



HOME TOP CATALOG CONTESTS GYM PROBLEMSET GROUPS RATING EDU API CALENDAR HELP RAYAN 🛣

PROBLEMS SUBMIT CODE MY SUBMISSIONS STATUS STANDINGS CUSTOM INVOCATION

B. Andryusha and Socks

time limit per test: 2 seconds memory limit per test: 256 megabytes

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 ($1 \le n \le 10^5$) — the number of sock pairs.

The second line contains 2n integers $x_1, x_2, ..., x_{2n}$ ($1 \le x_i \le n$), 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.

Examples



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.
- 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.

<u>ICPC Assiut University Training -</u> <u>Juniors Phase 1 Sheets-2022</u>

Public

Participant



→ Group Contests

- Juniors Phase 1 Practice #5 (Bitmask, Bitset, Bits)
- Juniors Phase 1 Practice #4 (Binary search , Two pointers)
- Juniors Phase 1 Practice #3 (STL 2)
- Juniors Phase 1 Practice #2 (STL 1)
- Juniors Phase 1 Practice #1 (Prefix sum , Frequency Array)

<u>Juniors Phase 1 Practice #1 (</u> <u>Prefix sum , Frequency Array)</u>

Finished

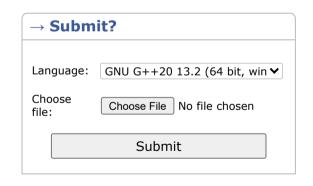
Practice



→ 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



→ Last submissions		
Submission	Time	Verdict
226977089	Oct/07/2023 11:21	Accepted
226976544	Oct/07/2023 11:17	Accepted