## Prime Again

## English

## Vietnamese

In this problem, you have to find the nearest prime number smaller than $N$. ( $3<=N<=2^{\wedge} 32$ )

## Input

The first line contains an integer $T$ specifying the number of test cases. ( $T<=10000$ )
T lines follow, each line contains an integer N .

## Output

For each test case, output the result on one line.

## Example

Input:
3
5
10
17

Output:
3
7
13

