An Animal Contest 1 P4 - Alpaca Arrays

Time limit: 0.75s **Memory limit:** 256M
Java: 2.0s
Python: 2.0s

Today, Tony the Alpaca needs some help with an array he found in the grass!

Tony gives you an array a of length N. He has Q queries to ask you about the array. Each query is of the form l_i, r_i, x_i, such that $l_i \leq r_i$.

Given these parameters, Tony wants to know if there are 2 **distinct** indices p and q between l_i and r_i inclusive such that $a_p \cdot a_q = x_i$.

Also, since Tony hates numbers that are the same, a_p **must not be equal to** a_q. To keep Tony happy, you must answer all his queries!

Constraints

$1 \leq N \leq 10^6$

$1 \leq Q \leq 5 \cdot 10^4$

$1 \leq a_i \leq 10^5$

$1 \leq l_i \leq r_i \leq N$

$1 \leq x_i \leq 10^5$

Subtask 1 [10%]

$1 \leq N, Q, a_i \leq 10^3$

Subtask 2 [90%]

No additional constraints.

Input Specification

The first line of input contains two integers N and Q.

The second line of input contains N integers a_i.

The final Q lines will each contain l_i, r_i, x_i, the parameters for the i^{th} query.

Output Specification

For each query, output `YES` if there are two **distinct** indices that multiply to x_i, and `NO` otherwise.

Sample Input 1

```
5 3
1 5 5 2 3
1 3 25
1 4 6
1 5 10
```

Sample Output 1

```
NO
NO
YES
```

Sample Input 2

```
6 4
2 4 2 4 2 4
1 3 8
1 6 5
1 2 1
1 5 16
```

Sample Output 2

```
YES
NO
NO
NO
```