

r_int_day_1_r_operator

Nicholus Tint Zaw

2022-10-27

Content

Types of the operator in R language

1. Arithmetic Operators
2. Logical Operators
3. Relational Operators
4. Assignment Operators
5. Miscellaneous Operator

referenace: <https://www.geeksforgeeks.org/r-operators/>

Arithmetic Operators

Addition operator (+):

```
1 + 1
```

```
## [1] 2
```

```
c(1, 3, 5) + c(4, 6, 8)
```

```
## [1] 5 9 13
```

Subtraction Operator (-):

```
569 - 456
```

```
## [1] 113
```

```
c(4, 69, 20) - c(34, 45, 200)
```

```
## [1] -30 24 -180
```

```
x <- sample(1:10, 3, replace=TRUE)
y <- sample(1:10, 3, replace=TRUE)

x - y
```

```
## [1]  2 -5  1
```

Multiplication Operator (*):

```
4 * 5
```

```
## [1] 20
```

```
x * y
```

```
## [1]  8  6 30
```

Division Operator (/):

```
30/3
```

```
## [1] 10
```

```
y/x
```

```
## [1] 0.5000000 6.0000000 0.8333333
```

Power Operator (^):

```
690 ^ 0
```

```
## [1] 1
```

```
x ^ 1
```

```
## [1] 4 1 6
```

```
x ^ y
```

```
## [1]  16    1 7776
```

Modulo Operator (%%):

```
22%%7
```

```
## [1] 1
```

```
x %% 3
```

```
## [1] 1 1 0
```

```
x %% y
```

```
## [1] 0 1 1
```

Logical Operators

Logical AND operator (&):

```
random <- sample(1:20, 10, replace = TRUE)
```

```
random
```

```
## [1] 3 16 2 17 14 9 18 8 17 6
```

```
random >= 3 & random < 10
```

```
## [1] TRUE FALSE FALSE FALSE FALSE TRUE FALSE TRUE FALSE TRUE
```

Logical OR operator (|):

```
random > 3 | random < 10 # why all TRUE?
```

```
## [1] TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRUE
```

Relational Operators

```
# greater than  
1 > 0
```

```
## [1] TRUE
```

```
c(c, y)
```

```
## [[1]]
## function (...) .Primitive("c")
##
## [[2]]
## [1] 2
##
## [[3]]
## [1] 6
##
## [[4]]
## [1] 5
```

```
# greater than and equal to
x >= y
```

```
## [1] TRUE FALSE TRUE
```

```
# less than
5 < 2
```

```
## [1] FALSE
```

```
x < y
```

```
## [1] FALSE TRUE FALSE
```

```
# less than and equal to
5 <= 10
```

```
## [1] TRUE
```

```
x <= y
```

```
## [1] FALSE TRUE FALSE
```

```
# equal to
1 == 0 # note: it is double equal
```

```
## [1] FALSE
```

```
1 == 1
```

```
## [1] TRUE
```

```
# not equal to
1 != 0
```

```
## [1] TRUE
```

```
0 != 0
```

```
## [1] FALSE
```

Assignment Operators

```
x <- 1  
i <- c(1, 3, 5)  
y <- sample(100:200, 5, replace = TRUE)  
c(x, i, y)
```

```
## [1] 1 1 3 5 177 105 102 134 153
```

Miscellaneous Operator

%in% Operator:

```
# with numeric vector  
x <- c(1, 5, 7, 0, 10)  
  
0 %in% x
```

```
## [1] TRUE
```

```
15 %in% x
```

```
## [1] FALSE
```

```
# with string vector  
strvector <- c("A", "B", "C", "D")  
  
"A" %in% strvector
```

```
## [1] TRUE
```

```
"G" %in% strvector
```

```
## [1] FALSE
```