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## Prime checking

Input file:            **standard input**  
Output file:        **standard output**  
Time limit:         4 seconds  
Memory limit:      256 megabytes

Given a number  $N$ . Determine whether  $N$  is **Prime** or **Not**.

### Input

Only one line contains a number  $N$  ( $1 \leq N \leq 10^{12}$ ).

### Output

Print “**YES**” if  $N$  is **Prime** otherwise, print “**NO**”.

### Examples

| standard input | standard output |
|----------------|-----------------|
| 2              | YES             |
| 1007           | NO              |
| 12             | NO              |