Q6. Write a R program to calculate the sum of two matrices of given size.

Program:-

print("Two Vectors of Diffrent Lengths:")

v1=c(1,3,4,5)

v2=c(10,11,12,13,14,15)

print(v1)

print(v2)

result=array(c(v1,v2),dim=c(3,3,2))

print("New array:")

print(result)

print("The addition of two matrices in the array is:")

print(result[,,1]+result[,,2])

print("The subtraction of two matrices in the array is:")

print(result[,,1]-result[,,2])

print("The multiplication of two matrices in the array is:")

print(result[,,1]\*result[,,2])

print("The division of two matrices in the array is:")

print(result[,,1]/result[,,2])

output:-

> print("Two Vectors of Diffrent Lengths:")

[1] "Two Vectors of Diffrent Lengths:"

> v1=c(1,3,4,5)

> v2=c(10,11,12,13,14,15)

> print(v1)

[1] 1 3 4 5

> print(v2)

[1] 10 11 12 13 14 15

> result=array(c(v1,v2),dim=c(3,3,2))

> print("New array:")

[1] "New array:"

> print(result)

, , 1

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

[1,] 1 5 12

[2,] 3 10 13

[3,] 4 11 14

, , 2

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

[1,] 15 4 11

[2,] 1 5 12

[3,] 3 10 13

> print("The addition of two matrices in the array is:")

[1] "The addition of two matrices in the array is:"

> print(result[,,1]+result[,,2])

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

[1,] 16 9 23

[2,] 4 15 25

[3,] 7 21 27

> print("The subtraction of two matrices in the array is:")

[1] "The subtraction of two matrices in the array is:"

> print(result[,,1]-result[,,2])

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

[1,] -14 1 1

[2,] 2 5 1

[3,] 1 1 1

> print("The multiplication of two matrices in the array is:")

[1] "The multiplication of two matrices in the array is:"

> print(result[,,1]\*result[,,2])

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

[1,] 15 20 132

[2,] 3 50 156

[3,] 12 110 182

> print("The division of two matrices in the array is:")

[1] "The division of two matrices in the array is:"

> print(result[,,1]/result[,,2])

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

[1,] 0.06666667 1.25 1.090909

[2,] 3.00000000 2.00 1.083333

[3,] 1.33333333 1.10 1.076923