JavaScript Array Methods Cheat Sheet

1. Adding Elements

```
push(): Add to the end
  e.g. arr.push("item")
unshift(): Add to the start
  e.g. arr.unshift("item")
splice(): Add at any position
  e.g. arr.splice(2, 0, "item")
```

2. Removing Elements

```
pop(): Remove from end
e.g. arr.pop()
shift(): Remove from start
e.g. arr.shift()
splice(): Remove from any position
e.g. arr.splice(2, 1)
```

3. Replacing / Copying / Slicing

```
splice(): Remove & replace items
e.g. arr.splice(1, 1, "new")
slice(): Get a shallow copy
e.g. arr.slice(1, 3)
copyWithin(): Copy elements within array
e.g. arr.copyWithin(0, 3, 5)
```

4. Searching / Testing

```
indexOf(): Find first index
e.g. arr.indexOf("item")
lastIndexOf(): Find last index
e.g. arr.lastIndexOf("item")
includes(): Check if value exists
e.g. arr.includes("item")
find(): Find first matching element
```

e.g. arr.find(x => x > 5)

findIndex(): Find index of first match

e.g. arr.findIndex(x => x > 5)

some(): Check if at least one matches

e.g. arr.some(x => x > 5)

every(): Check if all match

e.g. arr.every(x => x > 5)

5. Iteration / Transformation

forEach(): Run function on each item

e.g. arr.forEach(x => console.log(x))

map(): Transform each element

e.g. arr.map(x => x * 2)

filter(): Filter by condition

e.g. arr.filter(x => x > 5)

reduce(): Reduce to a single value

e.g. arr.reduce($(a, b) \Rightarrow a + b, 0$)

6. Sorting / Reversing

sort(): Sort elements

e.g. arr.sort()

reverse(): Reverse the array

e.g. arr.reverse()

7. Converting / Joining

join(): Join into a string

e.g. arr.join(", ")

toString(): Convert to string

e.g. arr.toString()

8. Other Utilities

length: Number of elements

e.g. arr.length

Array.isArray(): Check if it's an array

e.g. Array.isArray(arr)

flat(): Flatten nested arrays

e.g. arr.flat()

fill(): Fill with a static value

e.g. arr.fill(0)