

18 JavaScript Number Methods, Detailed examples



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Introduction

The **JavaScript number methods** help you to work with numbers. JavaScript can work with various numeric values like integer, float, hexadecimal, decimal, exponential and octal values.

We will explain Javascript number methods in simple maner with examples.

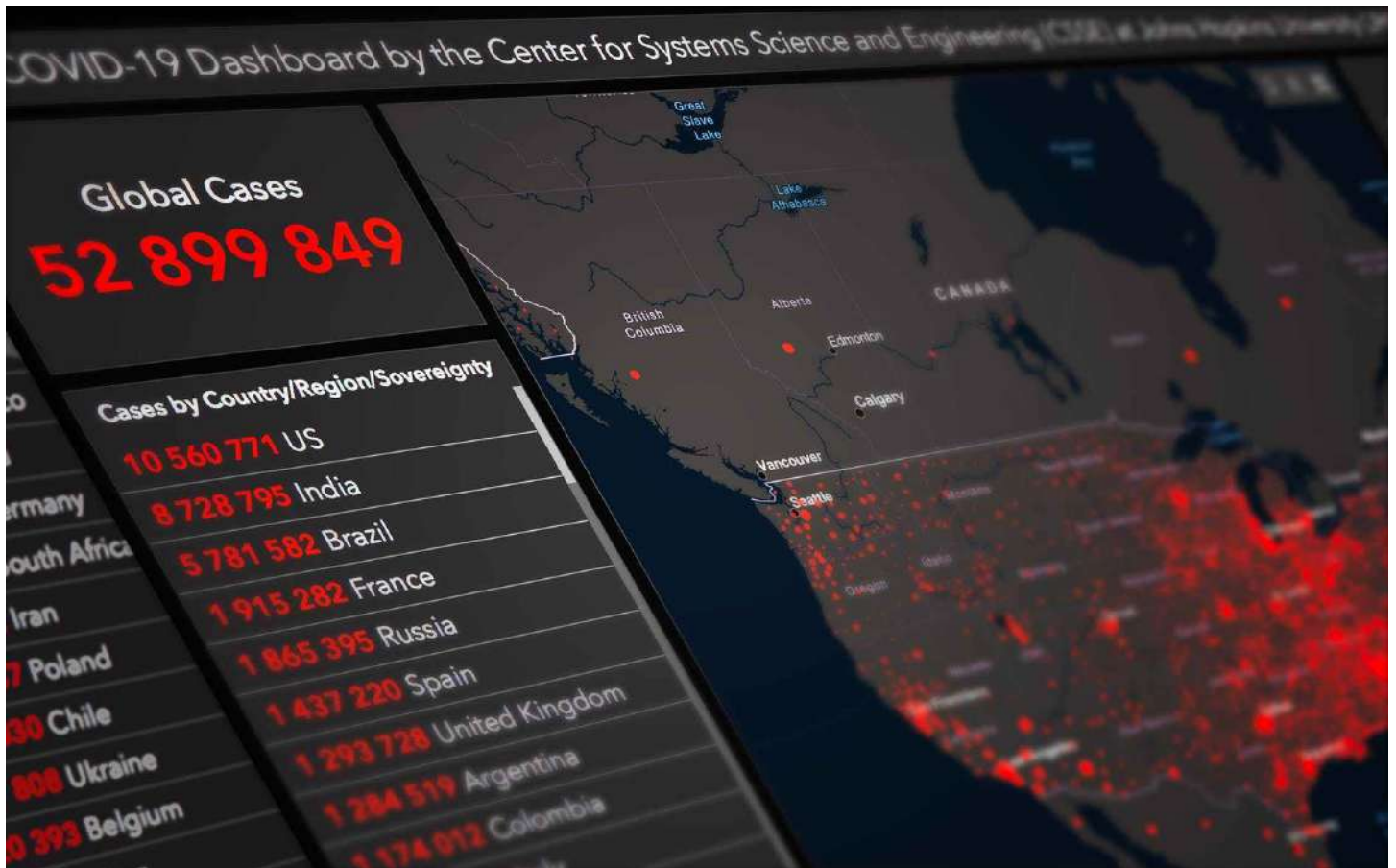


Photo by Atypeek Dgn on [Pexels.com](https://www.pexels.com)

The toString() method.

This method converts the [number into string](#) or it returns a number as a string.

```
1. //Example
2.
3. var x = 123;
4. // x is number
5.
6. console.log(typeof(x));
7.
8. //output: "number"
9.
10. var y = x.toString()
11. // convert to string
12.
13. console.log(typeof(y));
14.
15. //output: "string"
16.
17. //
```

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The toExponential() Method

Exponential notation is a method of writing numbers.

