Beautiful Pairs

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Problem Submissions Leaderboard Discussions Editorial

You are given two arrays, A and B, both containing N integers.

A pair of indices (i, j) is *beautiful* if the i^{th} element of array A is equal to the j^{th} element of array B. In other words, pair (i, j) is *beautiful* if and only if $A_i = B_j$.

Given A and B, there are k pairs of beautiful indices $(i_0, j_0), \ldots, (i_{k-1}, j_{k-1})$. A pair of indices in this set is *pairwise disjoint* if and only if for each $0 \leq x < y \leq k-1$ it holds that $i_x \neq i_y$ and $j_x \neq j_y$.

Change exactly 1 element in B so that the resulting number of *pairwise disjoint beautiful* pairs is maximal, and print this maximal number to stdout.

Input Format

The first line contains a single integer, N (the number of elements in A and B).
The second line contains N space-separated integers describing array A.
The third line contains N space-separated integers describing array B.

Constraints

- $1 \leq N \leq 10^3$
- $1 \leq A_i \leq 10^3$
- $1 \leq B_i \leq 10^3$

Output Format

Determine and print the maximum possible number of pairwise disjoint beautiful pairs.

Note: You must first change 1 element in B, and your choice of element must be optimal.

Sample Input

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

Sample Output

```
3
```

Explanation

You can transform B_2 from 3 to 2 and array B becomes $[1, 2, 2]$.

We now have: $A = [1, 2, 2]$ and $B = [1, 2, 2]$.

Of the 5 *beautiful pairs*, our *pairwise disjoint beautiful* pairs of indices are $(0, 0), (1, 2), (2, 1)$.

An alternative choice would be $(0, 0)$, $(1, 1)$, and $(2, 2)$.

Either solution yields **3** pairwise disjoint beautiful pairs, so we print **3**.

Submissions:7424

Max Score:30

Difficulty: Easy

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Current Buffer (saved locally, editable) Java 7

```
1  import java.io.*;
2  import java.util.*;
3  import java.text.*;
4  import java.math.*;
5  import java.util.regex.*;
6
7  public class Solution {
8
9      public static void main(String[] args) {
10         /* Enter your code here. Read input from STDIN. Print output to STDOUT. Your class should be named Solution. */
11     }
12 }
13
```

Line: 1 Col: 1

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