

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 .

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**.