
Problem A. Justifying the Conjecture

Input file: **standard input**
Output file: **standard output**
Time limit: 1 second
Memory limit: 512 megabytes

The great mathematician DreamGrid proposes a conjecture, which states that:

- Every positive integer can be expressed as the sum of a prime number and a composite number.

DreamGrid can't justify his conjecture, so you are invited to write a program to verify it. Given a positive integer n , find a prime number x and a composite number y such that $x + y = n$.

A prime number is a natural number greater than 1 that cannot be formed by multiplying two smaller natural numbers. A natural number greater than 1 that is not prime is called a composite number. Note that 1 is neither a prime number nor a composite number.

Input

The input contains multiple cases. The first line of the input contains a single integer T ($1 \leq T \leq 10^5$), the number of cases.

For each case, the only line of the input contains a single integer n ($1 \leq n \leq 10^9$).

Output

For each case, print two integers x and y in a single line, where $1 \leq x, y < n$. If there are multiple valid answers, you may print any of them. If there is no valid answer, print the integer -1 instead.

Example

standard input	standard output
3	-1
4	2 4
6	3 4
7	