Exponential numbers take the form X^n , where **X** is multiplied by itself **n** times.

A simple example is $8 = 2^3 = 2 \times 2 \times 2$.

In JavaScript `toExponential()` method returns a string with rounded number written in exponential form.

```
1. //Example
2.
3. var x = 323.34;
4. var y = x.toExponential();
5. console.log(y);
6.
7. //output : 3.2334e+2
8.
9. //
```

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The toFixed() Method

The toFixed() method converts a given number into a string. It rounds to a specified number of decimals. Additional zeros are added to create the desired decimal length if the number of decimals are higher than the actual number.

```
1. //Example
2.
3. var x = 323.3433;
4. var y = x.toFixed(2);
5. console.log(y);
6.
7. //same as
8. //x.toFixed(0); // returns 4
9. //x.toFixed(2); // returns 3.66
10.
11. //output: 323.34
12.
13. //Example: if the given length in parameters is larger
14. var x = 3.656;
15. console.log(x.toFixed(4));
16. // output: 3.6560
17.
18. console.log(x.toFixed(6));
19. //output: 3.656000
20.
21. //
```

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The toPrecision() Method

The toPrecision() method format a number to a specified length with the given number of significant digits. It rounds the result where necessary. This method returns value as a [string](#).

Here is simple example

```
1. //example
2.
3. var x = 7.938;
4. x.toPrecision(); // output 7.938
5. x.toPrecision(2); // output 7.9
6. x.toPrecision(4); // output 7.938
7. x.toPrecision(6); // output 7.93800
```

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```
8.
9.  //
```

The valueOf() Method

The **valueOf()** method returns the **primitive** value of a **String** object.

This **method** is called internally by **JavaScript**, and not explicitly in code. All JavaScript data types have a **valueOf()** and a **toString()** method.

Read more [here](#)

```
1.  //example
2.
3.  var x = 444;
4.  x.valueOf();           // output 444 from variable x
5.
6.  //
```

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How to convert String variables to Numeric in JavaScript?

There are 3 JavaScript methods that can be used to convert string variables to numbers. Number() method, parseInt() method and parseFloat() method

JavaScript global methods

The methods mentioned above are JavaScript global methods. this includes:

- Number() Method
- parseInt() method
- parseFloat() method

Number() Method

The Number() method is used to convert JavaScript variables to numbers.

consider the following example

```
1.  // Example
2.
3.  Number(true);
4.  // output: 1
5.
6.  Number(false);
7.  // output: 0
8.
9.  Number("20");
10. // output: 20
11.
12. Number(" 20 ");
13. // output: 20
14.
15. Number("20.43");
16. // output: 20.43
17.
```

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Extern

```
18.   Number("20,33");
19.   // output: NaN (Not a Number)
20.
21.   Number("20 33");
22.   // output: NaN
23.
24.   Number("John Doe");
25.   // output: NaN
26.
27.
28.   //
```

The `Number()` method is also used to convert Dates to numbers. It returns the number of milliseconds since **1-1-1970**.

```
1.   // Example
2.
3.   let dateToNumber = Number(new Date("2021-01-01"));
4.   console.log(dateToNumber);
5.   // output: 1609459200000
6.
7.
8.   //
```

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parseInt() method

parseInt() parses a string and returns a whole number. Spaces are allowed to use as parameters but it returns only the first number. This method returns **NaN** (not a number) if the given string is impossible to convert to a number.

```
1.   // Example
2.
3.   parseInt("20");
4.   // output: 20
5.
6.   parseInt("20.73");
7.   //output: 20
8.
9.   parseInt("20 70");
10.  // output: 20
11.
12.  parseInt("20 Days");
13.  // output: 20
14.
15.  parseInt("Date 20");
16.  // output: NaN
17.
18.
19.  //
```

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Extern

parseFloat() Method

The **parseFloat()** Method in JavaScript parses a string and **returns a floating-point number**. It also returns **NaN** if the given string is impossible to convert to a string.

```
1.   // Example
2.
3.   parseFloat("20");
4.   // output: 20
5.
```

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Extern

```
6.   parseFloat("20.71");
7.   // output: 20.71
8.
9.   parseFloat("20 10");
10.  // output: 20
11.
12.  parseFloat("20 Days");
13.  // output: 20
14.
15.  parseFloat("Number 20");
16.  // output: NaN
17.
18.  //
```

All JavaScript number Methods in one video

References

https://www.w3schools.com/js/js_number_methods.asp

https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global_Objects/Number

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#JavaScript Number Methods

#JavaScript Number Methods with examples

#JavaScript Numbers