Project Euler #3: Largest prime factor

This problem is a programming version of Problem 3 from projecteuler.net

The prime factors of 13195 are 5, 7, 13 and 29.

What is the largest prime factor of a given number N?

Input Format

First line contains T, the number of test cases. This is followed by T lines each containing an integer N.

Output Format

For each test case, display the largest prime factor of N.

Constraints

$1 \le T \le 10$
$10 \le N \le 10^{12}$

Sample Input

```
2
10
17
```

Sample Output

```
5
17
```