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- Fibonacci Factor
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Given a number K, find the smallest Fibonacci number that shares a common factor(other than 1) with it. A number is said to be a common factor of two numbers if it exactly divides both of them.

Output two separate numbers, F and D, where F is the smallest fibonacci number and D is the smallest number other than 1 which divides K and F.

Input Format

First line of the input contains an integer T, the number of testcases.
Then follows T lines, each containing an integer K.

Output Format

Output T lines, each containing the required answer for each corresponding testcase.

Sample Input

```
3
3
5
161
```

Sample Output

```
3 3
5 5
21 7
```

Explanation

There are three testcases. The first test case is 3, the smallest required fibonacci number 3. The second testcase is 5 and the third is 161. For 161 the smallest fibonacci number sharing a common divisor with it is 21 and the smallest number other than 1 dividing 161 and 7 is 7.

Constraints :

$1 \leq T \leq 5$

$2 \leq K \leq 1000,000$

The required fibonacci number is guranteed to be less than 10^{18} .

[Download sample testcases as zip](#)

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```
/* Enter your code here. Read input from STDIN. Print output to STDOUT */
```