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Experiment No-1

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Aim: To perform the basic mathematical operations in R programming.

a) using with and without R objects in console.

b) using mathematical functions on console.

c) Explore various operators.

d) List all objects and remove an object.

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Exp - 1

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1) with and without object.

> 2+5

[1] 7

> a=2

> b=2

> a+b

4

2) using given commands

> sum(2+5)

[1] 7

> abs(4)

[1] 4

> sqrt(9)

[1] 3

> exp(5)

[1] 148.4132

> log(2)

[1] 0.6931472

> cos(90)

[1] -0.4480736.

3) using operators
(Arithmetic)

$$> a + b$$

$$[i] = 4$$

$$> a - b$$

$$[i] = 0$$

$$> a * b$$

$$[i] = 4$$

$$> a / b$$

$$[i] = 1$$

$$> a \% b$$

$$[i] = 0$$

(Relational)

$$> a < b$$

$$[i] = \text{False}$$

$$> a > b$$

$$[i] = \text{False}$$

$$> a == b$$

$$[i] = \text{True}$$

$$> a != b$$

$$[i] = \text{False}$$

$$> a <= b$$

$$[i] = \text{True}$$

$$> a >= b$$

$$[i] = \text{True}$$

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Logical

> a & b

> a & b

[1] True

[1] True

> a || b

> a || b

[1] True

[1] True

Assignment

> a < 5

> a == 10

> a < -2

> a

[1] 2

Miscellaneous

> x < 1:10

→ x

[1] 1 2 3 4 5 6 7 8 9 10

> y = 8

> x[1] in 1:4

[1] false false false false false
 false false true false false

4.) List of all objects and remove them

> ls ()

[1] "a" "b" "m" "this list" "x"

[6] "y"

> rm (a)

> rm (b)

> rm (m)

> rm (this list)

> rm (x)

> rm (y)

> ls ()

character (0)