Devu and an Array

Problem Code: **DEVARRAY**

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Read problems statements in Mandarin Chinese, Russian and Vietnamese as well.

Devu has an array **A** consisting of **N** positive integers. He would like to perform following operation on array.

- Pick some two elements **a, b** in the array (**a** could be same as **b**, but their corresponding indices in the array should not be same). Remove both the elements **a** and **b** and instead add a number **x** such that **x** lies between **min(a, b)** and **max(a, b)**, both inclusive, (i.e. **min(a, b) ≤ x ≤ max(a, b)**).

Now, as you know after applying the above operation **N - 1** times, Devu will end up with a single number in the array. He is wondering whether it is possible to do the operations in such a way that he ends up a number **t**.

He asks your help in answering **Q** such queries, each of them will contain an integer **t** and you have to tell whether it is possible to end up **t**.

Input

There is only one test case per test file.

First line of the input contains two space separated integers **N, Q** denoting number of elements in **A** and number of queries for which Devu asks your help, respectively

Second line contains **N** space separated integers denoting the content of array **A**.

Each of the next **Q** lines, will contain a single integer **t** corresponding to the query.

Output

Output **Q** lines, each containing "Yes" or "No" (both without quotes) corresponding to the answer of corresponding query.

Subtasks

Subtask #1 : 30 points

- $1 \le A_i \le 2$

Subtask #2 : 70 points

- $1 \le A_i \le 10^9$

Example

```
Input 1:
1 2
1
1
2

Output:
Yes
No

Input 2:
2 4
1 3
1
2
3
4

Output:
Yes
Yes
Yes
No
```

Explanation

In the first example, Devu can't apply any operation. So the final element in the array will be 1 itself.

In the second example, Devu can replace 1 and 3 with any of the numbers among 1, 2, 3. Hence final element of the array could be 1, 2 or 3.

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Editorial:	http://discuss.codechef.com/problems/DEVARRAY
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PIKE, ST, NICE, LUA, BASH, NEM, LISP sbcl, LISP clisp, SCM guile, JS, ERL, TCL, PERL6, TEXT, SCM chicken, CLOJ, FS

Comments

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