JavaScript Math Reference

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 (/js/js_math.asp).

Math Object Properties

Property	Description
E (jsref_e.asp)	Returns Euler's number (approx. 2.718)
LN2 (jsref_ln2.asp)	Returns the natural logarithm of 2 (approx. 0.693)
LN10 (jsref_ln10.asp)	Returns the natural logarithm of 10 (approx. 2.302)
LOG2E (jsref_log2e.asp)	Returns the base-2 logarithm of E (approx. 1.442)
LOG10E (jsref_log10e.asp)	Returns the base-10 logarithm of E (approx. 0.434)
PI (jsref_pi.asp)	Returns PI (approx. 3.14)

SQRT1_2 (jsref_sqrt1_2.asp)	Returns the square root of 1/2 (approx. 0.707)
SQRT2 (jsref_sqrt2.asp)	Returns the square root of 2 (approx. 1.414)

Math Object Methods

Method	Description
abs(x) (jsref_abs.asp)	Returns the absolute value of x
acos(x) (jsref_acos.asp)	Returns the arccosine of x, in radians
asin(x) (jsref_asin.asp)	Returns the arcsine of x, in radians
atan(x) (jsref_atan.asp)	Returns the arctangent of x as a numeric value between -PI/2 and PI/2 radians
atan2(y,x) (jsref_atan2.asp)	Returns the arctangent of the quotient of its arguments
ceil(x) (jsref_ceil.asp)	Returns x, rounded upwards to the nearest integer
cos(x) (jsref_cos.asp)	Returns the cosine of x (x is in radians)
exp(x) (jsref_exp.asp)	Returns the value of E^x
floor(x) (jsref_floor.asp)	Returns x, rounded downwards to the nearest integer
log(x) (jsref_log.asp)	Returns the natural logarithm (base E) of x
max(x,y,z,...,n) (jsref_max.asp)	Returns the number with the highest value

min(x,y,z,...,n) (jsref_min.asp)	Returns the number with the lowest value
pow(x,y) (jsref_pow.asp)	Returns the value of x to the power of y
random() (jsref_random.asp)	Returns a random number between 0 and 1
round(x) (jsref_round.asp)	Rounds x to the nearest integer
sin(x) (jsref_sin.asp)	Returns the sine of x (x is in radians)
sqrt(x) (jsref_sqrt.asp)	Returns the square root of x
tan(x) (jsref_tan.asp)	Returns the tangent of an angle