3249 Give me a break!

Did you ever notice that some words in English can be broken into two or more words? Take for example the word "Sunday" which can be broken to "*sun*" and "*day*". Other examples include: "airbag" (*air.bag*), "adjust" (*ad.just*), and "weathering" (*we.at.he.ring*).

Write a program that reads a dictionary of words, and prints the number of words in that dictionary that can be broken into two or more sub-words (all within the same dictionary) where no sub-word is shorter than 3 letters. Case is insignificant.

Input

Your program will be tested on one or more test cases. The dictionary of each test case will be given as a list of words with each word specified on a separate line.

The end of a dictionary is indicated with a line made of '-' characters except the dictionary of the last test case which will end with a line made of '+' characters.

Each dictionary has at least one word but no more than 50,000 words. Each word is at least one character long but no longer than 16 characters. All words will be made of alphabetic characters only.

Output

For each dictionary, write the result on a separate line.

Sample Input

```
bag
sun
day
moon
Sunday
Monday
airbag
MoonBag
----
straw
black
blue
berry
raspberry
strawberry
blueberry
blackberry
cranberry
HalleBerry
+++
```

Sample Output

```
2
3
```