

```
## [1] "A" "C" "E" "G" "I" "K" "M" "O" "Q" "S" "U" "W" "Y"
```

```
#C.
```

```
LETTERS[c(1, 5, 9, 15, 21)]
```

```
## [1] "A" "E" "I" "O" "U"
```

```
#D.
```

```
letters[22:26]
```

```
## [1] "v" "w" "x" "y" "z"
```

```
#E.
```

```
letters[15:24]
```

```
## [1] "o" "p" "q" "r" "s" "t" "u" "v" "w" "x"
```

2

```
city <- c("Tuguegarao City", "Manila", "Iloilo City", "Tacloban", "Samal Island", "Davao City")
city
```

```
## [1] "Tuguegarao City" "Manila"           "Iloilo City"      "Tacloban"
## [5] "Samal Island"    "Davao City"
```

```
temp <- c(42, 39, 34, 34, 30, 27)
temp
```

```
## [1] 42 39 34 34 30 27
```

```
city <- c("Tuguegarao City", "Manila", "Iloilo City", "Tacloban", "Samal Island", "Davao City")
city
```

```
## [1] "Tuguegarao City" "Manila"           "Iloilo City"      "Tacloban"
## [5] "Samal Island"     "Davao City"
```

```
temp <- c(42, 39, 34, 34, 30, 27)
temp
```

```
## [1] 42 39 34 34 30 27
```

```
weather <- data.frame(city, temp)
weather
```

```
##           city temp
## 1 Tuguegarao City  42
## 2           Manila  39
## 3       Iloilo City  34
## 4           Tacloban 34
## 5       Samal Island 30
## 6           Davao City 27
```

```
names(weather) <- c("City", "Temperature")
weather
```

```
##           City Temperature
## 1 Tuguegarao City         42
## 2           Manila         39
## 3       Iloilo City         34
## 4           Tacloban         34
## 5       Samal Island         30
## 6           Davao City         27
```

```
## Row 3 and 4
weather[3:4, ]
```

```
##           City Temperature
## 3 Iloilo City         34
## 4   Tacloban         34
```

```
## City with the Highest and Lowest temprature
weather[which.max(weather$Temperature), ]
```

```
##           City Temperature
## 1 Tuguegarao City         42
```

```
weather[which.min(weather$Temperature), ]
```

```
##           City Temperature
## 6 Davao City         27
```

MATRIX

```
m <- matrix(c(1:8, 11:14), nrow = 3, ncol = 4)
m
```

```
##      [,1] [,2] [,3] [,4]
## [1,]    1    4    7   12
## [2,]    2    5    8   13
## [3,]    3    6   11   14
```

```
m * 2
```

```
##      [,1] [,2] [,3] [,4]
## [1,]    2    8   14   24
## [2,]    4   10   16   26
## [3,]    6   12   22   28
```

```
##Displays the content of Row 2
```

```
m[2, ]
```

```
## [1]  2  5  8 13
```

```
##Display columns 3 and 4 in rows 1 and 2
```

```
m[1:2, 3:4]
```

```
##      [,1] [,2]
## [1,]    7   12
## [2,]    8   13
```

```
##Display only columns 2 and 3 from row 3
```

```
m[3, 2:3]
```

```
## [1]  6 11
```

```
## Displays only column 4
```

```
m[, 4]
```

```
## [1] 12 13 14
```

```
##Name the rows and columns for the matrix from (b)
```

```
m2 <- m * 2
```

```
rownames(m2) <- c("isa", "dalawa", "tatlo")
```

```
colnames(m2) <- c("uno", "dos", "tres", "quatro")
```

```
m2
```

```
##      uno dos tres quatro
## isa    2   8  14    24
## dalawa 4  10  16    26
## tatlo  6  12  22    28
```

```
##Reshape the original matrix (from a)
dim(m) <- c(6, 2)
m
```

```
##      [,1] [,2]
## [1,]    1    7
## [2,]    2    8
## [3,]    3   11
## [4,]    4   12
## [5,]    5   13
## [6,]    6   14
```

ARRAY

```
values <- rep(c(1, 2, 3, 6, 7, 8, 9, 0, 3, 4, 5, 1), 2)
```

```
my_array <- array(values, dim = c(2, 4, 3))
my_array
```

```
## , , 1
##
##      [,1] [,2] [,3] [,4]
## [1,]    1    3    7    9
## [2,]    2    6    8    0
##
## , , 2
##
##      [,1] [,2] [,3] [,4]
## [1,]    3    5    1    3
## [2,]    4    1    2    6
##
## , , 3
##
##      [,1] [,2] [,3] [,4]
## [1,]    7    9    3    5
## [2,]    8    0    4    1
```

```
##How many dimensions does your array have?
dim(my_array)
```

```
## [1] 2 4 3
```

```
## Name the rows, columns, dimensions
rownames <- c("a", "b")
colnames <- c("A", "B", "C", "D")
dimnames(my_array) <- list(rownames, colnames,
                           c("1st-Dimensional Array",
                              "2nd-Dimensional Array",
                              "3rd-Dimensional Array"))
```

```
my_array
```

```
## , , 1st-Dimensional Array
##
##   A B C D
## a 1 3 7 9
## b 2 6 8 0
##
## , , 2nd-Dimensional Array
##
##   A B C D
## a 3 5 1 3
## b 4 1 2 6
##
## , , 3rd-Dimensional Array
##
##   A B C D
## a 7 9 3 5
## b 8 0 4 1
```