



# JavaScript Data Functions

## Arrow Functions

### Basic Function

```
function sum(a, b) {  
  return a + b;  
}  
  
var results = sum(1, 2);
```

### Function Expression

```
var sum = function sum(a, b) {  
  return a + b;  
}  
  
var results = sum(1, 2);
```

### Arrow Function

```
var sum = (a, b) => a + b;  
  
var results = sum(1, 2);
```

### Arrow Multiline

```
var sum = (a, b) => {  
  console.log("Adding Two Numbers");  
  return a + b;  
};
```

## Map

### Basic Map

```
var data = [1, 2, 3, 4, 5];  
var dataCopy = data.map(function(item) {  
  return item;  
});
```

### Map with Arrow

```
var data = [1, 2, 3, 4, 5];  
var dataCopy = data.map(item => item);
```

### Map with Array of Objects

```
var data = [{x: 1, y: 1}, {x: 2, y: 3}, {x: 3, y: 5}];  
var xData = data.map(obj => obj.x);  
var yData = data.map(obj => obj.y);
```

## Math Functions

min()

max()

abs()

sqrt()

random()

round()

## Filter

### Basic Filter

```
var data = [1, 2, 3, 4, 5];  
var filteredData = data.filter(function(item) {  
  return item < 3;  
});
```

### Filter with Arrow Function

```
var data = [1, 2, 3, 4, 5];  
var filteredData = data.filter(item => item < 3);
```

### Filter by Object Values

```
var data = [{x: 1, y: 1}, {x: 2, y: 3}, {x: 3, y: 5}];  
var xFiltered = data.filter(obj => obj.x < 3);
```

## Array Functions

push()

concat()

slice()

splice()

split()

join()