CODEFORCES β
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# B. Balanced Tunnel

time limit per test: 1 second
memory limit per test: 512 megabytes
input: standard input
output: standard output

Consider a tunnel on a one-way road. During a particular day, $n$ cars numbered from $1$ to $n$ entered and exited the tunnel exactly once. All the cars passed through the tunnel at constant speeds.

A traffic enforcement camera is mounted at the tunnel entrance. Another traffic enforcement camera is mounted at the tunnel exit. *Perfectly balanced*.

Thanks to the cameras, the order in which the cars entered and exited the tunnel is known. No two cars entered or exited at the same time.

Traffic regulations prohibit overtaking inside the tunnel. If car $i$ overtakes any other car $j$ inside the tunnel, car $i$ must be fined. However, each car can be fined at most once.

Formally, let's say that car $i$ *definitely overtook* car $j$ if car $i$ entered the tunnel later than car $j$ and exited the tunnel earlier than car $j$. Then, car $i$ must be fined if and only if it definitely overtook at least one other car.

Find the number of cars that must be fined.

### Input

The first line contains a single integer $n$ ($2 \le n \le 10^5$), denoting the number of cars.

The second line contains $n$ integers $a_1, a_2, \ldots, a_n$ ($1 \le a_i \le n$), denoting the ids of cars in order of entering the tunnel. All $a_i$ are pairwise distinct.

The third line contains $n$ integers $b_1, b_2, \ldots, b_n$ ($1 \le b_i \le n$), denoting the ids of cars in order of exiting the tunnel. All $b_i$ are pairwise distinct.

### Output

Output the number of cars to be fined.

### Examples

input Copy

```
5
3 5 2 1 4
4 3 2 5 1
```

output Copy

```
2
```

input Copy

```
7
5 2 3 6 7 1 4
2 3 6 7 1 4 5
```

output Copy

```
6
```

input Copy

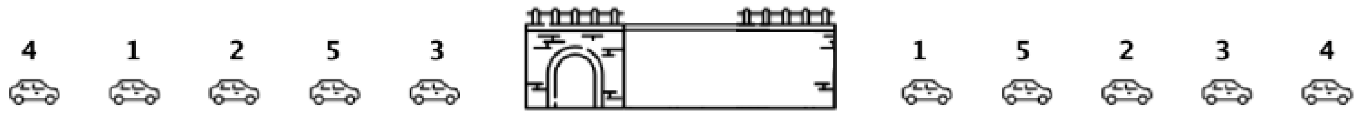
```
2
1 2
1 2
```

output Copy

```
0
```

### Note

The first example is depicted below:



Car $2$ definitely overtook car $5$, while car $4$ definitely overtook cars $1$, $2$, $3$ and $5$. Cars $2$ and $4$ must be fined.

In the second example car $5$ was definitely overtaken by all other cars.

**Codeforces Global Round 5**

**Finished**

Practice

☆

### → Virtual participation

Virtual contest is a way to take part in past contest, as close as possible to participation on time. It is supported only ICPC mode for virtual contests. If you've seen these problems, a virtual contest is not for you - solve these problems in the archive. If you just want to solve some problem from a contest, a virtual contest is not for you - solve this problem in the archive. Never use someone else's code, read the tutorials or communicate with other person during a virtual contest.

Start virtual contest

### → Practice

You are registered for practice. You can solve problems unofficially. Results can be found in the contest status and in the bottom of standings.

### → Clone Contest to Mashup

You can clone this contest to a mashup.

Clone Contest

### → Submit?

Language: GNU G++11 5.1.0 ▼

Choose file: 选择文件 未选择任何文件

Be careful: there is 50 points penalty for submission which fails the pretests or resubmission (except failure on the first test, denial of judgement or similar verdicts). "Passed pretests" submission verdict doesn't guarantee that the solution is absolutely correct and it will pass system tests.

Submit

### → Problem tags

data structures sortings two pointers

No tag edit access

### → Contest materials

- Announcement #1 (en) ×
- Announcement #2 (ru) ×
- Tutorial (en) ×

In the third example no car must be fined.