JS Prob 1:

function remove\_duplicates(arr) {

// index of the next non-duplicate element

let nextNonDuplicate = 1;

let i = 1;

while (i < arr.length) {

if (arr[nextNonDuplicate - 1] !== arr[i]) {

arr[nextNonDuplicate] = arr[i];

nextNonDuplicate += 1;

}

i += 1;

}

return nextNonDuplicate;

}

console.log(remove\_duplicates([2, 3, 3, 3, 6, 9, 9]));

console.log(remove\_duplicates([2, 2, 2, 11]));

JS prob 2:

function remove\_element(arr, key) {

let nextElement = 0; // index of the next element which is not 'key'

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

if (arr[i] !== key) {

arr[nextElement] = arr[i];

nextElement += 1;

}

}

return nextElement;

}

console.log(`Array new length: ${remove\_element([3, 2, 3, 6, 3, 10, 9, 3], 3)}`);

console.log(`Array new length: ${remove\_element([2, 11, 2, 2, 1], 2)}`);

Java Problem1:

class RemoveDuplicates {

public static int remove(int[] arr) {

int nextNonDuplicate = 1; // index of the next non-duplicate element

for (int i = 1; i < arr.length; i++) {

if (arr[nextNonDuplicate - 1] != arr[i]) {

arr[nextNonDuplicate] = arr[i];

nextNonDuplicate++;

}

}

return nextNonDuplicate;

}

public static void main(String[] args) {

int[] arr = new int[] { 2, 3, 3, 3, 6, 9, 9 };

System.out.println(RemoveDuplicates.remove(arr));

arr = new int[] { 2, 2, 2, 11 };

System.out.println(RemoveDuplicates.remove(arr));

}

}

class RemoveElement {

public static int remove(int[] arr, int key) {

int nextElement = 0; // index of the next element which is not 'key'

for (int i = 0; i < arr.length; i++) {

if (arr[i] != key) {

arr[nextElement] = arr[i];

nextElement++;

}

}

return nextElement;

}

public static void main(String[] args) {

int[] arr = new int[] { 3, 2, 3, 6, 3, 10, 9, 3 };

System.out.println(RemoveElement.remove(arr, 3));

arr = new int[] { 2, 11, 2, 2, 1 };

System.out.println(RemoveElement.remove(arr, 2));

}

}