S. Cairo

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

If you have ever been to Cairo before you would know how busy and crowded it is!

Looking down from my balcony to one of the narrowest main streets in the city I saw some trucks having the numbers from 1 to n but they weren't in order.

The street was so narrow that no two trucks can pass each other and there was a side street which was also so narrow that no two trucks can pass each other.

The last truck that enters the side street must be the first to leave so that other trucks can leave.

Can you tell if it's possible to re-order the trucks in the main street with the help of the side street?

See the first sample and the notes for more clarification.

Input

The first line of the input contains one integer t $(1 \leq t \leq 1000)$ — The number of the test cases.

Each test case consists of two lines:

The first line of the test case contains one integer n $(1 \leq n \leq 1000)$ — The number of trucks in the main street.

The second line of the test case contains n distinct integers $(1 \leq a_i \leq n)$ — These numbers indicate the order in which the trucks arrive in the main street.

Output

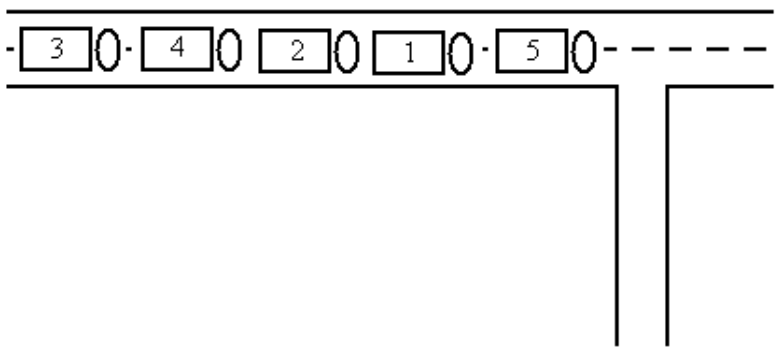
For each test case, print one line containing a single word "YES" if the trucks can be re-ordered in the main street with the help of the side street, otherwise print "NO".

Example

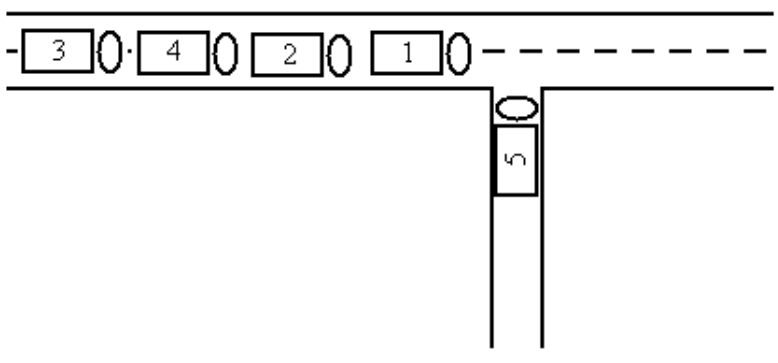
input	Copy
1 5 5 1 2 4 3	
output	**Copy**
YES	

Note

The sample input reflects the following situation:



The five trucks can be re-ordered in the following way:



ICPC Assiut University Training - Juniors Phase 1 Sheets-2022

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→ 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)

Juniors Phase 1 Practice #2 (STL 1)

Finished

Practice

→ About Time Scaling

This contest uses time limits scaling policy (depending on a programming language). The system automatically adjusts time limits by the following multipliers for some languages. Despite scaling (adjustment), the time limit cannot be more than 30 seconds. Read the details by the link.

→ 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

→ Submit?

Language: GNU G++20 13.2 (64 bit, win

Choose file: Choose File No file chosen

Submit

→ Last submissions

Submission	Time	Verdict
311705961	Mar/21/2025 22:52	Accepted
311705445	Mar/21/2025 22:47	Wrong answer on test 3
311704957	Mar/21/2025 22:42	Wrong answer on test 2