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JavaScript Math Reference

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Math Object

The Math object allows you to perform mathematical tasks.

Math is not a constructor. All properties/methods of Math can be called by using Math as an object, without creating it.

Syntax

```
var x = Math.PI;           // Returns PI
var y = Math.sqrt(16);     // Returns the square root of 16
```

For a tutorial about the Math object, read our [JavaScript Math Tutorial](#).

Math Object Properties

Property	Description
<u>E</u>	Returns Euler's number (approx. 2.718)
<u>LN2</u>	Returns the natural logarithm of 2 (approx. 0.693)
<u>LN10</u>	Returns the natural logarithm of 10 (approx. 2.302)
<u>LOG2E</u>	Returns the base-2 logarithm of E (approx. 1.442)
<u>LOG10E</u>	Returns the base-10 logarithm of E (approx. 0.434)
<u>PI</u>	Returns PI (approx. 3.14)
<u>SQRT1_2</u>	Returns the square root of 1/2 (approx. 0.707)

SQRT2

Returns the square root of 2 (approx. 1.414)

Math Object Methods

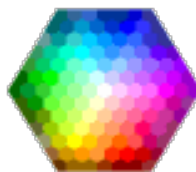
Method	Description
<u>abs(x)</u>	Returns the absolute value of x
<u>acos(x)</u>	Returns the arccosine of x, in radians
<u>asin(x)</u>	Returns the arcsine of x, in radians
<u>atan(x)</u>	Returns the arctangent of x as a numeric value between -PI/2 and PI/2 radians
<u>atan2(y, x)</u>	Returns the arctangent of the quotient of its arguments
<u>ceil(x)</u>	Returns x, rounded upwards to the nearest integer
<u>cos(x)</u>	Returns the cosine of x (x is in radians)
<u>exp(x)</u>	Returns the value of E^x
<u>floor(x)</u>	Returns x, rounded downwards to the nearest integer

<u>log(x)</u>	Returns the natural logarithm (base E) of x
<u>max(x, y, z, ..., n)</u>	Returns the number with the highest value
<u>min(x, y, z, ..., n)</u>	Returns the number with the lowest value
<u>pow(x, y)</u>	Returns the value of x to the power of y
<u>random()</u>	Returns a random number between 0 and 1
<u>round(x)</u>	Rounds x to the nearest integer
<u>sin(x)</u>	Returns the sine of x (x is in radians)
<u>sqrt(x)</u>	Returns the square root of x
<u>tan(x)</u>	Returns the tangent of an angle

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