Find a Word

We define a word as a non-empty maximum sequence of characters that can contain only lowercase letters, uppercase letters, digits and underscores '_' (ASCII value 95). Maximum sequence means that the word has to be immediately preceeded by a character not allowed to occur in a word or by the left boundary of the sentence, and it has to be immediately followed by a character not allowed to occur in a word or by the right boundary of the sentence.

Given N sentences and T words, for each of these words, find the number of its occurences in all the N sentences.

Input Format

In the first line there is a single integer N. Each of the next N lines contains a single sentence. After that, in the next line, there is a single integer T denoting the number of words. In the i-th of the next T lines, there is a single word denoting the i-th word for which, you have to find the number of its occurences in the sentences.

Constraints

$1 \le N \le 100$
$1 \le T \le 10$

Output format

For every word, print the number of occurrences of the word in all the N sentences listed.

Sample Input

```
1
foo bar (foo) bar foo-bar foo_bar foo'bar bar-foo bar, foo.
1
foo
```

Sample Output

```
6
```

Explanation

- foo is the first word

- (foo) is preceeded by '(' and followed by ')', so it's the second word.

- foo-bar is considered as two words and 'foo' is the first of them. It is preceeded by a space and followed by a hyphen '-'

- bar-foo also contains foo for the same reason mentioned above

- foo_bar is a single single word and hence foo in it is not counted

- foo'bar is considered as two words and 'foo' is the first of them. It is preceeded by a space and followed by a apostrophe "'"

- foo. as it is preceeded by a space and followed by a dot'.'