R Script:-

```
#Assignment
s <- 10
print(s)

#case sensitive
a <- 5
b <- 2
c <- 1
print(a+B+c)

#Arithmetic Operations
#creation of vector

a <- c(10, 20, 30, 40, 50)
b <- c(1, 2, 3, 4, 5)
print(a)
print(b)

#Addition of tow vector
Result <- a+b
print(Result)

#Subtraction of tow vector
Result <- a-b
print(Result)

#Multiplication of tow vector
Result <- a*b
print(Result)

#Division of tow vector
Result <- a/b
print(Result)

#options()
1/7#by default it will show 7 digits output.

options(digits = 3)#by using this it will show only 3 digits after decimal point
1/7

#Miscellaneous Mathematical functions

x<-20
abs(x)  #Absolute Value
```

```
sqrt(x) #square root
exp(x)  #exponential transformation
log(x)  #logarithmic transformation
cos(x)  #cosine and other trigonometric transformation

#infinite and Nan Number
y<-5
z<-6

ls()  #List all object
exists("y")   #identify R object with 'y' name
rm(y)        #remove object.
rm(y,z)      #remove multiple object.
rm(list=ls()) #remove everything on working environment.
```

OUTPUT-

```
> #Assignment
> s <- 10
> print(s)
[1] 10
>
> #case sensitive
> a <- 5
> b <- 2
> c <- 1
> print(a+B+c)
Error in print(a + B + c) : object 'B' not found
>
> #Arithmetic Operations
> #creation of vector
>
> a <- c(10, 20, 30, 40, 50)
> b <- c(1, 2, 3, 4, 5)
> print(a)
[1] 10 20 30 40 50
> print(b)
[1] 1 2 3 4 5
>
> #Addition of tow vector
> Result <- a+b
> print(Result)
[1] 11 22 33 44 55
>
> #Subtraction of tow vector
> Result <- a-b
> print(Result)
[1]  9 18 27 36 45
>
> #Multiplication of tow vector
> Result <- a*b
> print(Result)
[1]  10  40  90 160 250
>
> #Division of tow vector
> Result <- a/b
> print(Result)
[1] 10 10 10 10 10
```

```
>
> #options()
> 1/7#by default it will show 7 digits output.
[1] 0.1428571
>
> options(digits = 3)#by using this it will show only 3 digits after decimal point
> 1/7
[1] 0.143
>
> #Miscellaneous Mathematical functions
>
> x<-20
> abs(x)  #Absolute Value
[1] 20
> sqrt(x) #square root
[1] 4.47
> exp(x)  #exponential transformation
[1] 4.85e+08
> log(x)  #logarithmic transformation
[1] 3
> cos(x)  #cosine and other trigonometric transformation
[1] 0.408
>
> #infinite and Nan Number
> y<-5
> z<-6
>
> ls()  #List all object
[1] "a"      "b"      "c"      "Result" "s"      "x"      "y"      "z"
> exists("y")   #identify R object with 'y' name
[1] TRUE
> rm(y)         #remove object.
> rm(y,z)       #remove multiple object.
Warning message:
In rm(y, z) : object 'y' not found
> rm(list=ls()) #remove everything on working environment.
```