

### A. Andryusha and Socks

time limit per test: 2 seconds

memory limit per test: 256 megabytes

input: standard input

output: standard output

Andryusha is an orderly boy and likes to keep things in their place.

Today he faced a problem to put his socks in the wardrobe. He has  $n$  distinct pairs of socks which are initially in a bag. The pairs are numbered from 1 to  $n$ . Andryusha wants to put paired socks together and put them in the wardrobe. He takes the socks one by one from the bag, and for each sock he looks whether the pair of this sock has been already took out of the bag, or not. If not (that means the pair of this sock is still in the bag), he puts the current socks on the table in front of him. Otherwise, he puts both socks from the pair to the wardrobe.

Andryusha remembers the order in which he took the socks from the bag. Can you tell him what is the maximum number of socks that were on the table at the same time?

**Input**

The first line contains the single integer  $n$  ( $1 \leq n \leq 10^5$ ) — the number of sock pairs.

The second line contains  $2n$  integers  $x_1, x_2, \dots, x_{2n}$  ( $1 \leq x_i \leq n$ ), which describe the order in which Andryusha took the socks from the bag. More precisely,  $x_i$  means that the  $i$ -th sock Andryusha took out was from pair  $x_i$ .

It is guaranteed that Andryusha took exactly two socks of each pair.

**Output**

Print single integer — the maximum number of socks that were on the table at the same time.

<b>Examples</b>
<div><div>input</div><div>1 1 1</div><div>output</div><div>1</div></div>
<div><div>input</div><div>3 2 1 1 3 2 3</div><div>output</div><div>2</div></div>

**Note**

In the first example Andryusha took a sock from the first pair and put it on the table. Then he took the next sock which is from the first pair as well, so he immediately puts both socks to the wardrobe. Thus, at most one sock was on the table at the same time.

In the second example Andryusha behaved as follows:

- Initially the table was empty, he took out a sock from pair 2 and put it on the table.

Codeforces Round #403 (Div. 2, based on Technocup 2017 Finals)

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 ACM-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

→ Submit?

Language: GNU G++14 6.2.0

Choose file: Browse... No file selected.

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

→ Last submissions

Submission	Time	Verdict
<a href="#">25248392</a>	Mar/05/2017 16:12	Accepted

→ Problem tags

implementation

No tag edit access

→ Contest materials

- Announcement
- Tutorial

- Sock (2) was on the table. Andryusha took out a sock from pair 1 and put it on the table.
- Socks (1, 2) were on the table. Andryusha took out a sock from pair 1, and put this pair into the wardrobe.
- Sock (2) was on the table. Andryusha took out a sock from pair 3 and put it on the table.
- Socks (2, 3) were on the table. Andryusha took out a sock from pair 2, and put this pair into the wardrobe.
- Sock (3) was on the table. Andryusha took out a sock from pair 3 and put this pair into the wardrobe.

Thus, at most two socks were on the table at the same time.