

RWorksheet_Arcenas#3a

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```
LETTERS
```

```
## [1] "A" "B" "C" "D" "E" "F" "G" "H" "I" "J" "K" "L" "M" "N" "O" "P" "Q" "R" "S"  
## [20] "T" "U" "V" "W" "X" "Y" "Z"
```

```
first11 <- LETTERS[c(1:11)]  
first11
```

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

```
lenLet <- length(LETTERS)  
oddNumb <- LETTERS[seq(lenLet) %% 2 == 1]  
oddNumb
```

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

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

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

```
letters
```

```
## [1] "a" "b" "c" "d" "e" "f" "g" "h" "i" "j" "k" "l" "m" "n" "o" "p" "q" "r" "s"  
## [20] "t" "u" "v" "w" "x" "y" "z"
```

```
last_5 <- letters[c(22:26)]  
last_5
```

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

```
fifteen_to_24 <- letters[c(15:24)]  
fifteen_to_24
```

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

```
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"
```

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

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

```
city_temp <- data.frame(city,temperature)
```

```
city_temp
```

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

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

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

```
str(city_temp)
```

```
## 'data.frame':   6 obs. of  2 variables:
## $ City      : chr  "Tuguegarao City" "Manila" "Iloilo City" "Tacloban" ...
## $ Temperature: num  42 39 34 34 30 27
```

```
# the code displayed the structure of the city_temp object
# it displayed the contents of the data frame
# it displayed the summary of the data frame
```

```
two_rows <- city_temp[3:4,]
```

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

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

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

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

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

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

```
mulMatr <- matrx * 2
mulMatr
```

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

```

rowtwo <- mulMatr[2,]
rowtwo

## [1]  4 10 16 26

two_Cols_And_Rows <- mulMatr[c(1,2), c(3,4)]
two_Cols_And_Rows

##      [,1] [,2]
## [1,]   14   24
## [2,]   16   26

two_Cols_One_Row <- mulMatr[3, c(2,3)]
two_Cols_One_Row

## [1] 12 22

four_Col <- mulMatr[, 4]
four_Col

## [1] 24 26 28

dimnames(mulMatr) <- list(c("isa", "dalawa", "tatlo"), c("uno", "dos", "tres", "quatro"))
mulMatr

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

matrx

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

dim(matrx) <- c(6,2)
matrx

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

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

## , , 1
##
##      [,1] [,2] [,3] [,4]
## [1,]    1    2    3    6
## [2,]    1    2    3    6

```

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

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

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