RWorksheet#3

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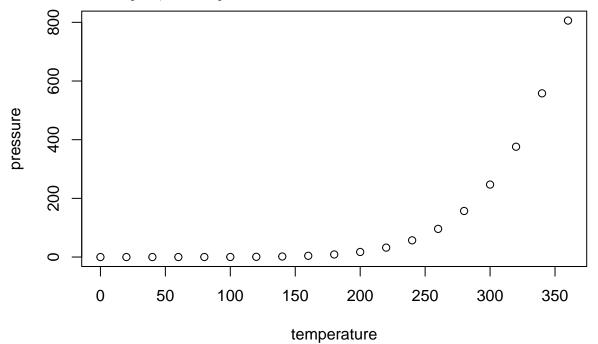
When you click the **Knit** button a document will be generated that includes both content as well as the output of any embedded R code chunks within the document. You can embed an R code chunk like this:

```
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.

'"{r} #code here"' Using Vectors #1 There is a built-in vector LETTERS contains the uppercase letters of the alphabet and letters which contains the lowercase letters of the alphabet

LETTERS letters

#1a vector that contains the first 11 letters first_11 <- head(LETTERS,11) first_11

#1b vector that contains the odd numbered letters AllLetters <- LETTERS odd_Letters <-AllLetters[seq(1, length(AllLetters), by=2)] odd_Letters

#1c vector that contains the vowels vow_Letters <-LETTERS [c(1,5,9,15,21)] vow_Letters

#1d vector that contains the last 5 lowercase letters last_5 <- letters[c(22:26)] last_5

#e vector that contains letters between 15 to 24 letters in lowercase fifteen_24 <- letters[c(15:24)] fifteen_24

#2a

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

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

#c city_temp <- data.frame(city,temp) city_temp

#d names(city_temp) <- c("City", "Temperature") city_temp

#e str(city_temp)

the code displayed the city_temp object's structure

it displayed the contents and summary of the data frame

#f twoRows <- city_temp[3:4,]

#g highest <- city_temp[which.max(city_temp$Temperature),] highest

lowest <- city_temp[which.min(city_temp$Temperature),] lowest

#USING MATRICES

#2a matr <- matrix(c(1:8,11:14), nrow = 3, ncol = 4) matr

#b mulMatr <- matr * 2 mulMatr

#c row_two <- mulMatr[2,] row_two

#d two_cols_andRows <- mulMatr[c(1,2),c(3,4)] two_col_andRows

#e two_cols_oneRow <- mulMatr[3,c(2,3)] two_cols_oneRow

#f four_col <- mulMatr[,4] four_col

#g row_names <- c("isa", "dalawa", "tatlo") col_names <- c("uno", "dos", "tres", "quatro")

#h matr dim(matr) <- c(6,2) matr

#ARRAYS

#3a values <- c(1, 2, 3, 6, 7, 8, 9, 0, 3, 4, 5, 1) rep_values <- rep(values, each = 2)

arr <- array(rep_values, dim = c(2,4,3)) arr

#3b # three dimensions

#3c dimnames(arr) <- list(letters[1:2], # row names LETTERS[1:4], # col names c("1st-Dimensional Array", "2nd-Dimensional Array", "3rd-Dimensional Array") # dim names) arr

```
```