

## 13186 Toby and the quaseEquals strings

Tobby always enjoys playing with strings, and now he brings to you a nice problem with them. Of course, since Tobby is a lazy dog, he has not solved it yet and hopes that you can solve it for him.

Tobby got a set of strings  $S$  of size  $N$  (where every string has the same length  $L$ ). He also has  $Q$  queries.

For each query a string  $A$  of size  $L$  is given and Tobby wants to know how many strings in  $S$  are quaseEquals to  $A$  for every  $i$  ( $1 \leq i \leq L$ ).

Two strings are quaseEquals to one another for an index  $i$  if they are equal after deleting the  $i$ -th character from both strings.

### Input

The input consists of several test cases, read until the end of file (EOF). In the first line of each test case there are three integers:  $N, Q, L$  ( $1 \leq N, Q, L \leq 10^5$ ). The next  $N$  lines contain the strings in  $S$ , all of length  $L$ . Finally  $Q$  strings of length  $L$  are given, those are the queries. It is guaranteed that ( $1 \leq N * L \leq 100000$ ) and ( $1 \leq Q * L \leq 100000$ ) and that all strings in the input contain only english lowercase letters (a..z).

### Output

For each query print the number of strings in  $S$  that are quaseEquals to the string in the query for every position  $1 \leq i \leq L$ .

### Explanation:

For the first sample, if the character  $i = 1$  is removed, then  $S = \{\text{ab}, \text{ba}, \text{aa}\}$  and  $A = \{\text{aa}\}$  and we got 1 pair of quaseEquals strings. If the character  $i = 2$  is removed, then  $S = \{\text{ab}, \text{aa}, \text{aa}\}$  and  $A = \{\text{aa}\}$  and we got 2 pairs of quaseEquals strings. If the character  $i = 3$  is removed, then  $S = \{\text{aa}, \text{ab}, \text{aa}\}$  and  $A = \{\text{aa}\}$  and we got 2 pairs of quaseEquals strings, so our answer is  $1 + 2 + 2 = 5$ .

### Sample Input

```
3 1 3
aab
aba
aaa
aaa
```

### Sample Output

```
5
```