Sock Merchant

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John works at a clothing store. He has a large pile of socks that he must pair by color for sale. Given an array of integers representing the color of each sock, determine how many pairs of socks with matching colors there are.

For example, there are $n = 7$ socks with colors $ar = [1, 2, 1, 2, 1, 3, 2]$. There is one pair of color 1 and one of color 2. There are three odd socks left, one of each color. The number of pairs is 2.

Function Description

Complete the sockMerchant function in the editor below. It must return an integer representing the number of matching pairs of socks that are available.

sockMerchant has the following parameter(s):

- n: the number of socks in the pile
- ar: the colors of each sock

Input Format

The first line contains an integer n, the number of socks represented in ar.
The second line contains n space-separated integers describing the colors $ar[i]$ of the socks in the pile.

Constraints

- $1 \leq n \leq 100$
- $1 \leq ar[i] \leq 100$ where $0 \leq i < n$

Output Format

Print the total number of matching pairs of socks that John can sell.

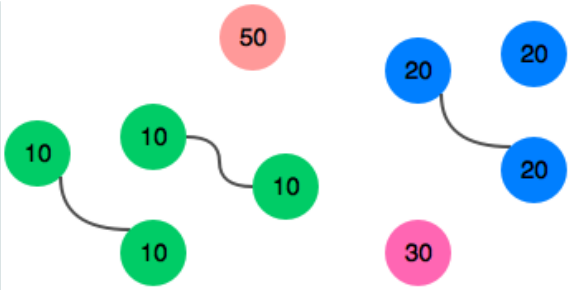
Sample Input

```
9
10 20 20 10 10 30 50 10 20
```

Sample Output

```
3
```

Explanation



John can match three pairs of socks.

Java 8

```java
import java.io.*;
import java.math.*;
import java.security.*;
import java.text.*;
import java.util.*;
import java.util.concurrent.*;
import java.util.regex.*;

public class Solution {

    // Complete the sockMerchant function below.
    static int sockMerchant(int n, int[] ar) {
        Arrays.sort(ar);
        int count = 0;
       for(int i=0; i<n-1; i++) {
           if(ar[i] == ar[i+1]) {
               count++;
               i++;
           }
       }
        return count;

    }

    private static final Scanner scanner = new Scanner(System.in);

    public static void main(String[] args) throws IOException {
        BufferedWriter bufferedWriter = new BufferedWriter(new
FileWriter(System.getenv("OUTPUT_PATH")));

        int n = scanner.nextInt();
        scanner.skip("(\r\n|[\n\r\u2028\u2029\u0085])?");

        int[] ar = new int[n];

        String[] arItems = scanner.nextLine().split(" ");
        scanner.skip("(\r\n|[\n\r\u2028\u2029\u0085])?");

        for (int i = 0; i < n; i++) {
            int arItem = Integer.parseInt(arItems[i]);
            ar[i] = arItem;
        }
```

```
        int result = sockMerchant(n, ar);

        bufferedWriter.write(String.valueOf(result));
        bufferedWriter.newLine();

        bufferedWriter.close();

        scanner.close();
    }
}

```

Line: 52 Col: 2

Upload Code as File | Test against custom input | Run Code | Submit Code

Congratulations!

You have passed the sample test cases. Click the submit button to run your code against all the test cases.

Testcase 0 | Testcase 1

Input (stdin)

```
10
1 1 3 1 2 1 3 3 3 3
```

Your Output (stdout)

```
4
```

Expected Output

```
4
```