Find A Substring

A word made of a series of letters (lower or upper) or numerics or an underscore `_` (ascii value 95).

We define a substring as follows.

- It is a part of a word.
- The given substring must be preceded and succeeded by letters or numerics or an underscore.

A word will be surrounded by 1 or more occurrences of non-letter, non-numeric and non-underscore (not an underscore) characters - or the beginning or end of a line on one side.

```
<non letter, non-numeral ,non-underscore ><letters, numerals and underscore><non letter, non numerals, non underscore>
```

Given a sentence, can you find the total number of occurrences of the substring?

Input Format

First line is an integer N, N lines follow. Each line is a sentence as per the above definition.
N_{th} sentence is immediately followed by an integer T, T lines follow.
Each line has a substring on which you need to perform the prescribed query which returns the total number of occurrences of the substring.

Constraints

1 <= N <= 100
1 <= T <= 10

Output format

For every word, print the total number of occurrences of the substring in all of the N sentences provided as input.

Sample Input

```
1
existing pessimist optimist this is
1
is
```

Sample Output

```
3
```

Explanation

- 'existing' has 'is' as a substring and is both preceded and succeeded by words as defined above.
- 'pessimist' has 'is' as a substring for the same argument as above.
- 'optimist' has 'is' as a substring for the same argument as above.
- 'this' though has 'is' as a substring is only preceded by a word and is succeeded by a [blank space] which is non-letter, non-numeric and non-underscore
- 'is' is not included as it is preceded and succeeded by a [blank space] which is non-letter, non-numeric

and non-underscore.