

# JavaScript Operators Cheatsheet

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## Arithmetic Operators

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Arithmetic operators are symbols used for math operations.

Arithmetic Operator	Meaning	Example*
+	Addition	8 + 1
-	Subtraction	10 - 1
*	Multiplication	3 * 3
/	Division	18 / 2
%	Remainder (Modulus)	31 % 11
**	Exponentiation	3 ** 2
++	Increment	8++
--	Decrement	10--

\*All examples result in a value of 9. Ex. `console.log(8 + 1);`

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## Comparison Operators

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Comparison operators are symbols used to compare two or more values.

Comparison Operator	Meaning	Example*
<	less than	9 < 10
>	greater than	10 > 9
==	equal to	"10" == 10
===	equal to (value and type)	10 === 10
<=	less than or equal to	10 <= 10
>=	greater than or equal to	10 >= 10
!=	not equal to	"9" != 10
!==	not equal to (value and type)*	9 !== 10

\*All examples result in a value of true. Ex. `console.log(9 < 10);`

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## Logical Operators

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Logical operators are symbols used to return a boolean value.

Logical Operator	Meaning	Example*
&&	and	(true && true)
	or	(false    true)
!	not	!(false)

\*All examples result in a value of true. Ex. `console.log((true && true));`

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## Assignment Operators

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Assignment operators assign values to JavaScript variables.

Assignment Operator	Meaning	Example ( <i>results are 9</i> )
=	Assigns a value to a variable	var cats = 9;
+=	Adds to a value and assigns the variable to the new result	var cats = 8; cats += 1;
-=	Subtracts from a value and assigns the variable the new result	var cats = 10; cats -= 1;
*=	Multiplies a value and assigns the variable the new result	var cats = 3; cats *= 3;
/=	Divides a value and assigns the variable the new result	var cats = 18; cats /= 2;
%=	Finds a remainder of the value divided by a number and assigns the variable the new result	var cats = 31; cats %= 11;

\*All examples result in a value of 9. Ex.:

```
var cats = 8;  
cats += 1;  
console.log(cats);
```