

# Word Power

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Farmer John wants to evaluate the quality of the names of his  $N$  ( $1 \leq N \leq 1000$ ) cows. Each name is a string with no more than 1000 characters, all of which are non-blank.

He has created a set of  $M$  ( $1 \leq M \leq 100$ ) 'good' strings (no longer than 30 characters and fully non-blank). If the sequence letters of a cow's name contains the letters of a 'good' string in the correct order as a subsequence (i.e., not necessarily all next to each other), the cow's name gets 1 quality point.

All strings is case-insensitive, i.e., capital letters and lower case letters are considered equivalent. For example, the name "Bessie" contains the letters of "Be", "sl", "EE", and "Es" in the correct order, but not "is" or "eB". Help Farmer John determine the number of quality points in each of his cow's names.

## Input

- Line 1: Two space-separated integers:  $N$  and  $M$
- Lines 2.. $N+1$ : Line  $i+1$  contains a string that is the name of the  $i$ th cow
- Lines  $N+2$ .. $N+M+1$ : Line  $N+i+1$  contains the  $i$ th good string

## Output

- Lines 1.. $N+1$ : Line  $i+1$  contains the number of quality points of the  $i$ th name

## Example

### Input:

```
5 3
Bessie
Jonathan
Montgomery
Alicia
Angola
se
nGo
Ont
```

There are 5 cows, and their names are "Bessie", "Jonathan", "Montgomery", "Alicia", and "Angola". The 3 good strings are "se", "nGo", and "Ont".

### Output:

```
1
1
2
0
1
```

"Bessie" contains "se", "Jonathan" contains "Ont", "Montgomery" contains both "nGo" and "Ont", Alicia contains none of the good strings, and "Angola" contains "nGo".

