let arr = [1, 2, 3, 4, 5];

// 1. length

console.log("Length:", arr.length);

// 2. push()

arr.push(6);

console.log("push(6):", arr);

// 3. pop()

arr.pop();

console.log("pop():", arr);

// 4. unshift()

arr.unshift(0);

console.log("unshift(0):", arr);

// 5. shift()

arr.shift();

console.log("shift():", arr);

// 6. concat()

let arr2 = [6, 7];

let combined = arr.concat(arr2);

console.log("concat([6, 7]):", combined);

// 7. join()

console.log("join('-'):", arr.join('-'));

// 8. slice()

console.log("slice(1, 3):", arr.slice(1, 3));

// 9. splice()

arr.splice(2, 1, 99); // Replace item at index 2

console.log("splice(2, 1, 99):", arr);

// 10. indexOf()

console.log("indexOf(4):", arr.indexOf(4));

// 11. lastIndexOf()

arr.push(2);

console.log("lastIndexOf(2):", arr.lastIndexOf(2));

// 12. includes()

console.log("includes(3):", arr.includes(3));

// 13. reverse()

console.log("reverse():", arr.reverse());

// 14. sort()

let alpha = ['b', 'c', 'a'];

console.log("sort():", alpha.sort());

// 15. map()

let squared = arr.map(x => x \* x);

console.log("map(x => x \* x):", squared);

// 16. filter()

let even = arr.filter(x => x % 2 === 0);

console.log("filter(even):", even);

// 17. reduce()

let sum = arr.reduce((acc, val) => acc + val, 0);

console.log("reduce(sum):", sum);

// 18. reduceRight()

let sumRight = arr.reduceRight((acc, val) => acc + val, 0);

console.log("reduceRight(sum):", sumRight);

// 19. forEach()

arr.forEach((val, idx) => console.log(`forEach index ${idx}: ${val}`));

// 20. find()

console.log("find(x > 3):", arr.find(x => x > 3));

// 21. findIndex()

console.log("findIndex(x > 3):", arr.findIndex(x => x > 3));

// 22. some()

console.log("some(x > 3):", arr.some(x => x > 3));

// 23. every()

console.log("every(x > 0):", arr.every(x => x > 0));

// 24. flat()

let nested = [1, [2, [3, 4]]];

console.log("flat(2):", nested.flat(2));

// 25. flatMap()

let nums = [1, 2, 3];

console.log("flatMap():", nums.flatMap(x => [x, x \* 2]));

// 26. fill()

let filled = new Array(5).fill(0);

console.log("fill(0):", filled);

// 27. copyWithin()

let copyArr = [1, 2, 3, 4, 5];

console.log("copyWithin(0, 3):", copyArr.copyWithin(0, 3));

// 28. toString()

console.log("toString():", arr.toString());

// 29. toLocaleString()

console.log("toLocaleString():", arr.toLocaleString());

// 30. Array.isArray()

console.log("Array.isArray(arr):", Array.isArray(arr));

// 31. from()

console.log("Array.from('123'):", Array.from('123'));

// 32. of()

console.log("Array.of(1, 2, 3):", Array.of(1, 2, 3));

// 33. entries()

for (let [index, value] of arr.entries()) {

console.log(`entries: ${index} => ${value}`);

}

// 34. keys()

console.log("keys():", [...arr.keys()]);

// 35. values()

console.log("values():", [...arr.values()]);