

Sad Trainer 2

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

The head trainer of Dec Course 2024, TheRaptor, is very sad as he is unable to quickly determine if a trainee is present in NUS. Make him happy by automating this process!

There are N students present in NUS, each student having a unique ID S_i . TheRaptor has Q queries. For each query, he wants to know if the student with the ID X_i is present. Output “Yes” if the student is present, and “No” if they are not present.

Input

The first line consists of 2 integers, N and Q .
The second line consists of N integers. The i^{th} number, S_i , representing the unique ID of the i^{th} student.
There will be Q subsequent lines. The i^{th} line consists of 1 integer, X_i , representing the ID of the student TheRaptor wants to find.

Output

The output should contain Q lines. The i^{th} line should contain either a “Yes” or “No”, reporting if the student with ID X_i is present.

Scoring

For all testcases, it is guaranteed that:

- $1 \leq N, Q \leq 2 * 10^5$
- $1 \leq S_i, X_i \leq 10^9$

| Subtask | Constraints | Points |
|---------|--------------------|--------|
| 1 | $N, Q = 1$ | 5 |
| 2 | $N, Q \leq 1\,000$ | 10 |
| 3 | $S_i < S_{i+1}$ | 25 |
| 4 | — | 60 |
| 5 | Sample Testcases | 0 |

Example

| standard input | standard output |
|----------------|-----------------|
| 4 3 | Yes |
| 1 9 3 5 | No |
| 3 | Yes |
| 10 | |
| 9 | |