

JavaScript Array Functions & Methods Cheat Sheet

1. Array Creation

- 1 `Array()` → Creates a new array. Example: `Array(1, 2, 3) → [1, 2, 3]`
- 2 `Array.of()` → Creates an array from arguments. Example: `Array.of(5, 10) → [5, 10]`
- 3 `Array.from()` → Converts iterable to array. Example: `Array.from('hi') → ['h','i']`

2. Adding & Removing

- 1 `push()` → Add to end. `[1,2].push(3) → [1,2,3]`
- 2 `pop()` → Remove last. `[1,2,3].pop() → [1,2]`
- 3 `unshift()` → Add to start. `[2,3].unshift(1) → [1,2,3]`
- 4 `shift()` → Remove first. `[1,2,3].shift() → [2,3]`
- 5 `splice()` → Add/remove. `[1,2,3].splice(1,1,'a') → [1,'a',3]`

3. Searching & Checking

- 1 `includes()` → `[1,2,3].includes(2) → true`
- 2 `indexOf()` → `['a','b'].indexOf('b') → 1`
- 3 `find()` → `[1,2,3].find(x=>x>2) → 3`
- 4 `findIndex()` → `[1,2,3].findIndex(x=>x>2) → 2`
- 5 `some()` → `[1,2,3].some(x=>x>2) → true`
- 6 `every()` → `[2,4].every(x=>x%2==0) → true`

4. Iteration & Transformation

- 1 `forEach()` → Executes for each element.
- 2 `map()` → Returns new array. `[1,2].map(x=>x*2) → [2,4]`
- 3 `filter()` → `[1,2,3].filter(x=>x>1) → [2,3]`
- 4 `reduce()` → `[1,2,3].reduce((a,b)=>a+b,0) → 6`

5. Sorting & Reordering

- 1 `sort()` → `[3,1,2].sort() → [1,2,3]`
- 2 `reverse()` → `[1,2,3].reverse() → [3,2,1]`
- 3 `toSorted()` → returns sorted copy
- 4 `toReversed()` → returns reversed copy

6. Joining & Splitting

- 1 `join('-')` → `['a','b'].join('-') → 'a-b'`
- 2 `toString()` → `[1,2,3].toString() → '1,2,3'`

7. Copying & Combining

- 1 `concat()` → `[1,2].concat([3]) → [1,2,3]`
- 2 `slice()` → `[1,2,3].slice(1) → [2,3]`
- 3 `copyWithin()` → `[1,2,3,4].copyWithin(0,2) → [3,4,3,4]`

8. Flattening & Mapping

- 1 flat() → [1,[2,[3]]].flat(2) → [1,2,3]
- 2 flatMap() → [1,2].flatMap(x=>[x,x*2]) → [1,2,2,4]

9. Iterators

- 1 keys() → returns index iterator
- 2 values() → returns value iterator
- 3 entries() → returns [index,value] iterator

10. Type Checking

- 1 Array.isArray([]) → true
- 2 Array.isArray('hi') → false

11. ES2023 Immutable Methods

- 1 toReversed(), toSorted(), toSpliced(), with()
- 2 Example: [1,2,3].with(1,99) → [1,99,3]

Bonus Tricks

- 1 Remove duplicates: [...new Set(arr)]
- 2 Clone: [...arr]
- 3 Last element: arr.at(-1)