

Beauty Square

Math is fun, they said.

Two months ago, Mr. Oski was teaching his student about square number. Square number is a multiplication product of a number with the number itself. For example: 1 (1×1), 4 (2×2), 9 (3×3), ...

One day when he wrote down sequences of square number, he found something fun. What is the digit of the X position, and what is that square number.

Input

The first line contains an integer ($1 \leq T \leq 100$) denotes the number of cases. Each case contains an integer, ($1 \leq X \leq 2.000.000.000$).

Output

For each case, output the digit from the sequences and that square number in one line.

Sample Input

```
10
1
2
3
4
5
6
7
8
9
20
```

Sample Output

```
1 1
4 4
9 9
1 16
6 16
```

| | |
|---|-----|
| 2 | 25 |
| 5 | 25 |
| 3 | 36 |
| 6 | 36 |
| 2 | 121 |