

# Javascript Operators

In JavaScript, an operator is **a special symbol used to perform operations on operands (values and variables)**. For example, `2 + 3; // 5`. Here `+` is an operator that performs addition, and 2 and 3 are operands.

## Types of JavaScript Operators

There are different types of JavaScript operators:

- Arithmetic Operators
- Assignment Operators
- Comparison Operators
- Logical Operators
- Conditional Operators

## 1) Arithmetics Operators

In JavaScript, arithmetic operators take numerical values (either literals or variables) as their operands and return a single numerical value. There are four standard arithmetic operators, addition (+), subtraction (-), multiplication (\*), and division (/).

# Arithmetic Operators

Operators	Meaning	Example	Result
+	Addition	4+2	6
-	Subtraction	4-2	2
*	Multiplication	4*2	8
/	Division	4/2	2
%	Modulus operator to get remainder in integer division	5%2	1
++	Increment	A = 10; A++	11
--	Decrement	A = 10; A--	9

## 2) Assignment operator

The Assignment operator is **equal (=)** which assigns the value of right-hand operand to its left-hand operand. That is if  $a = b$  assigns the value of  $b$  to  $a$ .

Operator	Example	Equivalent Expression ( $m=15$ )	Result
=	$y = a+b$	$y = 10 + 20$	30
+=	$m += 10$	$m = m + 10$	25
-=	$m -= 10$	$m = m - 10$	5
*=	$m *= 10$	$m = m * 10$	150
/=	$m /= 10$	$m = m / 10$	1.5
%=	$m \% = 10$	$m = m \% 10$	5
**=	$m ** = 2$	$m = m ** 2$ or $m = m^2$	225
//=	$m //= 10$	$m = m // 10$	1

### 3) Comparison operators

The **Comparison operators** are mainly used to perform the logical operations that determine the equality or difference between the values.

## Relational Operators

Operators	Meaning	Example	Result
<	Less than	5<2	False
>	Greater than	5>2	True
<=	Less than or equal to	5<=2	False
>=	Greater than or equal to	5>=2	True
==	Equal to	5==2	False
!=	Not equal to	5!=2	True
===	Equal value and same type	5 === 5	True
		5 === "5"	False
!==	Not Equal value or Not same type	5 !== 5	False
		5 !== "5"	True



## 4) Logical Operators

# Logical Operators

Operator	Meaning	Example	Result
&&	Logical and	$(5 < 2) \&\& (5 > 3)$	False
	Logical or	$(5 < 2)    (5 > 3)$	True
!	Logical not	$!(5 < 2)$	True

## Conditional (Ternary) Operator

JavaScript also contains a conditional operator that assigns a value to a variable based on some condition.

Example:

```
let voteable = (age < 18) ? "Too young":"Old enough";
```