SECTION III – MATHEMATICS

1. Inverse of matrix with R programming.

Source code:

# Inverse of matrix

A<- matrix(c(1,3,-1,0,1,2,-1,0,8),nrow=3,ncol=3,byrow=TRUE)

print(A)

B<-det(A)

print(B)

# determinant of matrix A non-zero, so inverse of matrix also exist.

A1<-solve(A)

print(A1)

# matrix A1 is the inverse of matrix A

1. Solving the system of linear equation using R programming

Source code:

# solving the system of linear equation

A <- matrix(c(-1,-5,3,-2,-7,0,-1,4,1),nrow=3,ncol=3,byrow=TRUE)

print(A)

B <- matrix(c(4,5,3),nrow=3,ncol=1,byrow=TRUE)

print(B)

C <- solve(A,B)

print(C)

# matrix C consists values of x, y, z