



Strolling Game

Problem Statement

Oski is playing a strolling game on an infinite number line. He starts at position 0.

Given an array A of N integers representing stepping sizes, Oski faces Q independent challenges. In each challenge, he is given a range $[L, R]$ and a target position X . He can only choose stepping sizes from $A_L, A_{L+1}, \dots, A_R$ and move forward or backward as many times as he wants.

Determine whether Oski can reach the target position X starting from 0 for each challenge.

Input Format

The first line contains two integers N and Q ($1 \leq N, Q \leq 2 \times 10^5$), representing the number of stepping sizes and the number of challenges.

The second line contains N positive integers $A_1, A_2, \dots, A_N$ ($1 \leq A_i \leq 10^9$), representing the sizes of the steps.

Each of the next Q lines contains three integers L, R , and X ($1 \leq L \leq R \leq N$, $-10^{18} \leq X \leq 10^{18}$), where $[L, R]$ specifies the range of stepping sizes Oski can use, and X is the target position he needs to reach.

Output Format

For each challenge, output a single line containing `YES` if Oski can reach position X , or `NO` otherwise.

Sample Input

```
5 5
6 9 10 15 14
1 2 3
1 2 4
2 4 -5
3 4 0
5 5 28
```

Sample Output

```
YES
NO
YES
YES
YES
```

Explanation of Sample

In the first challenge, $A_1 = 6$ and $A_2 = 9$. Oski can reach 3 by taking one step backward of size 6 and one step forward of size 9 ($-6 + 9 = 3$), so the answer is `YES`.

In the second challenge, the target of 4 cannot be reached, so the answer is NO .