MathFunctions Computer Science Haas

Some JavaScript mathematical functions

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| **Function Name** | **What is does** |
| Math.ceil(x)  | rounds 'x' up to the next higher integer  |
| Math.floor(x)  | rounds 'x' down to the nearest integer |
| Math.pow(x,y)  | returns 'x' to the power 'y' |
| Math.random()  | returns a random number between 0 to 1 |
| Math.abs(x) | returns the absolute value of ‘x’ |
| Math.sqrt(x) | returns the square root of ‘x’ |
| Math.round(x)  | returns the integer closest to 'x'  |

You can round numbers to one or more decimal place by using the toFixed method.

**Example:**

var someNumber = 12.345;

someNumber = someNumber.toFixed(2); // Rounds to 2 places

document.write(someNumber); // Prints 12.35

**JavaScript Arithmetic Operators**

Arithmetic operators are used to perform arithmetic between variables and/or values.

Given that **y=5**, the table below explains the arithmetic operators:

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| --- | --- | --- | --- |
| **Operator** | **Description** | **Example** | **Result** |
| + | Addition | x=y+2 | x=7 |
| - | Subtraction | x=y-2 | x=3 |
| \* | Multiplication | x=y\*2 | x=10 |
| / | Division | x=y/2 | x=2.5 |
| % | Modulus (division remainder) | x=y%2 | x=1 |
| ++ | Increment | x=++y | x=6 |
| -- | Decrement | x=--y | x=4 |