

F. 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 ($2 \leq n < m \leq 50$). It is guaranteed that n is prime.

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

Output

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

→ Attention

The package for this problem was not updated by the problem writer or Codeforces administration after we've upgraded the judging servers. To adjust the time limit constraint, a solution execution time will be multiplied by 2. For example, if your solution works for 400 ms on judging servers, then the value 800 ms will be displayed and used to determine the verdict.

ICPC FCAI BSU Community 2024

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Examples

input	Copy
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3 5

output	Copy
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YES

input	Copy
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7 11

output	Copy
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YES

input	Copy
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7 9

output	Copy
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NO



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→ Group Contests

- Week 4 Sheet (General #1)
- Week #3 Contest
- Practice (Data types, Arithmetic operators, Conditions, Loops)
- Week 3 Sheet (Loops)
- Week #2 Contest
- Week 2 Sheet (Conditions)
- Week #1 Contest
- Week 1 Sheet (Data types, Arithmetic operators)

Week 4 Sheet (General #1)

Contest is running

5 days



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