1. Given an array of numbers, return a new array where each number is doubled.

const numbers = [1, 2, 3, 4, 5];

console.log(numbers.map(value=>value\*2));

1. Write a function that filters out even numbers from an array.

* const numbers = [10, 15, 20, 25, 30];
* console.log(numbers.filter=>value % 2 == 0);

1. Given an array of strings, use map to convert each string to uppercase.

* const words = ["apple", "banana", "cherry"];
* console.log(words.map(word => word.toUpperCase()));

1. Use forEach to log each element of an array to the console.

* const items = ["pen", "notebook", "eraser"];
* items.foreach(ele=>console.log(ele));

1. Given an array of numbers, use reduce to find the sum of all elements.

* const numbers = [5, 10, 15, 20];
* res= numbers.reduce((a,b)=>a+b);
* console.log(res);

1. Given an array of numbers, use filter to remove odd numbers, then use map to square the remaining numbers.

* const numbers = [1, 2, 3, 4, 5, 6];
* let res=numbers.filter((ele)=>ele%2==0).
* map((ele)=>ele\*ele);
* console.log(res)

1. Chain map, filter, and reduce to find the sum of squares of only the even numbers.

* const numbers = [1, 2, 3, 4, 5, 6];
* let res=numbers.filter((ele)=> ele % 2==0).
* map((ele)=>ele\*ele).reduce((a,b)=>a+b);
* console.log(res);

8.Given an array of objects representing people, filter out those below 18, then use map to extract their names.

* const people = [  
   { name: "Alice", age: 25 },  
   { name: "Bob", age: 16 },  
   { name: "Charlie", age: 30 }  
  ];
* people.filter((ele)=>ele.age>=18)
* .map((ele)=>console.log(ele.name));

1. Given an array of strings, use map and filter to remove empty strings and convert the remaining ones to lowercase.

* const words = ["Hello", "", "WORLD", "JavaScript", ""];
* let res = words.filter(word => word !== "")
* .map(word => word.toLowerCase());
* console.log(res);

1. Use reduce to group an array of numbers by even and odd.

const numbers = [1, 2, 3, 4, 5, 6];

const group = numbers.reduce((acc, num) => {

if (num % 2 === 0) {

acc.even.push(num);

}

else {

acc.odd.push(num);

}

return acc;

},

{ even: [ ], odd: [ ] });

console.log(group);