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Quinzè Concurs de Programació de la UPC - Semifinal (2017-06-29)

Given three integer numbers n, a and b, does there exist a natural t such that $a^t \equiv b \bmod n$?

Input

Input consists of the number of cases c, followed by c triples with n, a and b. You can assume $2 \leq n \leq 10^9$, $0 \leq a < n$, and $0 \leq b < n$. Additionally, assume $c \leq 200$ for the "hard private test cases".

Output

For each case, print "`YES`" or "`NO`" depending on whether $a^t \equiv b \bmod n$ has at least one solution $t \geq 0$ or not.

Sample input

```
7
2 1 0
7 3 6
8 3 6
6 0 5
6 0 1
1000000000 42424242 1
1000000000 123456789 987654320
```

Sample output

```
NO
YES
NO
NO
YES
YES
NO
```

Problem information

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