**Math Object**

*Last updated: June 20th, 2004*

The Math object allows you to perform common math related tasks. Here are a few example uses:

var mygrade=Math.round(8.6) //returns 9  
var mynum=Math.pow(2, 3) //returns 8

**http://www.javascriptkit.com/jsref/bullet.gifRelated Tutorials**

* [The Math object](http://www.javascriptkit.com/javatutors/math.shtml)
* [Number rounding in JavaScript](http://www.javascriptkit.com/javatutors/round.shtml)
* [Generating a random number in JavaScript](http://www.javascriptkit.com/javatutors/randomnum.shtml)
* [Generating weighed random numbers](http://www.javascriptkit.com/javatutors/weighrandom.shtml)

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**http://www.javascriptkit.com/jsref/bullet.gifProperties**

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| **Properties** | **Description** |
| E | The constant of E, the base of natural logarithms. |
| LN2 | The natural logarithm of 2. |
| LN10 | The natural logarithm of 10. |
| LOG2E | Base 2 logarithm of E. |
| LOG10E | Base 10 logarithm of E. |
| PI | Returns PI. |
| SQRT1\_2 | Square root of 1/2. |
| SQRT2 | Square root of 2. |

**http://www.javascriptkit.com/jsref/bullet.gifMethods**

|  |  |
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| **Methods** | **Description** |
| abs(x) | Returns absolute value of x. |
| acos(x) | Returns arc cosine of x in radians. |
| asin(x) | Returns arc sine of x in radians. |
| atan(x) | Returns arc tan of x in radians. |
| atan2(y, x) | Counterclockwise angle between x axis and point (x,y). |
| ceil(x) | Returns the smallest integer greater than or equal to x. (round up). |
| cos(x) | Returns cosine of x, where x is in radians. |
| exp(x) | Returns ex |
| floor(x) | Returns the largest integer less than or equal to x. (round down) |
| log(x) | Returns the natural logarithm (base E) of x. |
| max(a, b) | Returns the larger of a and b. |
| min(a, b) | Returns the lesser of a and b. |
| pow(x, y) | Returns Xy |
| random() | Returns a pseudorandom number between 0 and 1. [Example(s)](http://www.javascriptkit.com/jsref/math.shtml#e1). |
| round(x) | Rounds x up or down to the nearest integer. It rounds .5 up. [Example(s)](http://www.javascriptkit.com/jsref/math.shtml#e2). |
| sin(x) | Returns the Sin of x, where x is in radians. |
| sqrt(x) | Returns the square root of x. |
| tan(x) | Returns the Tan of x, where x is in radians. |

**http://www.javascriptkit.com/jsref/bullet.gifExamples**

**http://www.javascriptkit.com/Red_CurlyC035.gifrandom()**

Math.random() //returns random number between 0 and 1, such as 0.634343434...  
Math.floor(Math.random()\*11) //returns random **integer** between 0 and 10

**http://www.javascriptkit.com/Red_CurlyC035.gifround(x)**

Math.round(25.9) //returns 26  
Math.round(25.2) //returns 25  
Math.round(-2.58) //returns -3  
  
var original=28.453  
//round "original" to two decimals:  
Math.round(original\*100)/100 //returns 28.45