Do the below programs in anonymous function & IIFE

1. Print odd numbers in an array

a. Anonymous function

```
arr=[1,2,3,4,5,6,7];
a= function(array){
  arrOdd=[]
  for(i=0;i<arr.length;i++)
{
  if(+arr[i] % 2 !== 0 ){
    arrOdd.push(arr[i]);
  }
}
  console.log(arrOdd);
};
a(arr);
```

b. IIFE function

```
arr=[1,2,3,4,5,6,7];
(function(arr){
  arrOdd=[]
  for(i=0;i<arr.length;i++)
{
  if(+arr[i] % 2 !== 0 ){
    arrOdd.push(arr[i]);
  }
}
  console.log(arrOdd);
})();
```

2. Convert all the strings to title caps in a string array

Answer:

a. Using anonymous function

```
a=['pen','goat','john'];

myFunction = function(array){
  b=[];
  for(i=0;i<array.length;i++){
    b.push(array[i].toUpperCase())
  }
  console.log(b);
}

myFunction(a);
```

b.using IIFE function

```
array=['pen','goat','john'];

(function(array){
  b=[];
  for(i=0;i<array.length;i++){
    b.push(array[i].toUpperCase())
  }
  console.log(b);
})()
```

3. Sum of all numbers in an array

Answer:

a. Using anonymous function

```
a = [1,2,3];

myFunction = function(array){
  sum = 0;
  for(i=0;i<array.length;i++){
    sum=sum+array[i];
  }
  console.log(sum);
}
myFunction(a);
```

b. Using IIFE function

```
array1=[1,2,3];

(myFunction = function(array=array1){
  sum = 0;
  for(i=0;i<array1.length;i++){
    sum=sum+array1[i];
  }
  console.log(sum);
})()
```

4. Return all the prime numbers in an array

a. Using anonymous function

```
var Array = [2, 3, 4, 5, 6, 7, 8, 9, 10]
myFunction=
  function(numArray){
  numArray = numArray.filter((number) => {
  for (var i = 2; i <= Math.sqrt(number); i++) {
    if (number % i === 0) return false;
  }
  return true;
});

console.log(numArray);
}

myFunction(Array);
```

b. using IIFE

```
 (function(){
  var numArray = [2, 3, 4, 5, 6, 7, 8, 9, 10]
  numArray = numArray.filter((number) => {
  for (var i = 2; i <= Math.sqrt(number); i++) {
    if (number % i === 0) return false;
  }
  return true;
});

console.log(numArray);
})()
```

5. Return all the palindromes in an array

Answer: Using anonymous function

```
let myarr = ["foo", "racecar", "pineapple", "porcupine", "pineenip",'pap','aaaa'];
DummyVariable
=function(arr){
  var palindromes = arr.filter(w => {
  let len = w.length;
  for (let i = 0; i < len / 2; i++) {
    if (w[i] == w[len - i - 1]) {
      return true;
    } else {
      return false;
    }
  }
});

console.log(palindromes)

}

DummyVariable(myarr);
```

b. Using IIFE

```
(function(arr = ["foo", "racecar", "pineapple", "porcupine", "pineenip",'pap','aaaa'])
 {
  var palindromes = arr.filter(w => {
  let len = w.length;
  for (let i = 0; i < len / 2; i++) {
    if (w[i] == w[len - i - 1]) {
      return true;
    } else {
      return false;
    }
  }
});

console.log(palindromes);

})();
```

6. Return median of two sorted arrays of same size

a. Using anonymous function

```
arr1 = [1,2,3];
arr2 = [4,5,6];

myVariable = function(arrX,arrY){
  arrX.sort((a,b)=>a-b);
  arrY.sort((a,b)=>a-b);
  mergedArr = arrX.concat(arrY);
  Median = (mergedArr[(arrX.length+arrY.length)/2] +
mergedArr[((arrX.length+arrY.length)/2)-1])/2;
  console.log(Median);
}

myVariable(arr1,arr2);
```

7. Remove duplicates from an array

let a =[1,2,3,3,2,2,6,6];

```
myvariable = function (arr){
  len = arr.length;
  b=[];
  for(i=0;i<len;i++){
    if(b.indexOf(arr[i]) === -1){
      b.push(arr[i])

    }
  }
  console.log(b);
}
myvariable(a);
```

b. Using IIFE function

```
let a =[1,2,3,3,2,2,6,6];

(myvariable = function (arr=a){
  len = arr.length;
  b=[];
  for(i=0;i<len;i++){
    if(b.indexOf(arr[i]) === -1){
      b.push(arr[i])

    }
  }
  console.log(b);
})();
```

8. Rotate an array by k times

Answer :

```
a=[1,2,3,4,5];
myVariable = function (arr,k){
  for(let i=0;i<k;i++){
    let temp = arr[0];
    for(let j=0;j<arr.length;j++){
      arr[j]=arr[j+1];

    }
    arr[arr.length-1] = temp;
  }
  return arr;
}


console.log(myVariable(a,1));
```

GUVI : Zen Code-Sprints :— JavaScript Functions — Warmup Pbms

1.Write a function called “addFive”.
Given a number, “addFive” returns 5 added to that number.

Answer:

```
function addFive (num){

return num+5;

}
```

2. **Fill in your code that takes an number minutes and converts it to seconds.**

Answer:

```
function toSeconds(minutes){
return minutes * 60;
}
minutes = 5;
```

3. **Create a function that takes a string and returns it as an integer.**

Answer:

```
function toInteger(string) {
return parseInt(string);}
```

4.Create a function that takes a number as an argument, increments the number by +1 and returns the result.

Answer:

```
function addOne(number){
return number+1;
}
```

5.Create a function that takes an array and returns the first element.

Answer :

```
function firstElement(arr){
return arr[0];
}
```

3. Do the below programs in arrow functions

1. **Print odd numbers in an array**

Answer :

```
myfunction = (arr) => {
  arrOdd=[];
  for(i=0;i<arr.length;i++)
  {
  if (arr[i]%2 !== 0){
    arrOdd.push(arr[i])
  }


}
console.log(arrOdd);
}
a=[1,2,3,4,5];
myfunction(a);
```

2. **Convert all the strings to title caps in a string array**

Answer:

```
myfunction = (arr) => {
arrnew=[];
for(i=0;i<arr.length;i++)
{
arrnew[i] = arr[i].toUpperCase();
}
  console.log(arrnew);
}
myfunction(arr = ['bad','good']);
```

3. Sum of all numbers in an array

Answer:

```
myfunction = (arr) => {
let sum = 0;
for(i=0;i<arr.length;i++){
sum += arr[i]
}
return sum;
```

4. Return all the prime numbers in an array

Answer:

```
numArray = (number) => {
  for (var i = 2; i <= Math.sqrt(number); i++) {
    if (number % i === 0) return false;
  }
  return true;
}

console.log(numArray);
```

5. Return all the palindromes in an array

```
DummyVariable
=(arr)=>{
  var palindromes = arr.filter(w => {
  let len = w.length;
  for (let i = 0; i < len / 2; i++) {
    if (w[i] == w[len - i - 1]) {
      return true;
    } else {
      return false;
    }
```

```
  }
});

console.log(palindromes)

}
```