

# Math Object

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JavaScript has a built-in object called **Math**. This object has a bunch of methods that have to do with mathematical operations. It comes in handy when you need to do things like find the square root or absolute value of a number, when you need to round up or down or when you need to generate a random number. Let's see some examples.

You can see what is available with:

```
console.log(Math);
```

## **Math.abs()**

Returns the absolute value of a number

```
Math.abs(-5); // 5
```

## **Math.round()**

Returns the rounded value of a number

```
Math.round(5.5); // 6
```

## **Math.ceil()**

Returns the smallest integer greater than or equal to a number (rounds up)

```
Math.ceil(5.5); // 6
```

## **Math.floor()**

Returns the largest integer less than or equal to a number (rounds down)

```
Math.floor(5.5); // 5
```

## **Math.sqrt()**

Returns the square root of a number

```
Math.sqrt(25); // 5
```

### Math.pow()

Returns the value of a number raised to the specified power

```
Math.pow(5, 2); // 25
```

### Math.min()

Returns the smallest of the two numbers

```
Math.min(5, 10); // 5
```

### Math.max()

Returns the largest of the two numbers

```
Math.max(5, 10); // 10
```

### Math.random()

Returns a random number between 0 and 1

```
Math.random(); // 0.83929
```

This returns a decimal. If you want let's say a random integer between 1 and 10, you can multiply the result of Math.random() by 10 and round it down.

```
Math.floor(Math.random() * 10) + 1; // 5
```

We had to round down first with Math.floor() or we would get a decimal. We also added 1 otherwise we would get a number between 0 and 9. This is important to understand for the next challenge.

To get a random integer between two numbers, you can do

```
const min = 10;  
const max = 20;
```

```
x = Math.floor(Math.random() * (max - min + 1)) + min; // 17
```