

Problem C. C

Time limit 3000 ms
Mem limit 65536 kB
OS Windows

Given a number X . Determine if the number is **prime** or **not**

Note:

A **prime** number is a number that is greater than 1 and has only two factors which are 1 and **itself**.

In other words : **prime number divisible only by 1 and itself**.

Be careful that 1 is not prime .

The first few **prime** numbers are

2 3 5 7 11 13 17
19 23 29 31 37 41
43 47 53 59 61 67
71 73 79 83 89 97

Input

Only one line containing a number X ($2 \leq X \leq 10^5$).

Output

print "YES" if the number is **prime** and "NO" otherwise.

Sample 1

Input	Output
7	YES

Sample 2

Input	Output
15	NO

Note

First Example :

7 is prime because it is not divisible by **2,3,4,5,6**, and only divisible by 1 and itself, so the answer is **YES**.

Second Example :

15 not is prime because it is divisible by **3 ,5**, so the answer is **NO**.