

# JavaScript Array Methods with Examples

## Adding/Removing Elements

**push():** Add item(s) to the end

```
let arr = [1,2]; arr.push(3); // [1,2,3]
```

**pop():** Remove item from the end

```
let arr = [1,2,3]; arr.pop(); // [1,2]
```

**unshift():** Add item(s) to the beginning

```
let arr = [2,3]; arr.unshift(1); // [1,2,3]
```

**shift():** Remove item from the beginning

```
let arr = [1,2,3]; arr.shift(); // [2,3]
```

**splice():** Add/Remove items at specific index

```
let arr = [1,2,3]; arr.splice(1,1); // [1,3]
```

**slice():** Copy a portion of array

```
let arr = [1,2,3,4]; arr.slice(1,3); // [2,3]
```

## Iteration

**forEach():** Run function on each element

```
[1,2,3].forEach(x => console.log(x));
```

**map():** Create new array by transforming elements

```
let doubled = [1,2,3].map(x => x*2); // [2,4,6]
```

**filter():** Filter elements that pass a condition

```
let evens = [1,2,3,4].filter(x => x%2===0); // [2,4]
```

**reduce():** Reduce array to a single value

```
[1,2,3,4].reduce((a,b)=>a+b,0); // 10
```

**reduceRight():** Reduce array from right to left

```
[1,2,3].reduceRight((a,b)=>a-b); // 0
```

**some():** Check if any element passes a condition

```
[1,2,3].some(x=>x>2); // true
```

**every():** Check if all elements pass a condition

```
[1,2,3].every(x=>x>0); // true
```

**find():** Return first element matching a condition

```
[1,2,3,4].find(x=>x>2); // 3
```

**findIndex():** Return index of first element matching

```
[1,2,3,4].findIndex(x=>x>2); // 2
```

## Searching & Sorting

**indexOf():** Find index of element

```
let arr=[1,2,3]; arr.indexOf(2); // 1
```

**lastIndexOf():** Find last index of element

```
let arr=[1,2,2]; arr.lastIndexOf(2); // 2
```

**includes():** Check if array contains element

```
[1,2,3].includes(2); // true
```

**sort():** Sort elements

```
[3,1,2].sort(); // [1,2,3]
```

**reverse():** Reverse array order

```
[1,2,3].reverse(); // [3,2,1]
```

## Conversion & Utility

**concat():** Merge arrays

```
[1,2].concat([3,4]); // [1,2,3,4]
```

**join():** Join elements into string

```
[1,2,3].join('-'); // '1-2-3'
```

**toString():** Convert array to string

```
[1,2,3].toString(); // '1,2,3'
```

**flat():** Flatten nested arrays

```
[1,[2,3]].flat(); // [1,2,3]
```

**flatMap():** Map + flatten

```
[1,2].flatMap(x=>[x,x*2]); // [1,2,2,4]
```

**from():** Create array from iterable

```
Array.from('abc'); // ['a','b','c']
```

**isArray():** Check if value is an array

```
Array.isArray([1,2,3]); // true
```