

Foregone Solution (6pts, 10pts, 1pts)

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Competitive Submissions

You have not attempted this problem.

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Problem

Someone just won the Code Jam lottery, and we owe them **N** jamcoins! However, when we tried to print out an oversized check, we encountered a problem. The value of **N**, which is an integer, includes at least one digit that is a 4... and the 4 key on the keyboard of our oversized check printer is broken.

Fortunately, we have a workaround: we will send our winner two checks for positive integer amounts **A** and **B**, such that neither **A** nor **B** contains any digit that is a 4, and $A + B = N$. Please help us find any pair of values **A** and **B** that satisfy these conditions.

Input

The first line of the input gives the number of test cases, **T**. **T** test cases follow; each consists of one line with an integer **N**.

Output

For each test case, output one line containing `Case #x: A B`, where **x** is the test case number (starting from 1), and **A** and **B** are positive integers as described above.

It is guaranteed that at least one solution exists. If there are multiple solutions, you may output any one of them. (See "What if a test case has multiple correct solutions?" in the Competing section of the [FAQ](#). This information about multiple solutions will not be explicitly stated in the remainder of the 2019 contest.)

Limits

$1 \leq T \leq 100$.

Time limit: 10 seconds per test set.

Memory limit: 1GB.

At least one of the digits of **N** is a 4.

Test set 1 (Visible)

$1 < N < 10^5$.

Test set 2 (Visible)

$1 < N < 10^9$.

Solving the first two test sets for this problem should get you a long way toward advancing. The third test set is worth only 1 extra point, for extra fun and bragging rights!

Test set 3 (Hidden)

$1 < \mathbf{N} < 10^{100}$.

Sample

Input Output

```
3
4      Case #1: 2 2
940    Case #2: 852 88
4444   Case #3: 667 3777
```

In Sample Case #1, notice that A and B can be the same. The only other possible answers are 1^1 and 3^1 .