

# play with prime numbers (II)

A prime number is a natural number greater than 1 that has no positive divisors other than 1 and itself .

we define here a new prime number called prime of primes number (POP) is a prime number that consist of other prime numbers less than this number .

**example :**

1013 consist of 101 and 3 and both are primes .

**notes :**

2003 is not POP because leading zero not allowed .

the POP number must contain more than or equal two primes , and overlapping not allowed .

## Input

The first line contains an integer T specifying the number of test cases. ( $T \leq 200$ ) followed by

T lines , each line contains an integer m number  $0 \leq m \leq 10^{18}$  .

## Output

For each test case print single line contain the first integer greater than or equal to m and is (POP) .

## Example

**Input:**

3

10

100

1000

**Output:**

23

113

1013

after solving this you can try <http://www.spoj.com/problems/POP3/>