JavaScript - The Math Object

The **math** object provides you properties and methods for mathematical constants and functions. Unlike other global objects, **Math** is not a constructor. All the properties and methods of **Math** are static and can be called by using Math as an object without creating it.

Thus, you refer to the constant **pi** as **Math.PI** and you call the *sine* function as **Math.sin(x)**, where x is the method's argument.

Syntax

The syntax to call the properties and methods of Math are as follows

```
var pi_val = Math.PI;
var sine_val = Math.sin(30);
```

Math Properties

Here is a list of all the properties of Math and their description.

Sr.No.	Property & Description
1	E \ Euler's constant and the base of natural logarithms, approximately 2.718.
2	LN2 Natural logarithm of 2, approximately 0.693.
3	LN10 Natural logarithm of 10, approximately 2.302.
4	LOG2E Base 2 logarithm of E, approximately 1.442.
5	LOG10E Base 10 logarithm of E, approximately 0.434.
6	PI Ratio of the circumference of a circle to its diameter, approximately 3.14159.
7	SQRT1_2 Square root of 1/2; equivalently, 1 over the square root of 2, approximately 0.707.
8	SQRT2 Square root of 2, approximately 1.414.

In the following sections, we will have a few examples to demonstrate the usage of Math properties.

Math Methods

Here is a list of the methods associated with Math object and their description

Sr.No.	Method & Description
1	abs() Returns the absolute value of a number.
2	acos() Returns the arccosine (in radians) of a number.
3	asin() Returns the arcsine (in radians) of a number.
4	atan() Returns the arctangent (in radians) of a number.
5	atan2() Returns the arctangent of the quotient of its arguments.
6	ceil() Returns the smallest integer greater than or equal to a number.
7	cos() Returns the cosine of a number.
8	exp() Returns E^N, where N is the argument, and E is Euler's constant, the base of the natural logarithm.
9	floor() Returns the largest integer less than or equal to a number.
10	log() Returns the natural logarithm (base E) of a number.
11	max() Returns the largest of zero or more numbers.
12	min()

	Returns the smallest of zero or more numbers.
13	pow() Returns base to the exponent power, that is, base exponent.
14	random() Returns a pseudo-random number between 0 and 1.
15	round() Returns the value of a number rounded to the nearest integer.
16	sin() Returns the sine of a number.
17	sqrt() Returns the square root of a number.
18	tan() Returns the tangent of a number.
19	toSource() Returns the string "Math".

In the following sections, we will have a few examples to demonstrate the usage of the methods associated with Math.