

Math Object & Methods In JavaScript:

```
JS demo.js x
JS demo.js > ...
1 const prompt = require("prompt-sync")();
2
3 console.log("Math.E : ",Math.E); //Euler's Number
4 console.log("Math.PI : ",Math.PI); //pi value
5 console.log("Math.SQRT 4 : ",Math.SQRT2); //square root of 2
6 console.log("Math.SQRT1_2 : ",Math.SQRT1_2); //square root of 1/2
7 console.log("Math.LN2 : ",Math.LN2); //logarithm of 2
8 console.log("Math.LN10 : ",Math.LN10); //logarithm of 10
9 console.log("Math.LOG2E : ",Math.LOG2E); //base 2 logarithm of E
10 console.log("Math.LOG10E : ",Math.LOG10E); //base 10 logarithm of E

PS E:\HTML_CSS_JS> node demo.js
Math.E : 2.718281828459045
Math.PI : 3.141592653589793
Math.SQRT 4 : 1.4142135623730951
Math.SQRT1_2 : 0.7071067811865476
Math.LN2 : 0.6931471805599453
Math.LN10 : 2.302585092994046
Math.LOG2E : 1.4426950408889634
Math.LOG10E : 0.4342944819032518
PS E:\HTML_CSS_JS>
```

```
JS demo.js x
JS demo.js > ...
1 const prompt = require("prompt-sync")();
2
3 console.log(Math.round(17.5));
4 console.log(Math.round(28.4));
5 console.log(Math.round(11.6));

PS E:\HTML_CSS_JS> node demo.js
18
28
12
PS E:\HTML_CSS_JS>
```

```
JS demo.js x
JS demo.js > ...
1 const prompt = require("prompt-sync")();
2
3 console.log(Math.ceil(4.9));
4 console.log(Math.ceil(-3.2));
5 console.log(Math.ceil(4.4));
6
7 console.log(Math.floor(5.9));
8 console.log(Math.floor(4.2));
9 console.log(Math.floor(-5.8));
10
11 console.log(Math.trunc(8.9));
12 console.log(Math.trunc(8.2));
13 console.log(Math.trunc(-8.3));
14
15 console.log(Math.sign(-4));
16 console.log(Math.sign(0));
17 console.log(Math.sign(4));
18

PS E:\HTML_CSS_JS> node demo.js
5
-3
5
5
4
-6
8
8
-8
-1
0
1
PS E:\HTML_CSS_JS>
```

```
JS demo.js x
JS demo.js > ...
1 const prompt = require("prompt-sync")();
2
3 console.log(Math.pow(2,8));
4 console.log(Math.sqrt(128));
5 console.log(Math.abs(-23.55));
6 console.log(Math.abs(48.21));
7 console.log(Math.cbrt(27));
8
9 console.log(Math.min(10, 55, 2, 11));
10 console.log(Math.max(55, 12, 35, 8));
11 console.log(Math.exp(5));
12
13 console.log(Math.log(1));
14 console.log(Math.log2(16));
15 console.log(Math.log10(500));

PS E:\HTML_CSS_JS> node demo.js
256
11.313708498984761
23.55
48.21
3
2
55
148.4131591025766
0
4
2.6989700043360187
PS E:\HTML_CSS_JS>
```

```
JS demo.js X ... >
JS demo.js > ...
1 const prompt = require("prompt-sync")();
2
3 console.log(Math.sin(90 * Math.PI / 180));
4 console.log(Math.cos(180 * Math.PI / 180));
5 console.log(Math.tan(270 * Math.PI / 180));
6
7 console.log(Math.asin(1));
8 console.log(Math.acos(0));
9 console.log(Math.atan(1));
10
11 console.log(Math.sinh(180));
12 console.log(Math.cosh(270));
13 console.log(Math.tanh(360));
14
15 console.log(Math.asinh(90));
16 console.log(Math.acosh(270));
17 console.log(Math.atanh(-360));
18
```

```
PS E:\HTML_CSS_JS> node demo.js
1
- 1
5443746451065123
1.5707963267948966
1.5707963267948966
0.7853981633974483
7.446921003909191e+77
9.088246925695501e+116
1
5.192987713658941
6.291565710185398
NaN
PS E:\HTML_CSS_JS>
```

Random Function:

```
JS demo.js X ... >
JS demo.js > ...
1 const prompt = require("prompt-sync")();
2
3 console.log(Math.random()); // 0 to 1
4 console.log(Math.random() * 10); // 0 to 9 decimal
5
6 console.log(Math.floor(Math.random() * 10)); // 0 to 9 integer;
7 console.log(Math.floor(Math.random() * 20));
8 console.log(Math.floor(Math.random() * 100));
9 console.log(Math.floor(Math.random() * (25 - 15 + 1)) + 15); // 15 to 25;
10
11 function func(min, max){
12   let num = Math.floor(Math.random() * (max - min + 1)) + min;
13   return num;
14 }
15 console.log(func(30, 40));
```

```
PS E:\HTML_CSS_JS> node demo.js
0.3097718312756408
6.776260141419925
9
8
36
25
38
PS E:\HTML_CSS_JS>
```

Date & Time Function:

```
JS demo.js X ... >
JS demo.js > ...
1 const prompt = require("prompt-sync")();
2
3 let date = new Date();
4 console.log(date.toLocaleDateString());
5 console.log(date.toDateString());
6 console.log(date.toTimeString());
7
8 console.log(date.getFullYear());
9 console.log(date.getMonth());
10 console.log(date.getDate());
11 console.log(date.getDay());
12
13 console.log(date.getTime());
14 console.log(date.getHours());
15 console.log(date.getMinutes());
16 console.log(date.getSeconds());
17 console.log(date.getMilliseconds());
18
19 console.log(Date.now());
```

```
PS E:\HTML_CSS_JS> node demo.js
9/5/2023
Tue Sep 05 2023
12:24:18 GMT+0530 (India Standard Time)
2023
8
5
2
1693896858636
12
24
18
636
1693896858692
PS E:\HTML_CSS_JS>
```

JS demo.js X

□ ... □

JS demo.js > ...

```
1 const prompt = require("prompt-sync")();
2
3 let date = new Date();
4 console.log(date.toLocaleDateString());
5 console.log(date.toLocaleString());
6 console.log(date.toLocaleTimeString()); console.log("\n");
7
8 let date1 = new Date(2001, 4, 28, 12, 45, 55, 0);
9 console.log(date1.toLocaleDateString());
10 console.log(date1.toLocaleString());
11 console.log(date1.toLocaleTimeString()); console.log("\n");
12
13 let date2 = new Date("April 18, 2003 1:46:15:00");
14 console.log(date2.toLocaleDateString());
15 console.log(date2.toLocaleString());
16 console.log(date2.toLocaleTimeString()); console.log("\n");
```

```
● PS E:\HTML_CSS_JS> node demo.js
9/5/2023
9/5/2023, 12:30:41 PM
12:30:41 PM
```

```
5/28/2001
5/28/2001, 12:45:55 PM
12:45:55 PM
```

```
4/18/2003
4/18/2003, 1:46:15 AM
1:46:15 AM
```

```
○ PS E:\HTML_CSS_JS> □
```