WORKSHEET 4

1.

a) Using the matrix function, construct a 4X3 matrix *m*, containing the elements 1 -12. Fill the matrix by column.

b) Add row names to a, b, c, d. and column names x, y, z. to the matrix *m*

c) Extract the elements in column one.

d) Extract the element in row 3, column 1.

2.

Let:

```
a <- c(1,2,3)
b <- c(6,7,8)
```

a) Write one line of code to generate the following result. Do **not** use the function matrix()

```
     a b
[1,] 1 6
[2,] 2 7
[3,] 3 8
```

Write code to determine whether the above R object is a matrix.

3.

Write an R program to create and print an empty 2 X 3 matrix.

4.

Using the following two vectors, write code to create an array of two 3x3 matrices, each with 3 rows and 3 columns.

```
V1 <- c(1,3,4,5)
V2 <- c(10,11,12,13,14,15)
```

5.

Create a numeric vector containing elements 10, 20, 30, 20, 20, 25, 9, 26
Write code to find the highest and lowest values.

6.

Create list containing elements “PSTAT 10”, 2024, 300, “ILP 1202”

Write code to replace the element “ILP 1202” with “ILP 1203”
Print the list.

END WORKSHEET 4