

RWorksheet_Francisco#3a

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```
#1a
A <- LETTERS[1:11]
A

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

#1b
Odd <- LETTERS[seq(1, 26, by=2)]
Odd

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

#1c
Let <- LETTERS[c(1,5,9,15,21)]
Let

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

#1d
Last <- tail(letters, 5)
Last

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

#1e
Low <- letters[15:24]
Low

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

#2a
city <- c("Tuguegarao City", "Manila", "Iloilo City", "Tacloban", "Samal Island", "Davao City")
#2b
temp <- c(42, 39, 34, 34, 30, 27 )
#2c : The vectors was combined to make a table
Fuse <- data.frame(city, temp)
#2d : The city was changed into City and temp into Temperature
names(Fuse) <- c("City", "Temperature")
#2e : It displays the structure of the data frame
str(Fuse)

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

#2f: Iloilo City:34, Tacloban:34
Fin <- Fuse[3:4,]
Fin
```

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

```
#2g
max(Fuse$City)
```

```
## [1] "Tuguegarao City"
min(Fuse$City)
```

```
## [1] "Davao City"
```

```
# max(Fuse$City)
# [1] "Tuguegarao City"
# min(Fuse$City)
# [1] "Davao City"
```

```
#MATRIX
```

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

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

```
#2.b
mult_mat <- mat * 2
mult_mat
```

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

```
#2.c
row2 <- mat[2,]
row2
```

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

```
#2.d
dis1 <- mat[1:2, 3:4]
dis1
```

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

```
#2.e
dis2 <- mat[3,2:3]
dis2
```

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

```
#2.f
dis3 <- mat[,4]
dis3
```

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

```
#2.g
```

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

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

```
#2.h
```

```
dim(mat) <- c(6,2)
mat
```

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

```
#ARRAY
```

```
#3.a
```

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

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

```
nums <- rep(num, 2)
nums
```

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

```
array_num <- array(nums, dim = c(2,4,3))
array_num
```

```
## , , 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
```

```
#3.b
```

```
dim(array_num)
```

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

```
#3.c
```

```
arg1 <- c("a","b")
```

```
arg2 <- c("A", "B", "C", "D")
```

```
mate <- c("1st-Dimensional Array", "2nd-Dimensional Array","3rd-Dimensional Array")
```

```
modified <- array(array_num,dim = c(2,4,3),dimnames = list(arg1,arg2,mate))
```

```
modified
```

```
## , , 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
```