1,

a)

const arr = [1, 2, 3, 4, 5, 6, 7, 8, 9];

const odds = [];

arr.forEach(number => {

  if (number % 2 !== 0) {

    odds.push(number);

  }

});

console.log(odds);

b)

function titleCase(str) {

    return str

        .split(' ')

        .map((word) => word[0].toUpperCase() + word.slice(1).toLowerCase())

        .join(' ');

}

console.log(titleCase("I'm ganapathy sriram"));

c)

const array = [1, 2, 3, 4];

let sum = 0;

for (let i = 0; i < array.length; i++) {

    sum += array[i];

}

console.log(sum);

d)

const array = [-5, -3, -2, -1, ...Array(20).keys()];

// Array(20).keys() generates numbers from 0 to 19.

function isPrime(num) {

  for (let start = 2; num > start; start++) {

    if (num % start == 0) {

      return false;

    }

  }

  return num > 1;

}

console.log(array.filter(isPrime)); // [2, 3, 5, 7, 11, 13, 17, 19]

e)

function isPalindrome(word) {

    const firstHalf = word.slice(0, Math.ceil(word.length/2));

    const secondHalfReversed = word.slice(Math.floor(word.length/2)).split('').reverse().join('');

    return firstHalf === secondHalfReversed;

}

function getPalindromesFromArray(arr) {

    return arr.filter(isPalindrome);

}

const wordsArr = ['foo', 'racecar', 'pineapple', 'porcupine', 'pineenip'];

console.log(getPalindromesFromArray(wordsArr));

f)

float getMedian(int num1[], int num2[], int size) {

    int i = 0

    int j = 0

    int m1 = -1, m2 = -1

    for (count = 0 to size) {

       if (i == size) {

          m1 = m2

          m2 = num2[0]

          break

       }

       else if (j == size) {

          m1 = m2

          m2 = num1[0]

          break

       }

       if (num1[i] < num2[j]) {

          m1 = m2

          m2 = num1[i]

          i = i + 1

       } else {

          m1 = m2

          m2 = num2[j]

          j = j + 1

       }

    }

    return (m1 + m2)/2

 }

g)

let chars = ['A', 'B', 'A', 'C', 'B'];

let uniqueChars = [...new Set(chars)];

console.log(uniqueChars);

h)

function solution(arr, k) {

    if(k == 0) return arr;

    if(arr.length == k) return arr;

    if(arr !== undefined && arr !== null){

      let counter = k > arr.length ? k % arr.length : k;

      let rotArray = [];

      rotArray = arr.slice(arr.length - counter, arr.length).concat(arr.slice(0,arr.length - counter))

      return rotArray;

     }

    return arr;

  }

3,

a)

let arr = [1,2,3,4,5,6,7,8,9,10,11,12]

let odds = arr.filter(n => n%2)

console.log(odds)

b)

const names = ['Ali', 'Atta', 'Alex', 'John'];

const uppercased = names.map(name => name.toUpperCase());

console.log(uppercased);

// ['ALI', 'ATTA', 'ALEX', 'JOHN']

c)

const arr = [1, 2, 3, 4];

const reducer = (accumulator, curr) => accumulator + curr;

console.log(arr.reduce(reducer));

d)

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);

e)

const arr = ['carecar', 1344, 12321, 'did', 'cannot'];

const isPalindrome = el => {

   const str = String(el);

   let i = 0;

   let j = str.length - 1;

   while(i < j) {

      if(str[i] === str[j]) {

         i++;

         j--;

      }

      else {

         return false;

      }

   }

   return true;

};

const findPalindrome = arr => {

   return arr.filter(el => isPalindrome(el));

};

console.log(findPalindrome(arr));