

Q#1: Write a function that will take an array as input, sort, and return the array in descending order.

Answer:

```
function descendingSort(arr) {
  for (let i = 0; i < arr.length - 1; i++) {
    for (let j = 0; j < arr.length - i - 1; j++) {
      if (arr[j] < arr[j + 1]) {
        let temp = arr[j];
        arr[j] = arr[j + 1];
        arr[j + 1] = temp;
      }
    }
  }
  return arr;
}

console.log(descendingSort([3, 2, 7, 4, 6, 9]));
// Output: [9, 7, 6, 4, 3, 2] using bubble sort
```

Q#2: Write a function that will take a string as input, check and return if it is palindrome or not. For example, if the string is “madam” the function should return true and if the string is “doctor” it should return false.

```
function isPalindrome(str) {
  str = str.toLowerCase().replace(/[^a-z0-9]/g, "");
  return str === str.split("").reverse().join("");
}

console.log(isPalindrome("madam")); // Output: true
console.log(isPalindrome("doctor")); // Output: false
```

Q#3: Write a function that will take an array as input and return the sum of the two largest numbers in the array.

Answer:

```
function sumOfTwoLargest(arr) {
  let largest = -Infinity;
  let secondLargest = -Infinity;

  for (let num of arr) {
    if (num > largest) {
      secondLargest = largest;
      largest = num;
    } else if (num > secondLargest && num !== largest) {
      secondLargest = num;
    }
  }
  return largest + secondLargest;
}
```

```

    }
  }

  return largest + secondLargest;
}

console.log(sumOfTwoLargest([3, 7, 1, 5, 11, 19]));
// Output: 30

```

Q#4: Write a function that will take an array as input and return an array with every missing element from 0 to the highest entry.

Answer:

```

function missingElements(arr) {
  let max = Math.max(...arr);
  let missing = [];

  for (let i = 0; i <= max; i++) {
    if (!arr.includes(i)) {
      missing.push(i);
    }
  }

  return missing;
}

console.log(missingElements([3, 4, 9, 1, 7, 3, 2, 6]));
// Output: [0, 5, 8]

```

Q#5: Write a function that will take an array of numbers and return the number most repeated in the array with how many times it was repeated.

Answer:

```

function mostRepeated(arr) {
  let counts = {};
  for (let num of arr) {
    counts[num] = (counts[num] || 0) + 1;
  }
  let maxCount = 0;

```

```
let mostRepeatedNum;

for (let num in counts) {
  if (counts[num] > maxCount) {
    maxCount = counts[num];
    mostRepeatedNum = num;
  }
}

return `${mostRepeatedNum} is repeated ${maxCount} times.`;
}

console.log(mostRepeated([4, 3, 5, 6, 4, 7, 9, 2, 4, 6, 3, 4, 6, 3, 4, 8, 5, 1, 5]));
// Output: 4 is repeated 5 times.
```

Q#6: Write a function that will take an array as input, it will rotate the array to the right 1 time and return the rotated array.

Answer:

```
function rotateArray(arr) {
  let lastElement = arr.pop();
  arr.unshift(lastElement);
  return arr;
}

console.log(rotateArray([1, 2, 3, 4, 5]));
// Output: [5, 1, 2, 3, 4]
```