Problem G. Collatz Conjecture

Input file: `standard input`
Output file: `standard output`

Lynk is studying the Collatz conjecture recently. The Collatz conjecture is a mathematical conjecture that states the following:

- Start with any positive integer n. Then, perform the following steps:
  - If n is even, divide it by 2: $n \to \frac{n}{2}$.
  - If n is odd, multiply it by 3 and add 1: $n \to 3n + 1$.
- Repeat the process indefinitely. The conjecture claims that regardless of the initial value of n, the sequence will eventually reach 1.

Lynk quickly solved the Collatz conjecture and decided to study a variant. In this problem, there are two coprime parameters: A and B.

- Start with any positive integer n. Then, perform the following steps:
  - If n is a multiple of A, divide it by A: $n \to \frac{n}{A}$;
  - Otherwise, add B to it: $n \to n + B$.

He discovered that in this problem, not all numbers will eventually become 1. In his experiments, some numbers grow quickly in the first few steps, and some eventually enter a cycle. Based on his observations, he conjectured that certain integers satisfying specific conditions would return to themselves. For a given positive integer n, he sought to determine whether it would eventually return to itself after a finite number of steps.

Input

The input consists of multiple test cases. The first line contains an integer T ($1 \le T \le 10^5$), the number of test cases. For each test case:

The first line contains three integers A, B, n ($2 \le A \le 10^9, 1 \le B \le 10^9, 1 \le n \le 10^{18}$). It's guaranteed that A and B are coprime.

Output

For each test case:

- Output `Yes` if n will return to itself after a finite number of steps.
- Otherwise, output `No` in a single line.

Example

standard input	standard output
7 2 1 1 2 1 2 2 1 3 2 1 100 314 159 265 314 159 2653 314 159 26535	Yes Yes No No Yes Yes No

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