

---

## Ivan the Terrible

P36895\_en

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  $a^t \equiv b \pmod n$ ?

### 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  $a^t \equiv b \pmod n$  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

Author : Ivan Geffner

Generation : 2017-06-29 21:38:06

© Jutge.org, 2006–2017.

<http://jutge.org>