Q1. function Sum(num, t) {

for (let i = 0; i < num.length - 1; i++) {

for (let j = i + 1; j < num.length; j++) {

if (num[i] + num[j] == t) {

return [i, j];

}

}

}

return [];

}

const num = [2, 7, 11, 15];

const t = 9;

const r = Sum(num, t);

console.log(r);

Q2. function f(nums, val) {

let i = 0;

let n = nums.length;

while (i < n) {

if (nums[i] === val) {

nums[i] = nums[n - 1];

n--;

} else {

i++;

}

}

return n;

}

const nums = [3, 2, 2, 3];

const val = 3;

const r = f(nums, val);

console.log(r);

console.log(nums);

Q3. function f(n, target) {

let index = 0;

while (index < n.length && n[index] < target) {

index++;

}

return index;

}

const n = [1, 3, 5, 6];

const target = 5;

const r = f(n, target);

console.log(r);

Q4. function f(digits) {

const n = digits.length;

for (let i = n - 1; i >= 0; i--) {

if (digits[i] !== 9) {

digits[i]++;

return digits;

} else {

digits[i] = 0;

}

}

digits.unshift(1);

return digits;

}

const digits = [1, 2, 3];

const result = f(digits);

console.log(result);

Q5. function merge(nums1, m, nums2, n) {

let i = m - 1;

let j = n - 1;

let k = m + n - 1;

while (i >= 0 && j >= 0) {

if (nums1[i] > nums2[j]) {

nums1[k] = nums1[i];

i--;

} else {

nums1[k] = nums2[j];

j--;

}

k--;

}

while (j >= 0) {

nums1[k] = nums2[j];

j--;

k--;

}

}

const nums1 = [1, 2, 3, 0, 0, 0];

const m = 3;

const nums2 = [2, 5, 6];

const n = 3;

merge(nums1, m, nums2, n);

console.log(nums1);

Q6. function f(nums) {

const a = new Set();

for (let num of nums) {

if (a.has(num)) {

return true;

} else {

a.add(num);

}

}

return false;

}

const nums = [1, 2, 3, 1];

console.log(f(nums));

Q7. function f(nums) {

let index = 0;

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

if (nums[i] != 0) {

nums[index] = nums[i];

index++;

}

}

while (index < nums.length) {

nums[index] = 0;

index++;

}

}

const nums = [0, 1, 0, 3, 12];

f(nums);

console.log(nums);

Q8. function f(nums) {

const n = nums.length;

const count = new Array(n + 1).fill(0);

let d, m;

for (let num of nums) {

count[num]++;

}

for (let i = 1; i <= n; i++) {

if (count[i] == 0) {

m = i;

} else if (count[i] == 2) {

d = i;

}

}

return [d, m];

}

const nums = [1, 2, 2, 4];

console.log(f(nums));