

Using map function

1. Write a function squareNumbers(arr) that returns a new array where each number in the original array is squared using map method.

```
let arr=[1,2,3,4,5,6,7,8,9];  
let y=arr.map((a)=>{return a*2})  
console.log(y)
```

o/p: [
2, 4, 6, 8, 10,
12, 14, 16, 18
]

Explanation: This code creates an array of numbers from 1 to 9 and uses a method called map to transform the array. The map method goes through each number in the array, doubles it, and creates a new array with these doubled values. Finally, it prints the new array to the console. The result is a list of numbers where each original number has been multiplied by 2.

2. Write a function toUppercase(arr) that returns a new array where each string in the original array is converted to uppercase using map method.

```
let arr1=["Smartphone","Laptop","Wireless Headphones","Smartwatch","Gaming Console"]  
let z=arr1.map((a)=> {return a.toUpperCase()});  
console.log(z);
```

O/P: [
'SMARTPHONE',
'LAPTOP',
'WIRELESS HEADPHONES',
'SMARTWATCH',
'GAMING CONSOLE'
]

Explanation: In this code, an array of strings is processed to convert each string to uppercase using the map method. Here's what happens step by step:

1. **Array arr1:** The array contains a list of electronic products:
 - o "Smartphone"

- "Laptop"
 - "Wireless Headphones"
 - "Smartwatch"
 - "Gaming Console"
2. **Using the map method:** The map method iterates over each string in the array, and for each string, it calls the toUpperCase() method. This method converts each string to uppercase.
 3. **New array z:** A new array is created where each product name is now in uppercase.
 4. **Output:** The new array is printed using console.log(z).