

Problem 3—Word Jumble

Professor Plum likes to work the “JUMBLE” word-puzzle in the daily newspaper. Each puzzle consists of several 5-to-7 letter words which have been scrambled. The goal of the puzzle is to unscramble the words.

On rare occasions Professor Plum gets stumped by a word or two on a puzzle. He wants you to write a program that takes in a list of scrambled words and for each one produce a list of matching dictionary words.

Input Format

The first line contains a positive integer n specifying the number of scrambled words. The following n lines contains one scrambled word per line. The next line contains a positive integer d specifying the number of words in the dictionary. The remaining d lines contain one dictionary word in alphabetical order.

Output Format

The output will consist of n lines corresponding with each scrambled word. Each line will start with the scrambled word followed by a colon (“:”), then each matching dictionary word preceded by a space. The dictionary words found should be in alphabetical order. If no matches found, then the string “ no match in dictionary” should be printed.

Input Sample

```
6
uzzyf
xyz
sternae
mmocno
risstf
oswdr
127142
a
aah
aahed
aahing
aahs
aal
aalii
aaliis
aals
aardvark
aardvarks
aardwolf
.
.
zymurgies
zymurgy
zyzzyva
zyzzyvas
```

Output Sample

```
uzzyf: fuzzy
xyz: no match in dictionary
sternae: earnest eastern nearest
mmocno: common
risstf: firsts
oswdr: sword words
```