Pair of Primes

Given an integer n

(between 1 and 104) find two prime numbers (possibly same) $p1, p2$ such that $p1+p2=n$

In case there are multiple solutions, you can output **any** of them.

If there is no solution, then print `-1 -1` instead.

Input

First line contains an integer T

, denoting the number of testcases

First and only line of each testcase contains a single integer n

Output

For each testcase print two space separated primes, $p1, p2$

such that $p1+p2=n$

Constraints

$1 \le T \le 104$

$1 \le \sum \text{over all testcases} n \le 104$

Sample Input

```
3
4
5
1
```

Sample Output

```
2 2
2 3
-1 -1
```

Explanation

2, 3 are both primes numbers and 2 + 2 = 4, 2 + 3 = 5

1 is smaller than every prime number, and so there are no solution in this case, so we have to print `-1 -1` instead.