

# ADAINDEX - Ada and Indexing

#trie-1

Ada the Ladybug has many things to do and almost no time. She wants to to save time while searching for something so she have decided to make a search engine.

She has many words in her TODO list. It costs her precious time to find out, whether a word is in it so she seeks your help. You will get list and some queries. You will be asked, to find out how many words in TODO list have a word as **prefix**.

## Input

The first line contains **N**, **Q**: the number words in TODO list and number of queries.

**N** lines follow, with words (of TODO list) consisting of lowercase letters. The sum of their lengths won't be greater than  $10^6$

**Q** lines follow, with words (queries) consisting of lowercase letters. The sum of their lengths won't be greater than  $10^6$

## Output

For each query print the number of words in TODO list which have actual word as prefix.

## Example Input

```
12 6
bulldog
dog
dogged
doggedly
doggerel
dogma
dogmatic
dogmatism
dogs
catastroph
catastroph
doctor
cat
dog
dogg
do
doctrinography
dogge
```

## Example Output

```
2
8
3
9
0
3
```

Submit solution!