Problem C. Next Prime

Time limit 2000 ms
Mem limit 1048576 kB

Problem Statement

Find the minimum prime number greater than or equal to X.

Notes

A prime number is an integer greater than 1 that cannot be evenly divided by any positive integer except 1 and itself.

For example, 2, 3, and 5 are prime numbers, while 4 and 6 are not.

Constraints

- $2 \leq X \leq 10^5$
- All values in input are integers.

Input

Input is given from Standard Input in the following format:

```
X
```

Output

Print the minimum prime number greater than or equal to X.

Sample 1

Input	Output
20	23

The minimum prime number greater than or equal to 20 is 23.

Sample 2

Input	Output
2	2

X itself can be a prime number.

Sample 3

Input	Output
99992	100003