CODEFORCES β
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PROBLEMS   SUBMIT   STATUS   STANDINGS   CUSTOM TEST

A. Panoramix's Prediction

time limit per test: 2 seconds
memory limit per test: 256 megabytes
input: standard input
output: standard output

A prime number is a number which has exactly two distinct divisors: one and itself. For example, numbers 2, 7, 3 are prime, and 1, 6, 4 are not.

*The next prime number after X is the **smallest** prime number greater than X. For example, the next prime number after 2 is 3, and the next prime number after 3 is 5. Note that there is exactly one next prime number after each number. So 5 **is not** the next prime number for 2.*

One cold April morning Panoramix predicted that soon Kakofonix will break free from his straitjacket, and this will be a black day for the residents of the Gallic countryside.

Panoramix's prophecy tells that if some day Asterix and Obelix beat exactly X Roman soldiers, where X is a prime number, and next day they beat exactly y Roman soldiers, where y is **the next prime number** after X, then it's time to wait for Armageddon, for nothing can shut Kakofonix up while he sings his infernal song.

Yesterday the Gauls beat n Roman soldiers and it turned out that the number n was prime! Today their victims were a troop of m Romans ($m > n$). Determine whether the Gauls should wait for the black day after today's victory of Asterix and Obelix?

Input

The first and only input line contains two positive integers — n and m ($2 \le n < m \le 50$). It is guaranteed that n is prime.

Pretests contain all the cases with restrictions $2 \le n < m \le 4$.

Output

Print YES, if m is the next prime number after n, or NO otherwise.

Examples

input
3 5
output
YES

input
7 11
output
YES

input
7 9
output
NO

Codeforces Beta Round #69 (Div. 2 Only)
Finished

→ Virtual participation

Virtual contest is a way to take part in past contest, as close as possible to participation on time. It is supported only ACM-ICPC mode for virtual contests. If you've seen these problems, a virtual contest is not for you - solve these problems in the archive. If you just want to solve some problem from a contest, a virtual contest is not for you - solve this problem in the archive. Never use someone else's code, read the tutorials or communicate with other person during a virtual contest.

[Start virtual contest]

→ Problem tags

[brute force]   No tag edit access

→ Contest materials

- Announcement   ✕
- Tutorial #1   ✕
- Tutorial #2   ✕