Programming Challenge : Array manipulation with functions

You are given an array of integers. Your task is to write a series of functions to transform this array according to specific criteria. The functions should be reusable, and you should use operators and array methods to achieve the transformations.

Sum of All Elements:

- Write a function sumArray(arr) that takes an array of integers as input and returns the sum of all the elements in the array.

```
function sumArray(arr) {
    // Your code here
}

// Example usage:
console.log(sumArray([1, 2, 3, 4, 5])); // Output: 15
```

Multiply Each Element by a Given Number:

- Write a function multiplyArray(arr, multiplier) that takes an array of integers and a multiplier as input and returns

a new array with each element multiplied by the multiplier.

```
function multiplyArray(arr, multiplier) {
    // Your code here
}

// Example usage:
console.log(multiplyArray([1, 2, 3, 4, 5], 3)); // Output: [3, 6, 9, 12, 15]
```

Filter Even Numbers:

- Write a function filterEvenNumbers(arr) that takes an array of integers as input and returns a new array containing only the even numbers.

```
function filterEvenNumbers(arr) {
    // Your code here
}

// Example usage:
console.log(filterEvenNumbers([1, 2, 3, 4, 5, 6])); // Output: [2, 4, 6]
```

Array to String Conversion:

- Write a function arrayToString(arr) that takes an array of integers as input and returns a string representation of the array, with elements separated by commas.

```
function arrayToString(arr) {
    // Your code here
}

// Example usage:
console.log(arrayToString([1, 2, 3, 4, 5])); // Output:
"1,2,3,4,5"
```

Chain the Functions:

- Write a function transformArray(arr, multiplier) that performs the following operations in sequence:
  1. Multiply each element by the given multiplier using multiplyArray.

2. Filter out the even numbers using filterEvenNumbers.
3. Find the maximum element in the resulting array using findMax.
4. Convert the final array to a string using arrayToString.

```
function transformArray(arr, multiplier) {
    // Your code here
}

// Example usage:
console.log(transformArray([1, 2, 3, 4, 5], 3)); // Output:
"9,12"
```

Bonus Challenge:

- Modify the transformArray function to return an object containing the results of each transformation step, as well as the final string.

Use Array methods and operators to achieve the required results.

Note: Draw conclusions after the completion of each challenge.