#### TC2017 Análisis y Diseño de Algoritmos

Tar04 - Range Primes (Tutoring 24/7)

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Given a positive integer X, we want to find the shortest interval [A,B] with X contained within it, Where also, A and B are primes numbers.

### Input

The first line of input contains an integer M (1 <= M <= 100). M lines follow, each with a number X (1 < X <=  $10^5$ ).

#### **Output**

M lines containing A and B (1 < A <= B <=  $10^6$ ), B-A <=  $10^4$ .

## **Sample Input**

2

2

#### 4

# **Sample Output**

2 2

3 5