Next prime number   **P50095_en**

Write a program that reads a sequence of prime numbers and, for each one, prints the next prime number.

Input

Input is all natural numbers, and consists of a sequence of prime numbers ended with a non-prime number.

Output

For every given prime number, print in a line the next prime number.

Sample input

```
7
2
107
12
```

Sample output

```
11
3
109
```

Problem information

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Generation : 2023-07-14 18:03:09