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The problem statement has recently been changed. View the changes.

## A. Square Year

time limit per test: 1 second memory limit per test: 256 megabytes

One can notice the following remarkable mathematical fact: the number 2025 can be represented as  $(20+25)^2$ .

You are given a year represented by a string s, consisting of exactly 4 characters. Thus, leading zeros are allowed in the year representation. For example, "0001", "0185", "1375" are valid year representations. You need to express it in the form  $(a+b)^2$ , where a and b are **non-negative integers**, or determine that it is impossible.

For example, if s = "0001", you can choose a = 0, b = 1, and write the year as  $(0 + 1)^2 = 1$ .

## Input

The first line of the input contains a single integer t ( $1 \le t \le 10^4$ ) — the number of test cases.

The following lines describe the test cases.

The only line of each test case contains a string s, consisting of exactly 4 characters. Each character is a digit from 0 to 9.

## Output

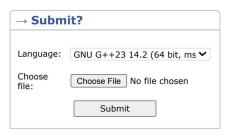
On a separate line for each test case, output:

- Two numbers a and b  $(a, b \ge 0)$  such that  $(a + b)^2 = s$ , if they exist. If there are multiple suitable pairs, you may output any of them.
- ullet The number -1 otherwise.

## Example







→ Last submissions		
Submission	Time	Verdict
321449116	May/26/2025 18:12	Accepted

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Server time: May/26/2025 22:13:06<sup>UTC+7</sup> (k1).
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