
Peak

Input file: **standard input**
Output file: **standard output**
Time limit: 1 second
Memory limit: 256 megabytes

A sequence of n integers a_1, a_2, \dots, a_n is called a peak, if and only if there exists exactly one integer k such that $1 < k < n$, and $a_i < a_{i+1}$ for all $1 \leq i < k$, and $a_{i-1} > a_i$ for all $k < i \leq n$.

Given an integer sequence, please tell us if it's a peak or not.

Input

There are multiple test cases. The first line of the input contains an integer T , indicating the number of test cases. For each test case:

The first line contains an integer n ($3 \leq n \leq 10^5$), indicating the length of the sequence.

The second line contains n integers a_1, a_2, \dots, a_n ($1 \leq a_i \leq 2 \times 10^9$), indicating the integer sequence.

It's guaranteed that the sum of n in all test cases won't exceed 10^6 .

Output

For each test case output one line. If the given integer sequence is a peak, output "Yes" (without quotes), otherwise output "No" (without quotes).

Example

standard input	standard output
7	Yes
5	No
1 5 7 3 2	No
5	No
1 2 1 2 1	Yes
4	No
1 2 3 4	No
4	
4 3 2 1	
3	
1 2 1	
3	
2 1 2	
5	
1 2 3 1 2	