One Prime

Input file:	`standard input`
Output file:	`standard output`
Time limit:	3 seconds
Memory limit:	64 megabytes

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

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.

Examples

standard input	standard output
7	YES
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**.