

# Project Euler #3: Largest prime factor

## Problem Statement

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

$$1 \leq T \leq 10$$

$$10 \leq N \leq 10^{12}$$

## Sample Input

```
2
10
17
```

## Sample Output

```
5
17
```