

```

letters[seq(1, 11, by = 1)]

## [1] "a" "b" "c" "d" "e" "f" "g" "h" "i" "j" "k"
letters[seq(1, 26, by=2)]

## [1] "a" "c" "e" "g" "i" "k" "m" "o" "q" "s" "u" "w" "y"
letters[c(1,5,9,15,21)]

## [1] "a" "e" "i" "o" "u"
letters[seq(22, 26, by=1)]

## [1] "v" "w" "x" "y" "z"
letters[seq(15, 24, by=1)]

## [1] "o" "p" "q" "r" "s" "t" "u" "v" "w" "x"
city <- c("Tuguegarao City", "Manila", "Iloilo City", "Tacloban", "Samal Island", "Davao City")
print(city)

## [1] "Tuguegarao City" "Manila"          "Iloilo City"      "Tacloban"
## [5] "Samal Island"    "Davao City"
temp<- c(42, 39, 34, 34, 30, 27)
print(temp)

## [1] 42 39 34 34 30 27
df_temp <- data.frame(city, temp)
print(df_temp)

##           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(df_temp) <- c("City", "Temperature")
print(df_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(df_temp)

## 'data.frame':   6 obs. of  2 variables:
## $ City          : chr  "Tuguegarao City" "Manila" "Iloilo City" "Tacloban" ...
## $ Temperature: num  42 39 34 34 30 27
df_temp[3:4, ]

```

```

##           City Temperature
## 3 Iloilo City           34
## 4  Tacloban            34
# City with Highest Temperature
df_temp[which.max(df_temp$Temperature), ]

##           City Temperature
## 1 Tuguegarao City      42
# City with Lowest Temperature
df_temp[which.min(df_temp$Temperature), ]

##           City Temperature
## 6 Davao City           27
vector_data <- c(1:8, 11:14)
mat_a <- matrix(vector_data, nrow = 3, ncol = 4)
print(mat_a)

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

mat_b <- mat_a * 2
print(mat_b)

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

mat_a[2, ]

## [1]  2  5  8 13

mat_a[1:2, 3:4]

##      [,1] [,2]
## [1,]    7   12
## [2,]    8   13
mat_a[3, c(2, 3)]

## [1]  6 11

mat_a[, 4]

## [1] 12 13 14

dimnames(mat_b) <- list(
  row_names = c("isa", "dalawa", "tatlo"),
  col_names = c("uno", "dos", "tres", "quatro")
)
print(mat_b)

##           col_names
## row_names uno dos tres quatro
##   isa      2   8  14   24
## dalawa    4  10  16   26

```

```
##      tatlo      6 12  22    28
dim(mat_a) <- c(6, 2)
print(mat_a)

##      [,1] [,2]
## [1,]    1    7
## [2,]    2    8
## [3,]    3   11
## [4,]    4   12
## [5,]    5   13
## [6,]    6   14
dim(mat_a) <- c(6, 2)
print(mat_a)

##      [,1] [,2]
## [1,]    1    7
## [2,]    2    8
## [3,]    3   11
## [4,]    4   12
## [5,]    5   13
## [6,]    6   14
array_data <- c(1, 2, 3, 6, 7, 8, 9, 0, 3, 4, 5, 1)
array_repeated <- rep(array_data, times = 2)
arr_3d <- array(array_repeated, dim = c(2, 4, 3))
print(arr_3d)

## , , 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
```