

630 Anagrams (II)

One of the preferred kinds of entertainment of people living in final stages of XX century is filling in the crosswords. Almost every newspaper and magazine has a column dedicated to entertainment but only amateurs have enough after solving one crossword. Real professionals require more than one crossword for a week. And it is so dull — just crosswords and crosswords — while so many other riddles are waiting out there. For those are special, dedicated magazines. There are also quite a few competitions to take part in, even reaching the level of World Championships. Anyway — a lot.

You were taken on by such a professional for whom riddle solving competing is just a job. He had a brilliant idea to use a computer in work not just to play games. Somehow anagrams found themselves first in the line. You are to write a program which searches for anagrams of given words, using a given vocabulary, tediously filled with new words by yours employer.

Input

The structure of input data is given below:

```
< number of words in vocabulary >
< word 1 >
.....
< word N >
< test word 1 >
.....
< test word k >
END
```

< number of words in vocabulary > is an integer number $N < 1000$. *< word 1 >* up to *< word N >* are words from the vocabulary. *< test word 1 >* up to *< test word k >* are the words to find anagrams for. All words are lowercase (word 'END' means end of data — it is **NOT** a test word). You can assume all words are not longer than 20 characters.

Output

For each *< testword >* list the found anagrams in the following way:

```
Anagrams for: < test word >
< No >) < anagram >
.....
```

< No > should be printed on 3 chars.

In case of failing to find any anagrams your output should look like this:

```
Anagrams for: < test word >
No anagrams for: <test word>
```

Print a blank line between datasets.

Sample Input

```
8
atol
```

```
lato
microphotographics
rata
rola
tara
tola
pies
tola
kola
aatr
photomicrographics
END
```

Sample Output

Anagrams for: tola

- 1) atol
- 2) lato
- 3) tola

Anagrams for: kola

No anagrams for: kola

Anagrams for: aatr

- 1) rata
- 2) tara

Anagrams for: photomicrographics

- 1) microphotographics