



# Project Euler #3: Largest prime factor

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Problem

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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  $N$ .

## Constraints

- $1 \leq T \leq 10$
- $10 \leq N \leq 10^{12}$

## Output Format

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

## Sample Input 0

```
2
10
17
```

## Sample Output 0

```
5
17
```

## Explanation 0

- Prime factors of **10** are **{2, 5}**, largest is **5**.
- Prime factor of **17** is **17** itself, hence largest is **17**.

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Max Score: 100

Difficulty: Easy

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