**SECTION III**

1. Inverse of a matrix using R

**Code:**

x<-c (1,0,-1,3,1,0,-1,2,8)

m <- matrix(x, ncol = 3, nrow = 3) #Representing in matric format

solve(m) #To find inverse of the matix

**Output:**

[,1] [,2] [,3]

[1,] 8 -24 7

[2,] -2 7 -2

[3,] 1 -3 1

1. Solve the system of linear equation using R

**Code:**

a<-c (-1,-2,-1,-5,-7,-4,3,0,1)

m <- matrix(a, ncol = 3, nrow = 3)

X<-c('x','y','z')

n <- matrix(X, ncol = 1, nrow = 3) #Representing variables(x,y,z) in matrix form

b<-c(4,5,3)

o <- matrix(b, ncol = 1, nrow = 3)

solve(a,b) #Finding the vector x value

**Output:**

Error in solve. default(a, b) : 'a' (9 x 1) must be square