

SPOJ Problem Set (classical)

3587. Prime Again

Problem code: PAGAIN

English

Vietnamese

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

Input

The first line contains an integer T specifying the number of test cases. ($T \leq 10000$)

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

Added by: Race with time

Date: 2008-12-25

Time limit: 5s

Source limit:50000B

Languages: All except: ERL TECS JS