

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 preceded 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 occurrences 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 occurrences in the sentences.

Constraints

$$1 \leq N \leq 100$$

$$1 \leq T \leq 10$$

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