

2086 Scramble Sort

In this problem, you will be given a series of lists containing both words and numbers. The goal is to sort these lists in such a way that all words are in alphabetical order and all numbers are in numerical order. Furthermore, if the n -th element in the list is a number, it must remain a number, and if it is a word, it must remain a word.

Input

The input will contain multiple lists, one per line. Each element of the list will be specified by a comma followed by a space, and the list will be terminated by a period.

Words will contain only letters (and no two words will be duplicated), while numbers will contain only digits and the optional plus or minus sign at the very beginning and will fit into a 32-bit signed integer.

The input will be terminated by a line containing a single period.

Output

For each list in the input, output the scramble sorted list, separating each element of the list with a comma followed by a space, and ending the list with a period.

Sample Input

```
0.  
banana, strawberry, OrAnGe.  
Banana, StRaWbErRy, orange.  
10, 8, 6, 4, 2, 0.  
x, 30, -20, z, 1000, 1, Y.  
50, 7, kitten, puppy, 2, orangutan, 52, -100, bird, worm, 7, beetle.  
.
```

Sample Output

```
0.  
banana, OrAnGe, strawberry.  
Banana, orange, StRaWbErRy.  
0, 2, 4, 6, 8, 10.  
x, -20, 1, Y, 30, 1000, z.  
-100, 2, beetle, bird, 7, kitten, 7, 50, orangutan, puppy, 52, worm.
```