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JavaScript

Math

What is Math?

JavaScript Math object is used to perform mathematical operations on numbers. All the properties of Math are static and unlike other objects, it does not have a constructor.

We use Math only on Number data type and not on BigInt.

Math Static properties:

Math.E:

Euler's number and the base of natural logarithms; approximately 2.718.

Ex;

console.log(Math.E); o/p: 2.718281828459045

Math.LN10:

Natural logarithm of 10; approximately 2.303.

Ex;

console.log(Math.LN10) o/p: 2.302585092994046

Math.LN2:

Natural logarithm of 2; approximately 0.693.

Ex;

console.log(Math.LN2); o/p: 0.6931471805599453

Math.LOG10E:

Base-10 logarithm of E; approximately 0.434.

Ex;

console.log(Math.LOG10E); o/p: 0.4342944819032518

Math.LOG2E:

Base-2 logarithm of E; approximately 1.443.

Ex;

console.log(Math.LOG2E); o/p: 1.4426950408889634

Math.PI:

Ratio of a circle's circumference to its diameter; approximately 3.14159.

Ex;

console.log(Math.PI); o/p: 3.141592653589793

Math.SQRT1_2:

Square root of ½; approximately 0.707.

Ex;

console.log(Math.SQRT1_2); o/p: 0.7071067811865476

Math.SQRT2:

Square root of 2; approximately 1.414.

Ex;

console.log(Math.SQRT2); o/p: 1.4142135623730951

Static Methods:

Math.abs():

Returns the absolute value of the input.

Ex;

console.log(Math.abs(-4)); o/p: 4

Math.ceil():

Returns the smallest integer greater than or equal to the input.

Ex;

console.log(Math.ceil(4.1)); o/p: 5

Math.floor():

Returns the largest integer less than or equal to the input.

Ex;

console.log(Math.ceil(4.8)); o/p: 4

Math.max():

Returns the largest of zero or more numbers.

Ex;

console.log(Math.max(4,5,23,6,3)); o/p: 23

Math.min():

Returns the smallest of zero or more numbers.

Ex;

console.log(Math.min(4,5,23,6,3)); o/p: 3

math.pow();

Returns base x to the exponent power y.

Ex;

console.log(Math.pow(4,2)); o/p: 16

Math.sqrt():

Ex;

Math.sqrt(4); o/p: 2

Math.round():

The Math.round() static method returns the value of a number rounded to the nearest integer.

Ex;

console.log(Math.round(0.9)); o/p: 1
console.log(Math.round(0.3)); o/p: 0

Math.random():

Returns a random number between 0 and 1.

Ex;

console.log(Math.random()); o/p: 0.7578697030332138

console.log(Math.random()*10); o/p: 1.2880257639636605

console.log((Math.random()*10) + 1); o/p: 9.958869362355852

console.log(Math.floor(Math.random()*10) + 1); o/p: 4