JavaScript Array Methods - 5 Examples Each
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1. Array.every()

Example 1: Check if all numbers are positive

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

Example 2: Check if all are strings

```
["a", "b", "c"].every(x => typeof x === "string"); // true
```

Example 3: Validate age > 18

```
[{age: 20}, {age: 25}].every(p => p.age > 18); // true
```

Example 4: Check if array is not empty and all elements are truthy

```
[1, "a", true].every(Boolean); // true
```

Example 5: Check if all numbers are even

```
[2, 4, 6].every(x => x % 2 === 0); // true
```

2. Array.some()

Example 1: Check if any number is even

```
[1, 3, 4].some(x => x % 2 === 0); // true
```

Example 2: Check if array has null

```
[null, "a"].some(x => x === null); // true
```

Example 3: At least one user is admin

```
[{admin: false}, {admin: true}].some(u => u.admin); // true
```

Example 4: Check if any string includes "a"

```
["cat", "dog"].some(str => str.includes("a")); // true
```

Example 5: Some elements are greater than 10

```
[5, 8, 15].some(x => x > 10); // true
```

3. Array.filter()

Example 1: Filter even numbers

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

Example 2: Get users over 18

```
[{age: 17}, {age: 22}].filter(u => u.age > 18); // [{age: 22}]
```

Example 3: Filter out falsy values

```
[0, "", "hello", null].filter(Boolean); // ["hello"]
```

Example 4: Words longer than 3 letters

```
["hi", "hello", "yes"].filter(w => w.length > 3); // ["hello"]
```

Example 5: Items with price > 10

```
[{price: 5}, {price: 15}].filter(item => item.price > 10);
```

4. Array.reduceRight()

Example 1: Subtract from right to left

```
[10, 1, 1].reduceRight((a, b) => a - b); // 0
```

Example 2: Concatenate from right

```
["a", "b", "c"].reduceRight((a, b) => a + b); // "cba"
```

Example 3: Reduce with initial value

```
[1, 2].reduceRight((a, b) => a + b, 5); // 8
```

Example 4: Create reversed string

```
["1", "2", "3"].reduceRight((a, b) => a + b); // "321"
```

Example 5: Nest arrays

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

5. Array.reduce()

Example 1: Sum numbers

```
[1, 2, 3].reduce((a, b) => a + b); // 6
```

Example 2: Flatten array

```
[[1], [2], [3]].reduce((a, b) => a.concat(b), []); // [1, 2, 3]
```

Example 3: Count occurrences

```
['a', 'b', 'a'].reduce((acc, val) => {
acc[val] = (acc[val] || 0) + 1;
return acc;
}, {});
```

Example 4: Max value

```
[1, 5, 3].reduce((a, b) => a > b ? a : b); // 5
```

Example 5: Build object

```
['x', 'y'].reduce((obj, key, i) => ({ ...obj, [key]: i }), {});
```

6. Array.pop()

Example 1: Remove last item

```
const arr1 = [1, 2, 3]; arr1.pop(); // [1, 2]
```

Example 2: Pop from empty array

```
[].pop(); // undefined
```

Example 3: Chain pop and log

```
const arr2 = [5, 6]; console.log(arr2.pop()); // 6
```

Example 4: Pop inside loop

```
let arr3 = [1,2,3]; while(arr3.length) console.log(arr3.pop());
```

Example 5: Pop returns removed element

```
const last = [10, 20].pop(); // 20
```

7. Array.push()

Example 1: Add one element

```
const arr4 = [1]; arr4.push(2); // [1, 2]
```

Example 2: Add multiple elements

```
arr4.push(3, 4); // [1, 2, 3, 4]
```

Example 3: Push returns new length

```
let len = arr4.push(5); // 5
```

Example 4: Add array as element

```
arr4.push([6, 7]); // [1, 2, 3, 4, 5, [6, 7]]
```

Example 5: Push in loop

```
let result = []; for (let i = 0; i < 3; i++) result.push(i);
```

8. Array.shift()

Example 1: Remove first item

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

Example 2: Shift returns removed element

```
let first = q.shift(); // 2
```

Example 3: Shift from empty array

```
[].shift(); // undefined
```

Example 4: Chain shift

```
let a = [10, 20, 30]; console.log(a.shift()); // 10
```

Example 5: Shift in loop

```
let b = [1,2,3]; while(b.length) console.log(b.shift());
```

9. Array.unshift()

Example 1: Add element at beginning

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

Example 2: Add multiple items

```
c.unshift(-1, 0); // [-1, 0, 1, 2, 3]
```

Example 3: Unshift returns new length

```
let newLen = c.unshift(-2); // 6
```

Example 4: Add array as first element

```
c.unshift(["x", "y"]); // [["x", "y"], -2, -1, 0, 1, 2, 3]
```

Example 5: Use in loop (reverse push)

```
let d = []; for(let i=3; i>0; i--) d.unshift(i); // [1, 2, 3]
```