# Problem C: Pseudoprime numbers

Fermat's theorem states that for any prime number $p$ and for any integer $a > 1$, $a^p == a \pmod p$. That is, if we raise $a$ to the $p$th power and divide by $p$, the remainder is $a$. Some (but not very many) non-prime values of $p$, known as *base-a pseudoprimes*, have this property for some $a$. (And some, known as Carmichael Numbers, are base-a pseudoprimes for all $a$.)

Given $2 < p \le 1{,}000{,}000{,}000$ and $1 < a < p$, determine whether or not $p$ is a *base-a pseudoprime*.

Input contains several test cases followed by a line containing "0 0". Each test case consists of a line containing $p$ and $a$. For each test case, output "yes" if p is a base-a pseudoprime; otherwise output "no".

## Sample Input

```
3 2
10 3
341 2
341 3
1105 2
1105 3
0 0
```

## Output for Sample Input

```
no
no
yes
no
yes
yes
```

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