Kamil

Some kids cannot pronounce all letters, some of them they sometimes pronounce correctly and sometimes incorrectly. Kamil sometimes says T instead of K, but he never says K instead of T. Similarly he sometimes says D instead of G. Instead of R he sometimes says L and sometimes F. Of course it happens that he pronounces the letter correctly. Kamil's father always thinks how many words can mean the word spoken by his son (it doesn't matter if they are real English words).

Task

Write a program which

- reads from standard input the words spoken by Kamil
- counts how many different words can that mean
- writes the outcome on standard output

Input

Ten test cases (given one under another, you have to process all!). Every test case is a single line - a word spoken by Kamil. Only 26 capital leters are used. The length of the word is at most 20.

Output

For every testcase write an integer in a single line with a single integer, denoting the number of words which Kamil's word can mean.

Score

The score awarded to your program is the number of bytes the source code you submit. The fewer points you score, the better. Submissions are not allowed to exceed 256 bytes.

Remark. It may turn out impossible to solve this problem in some languages.

Example

Input:
FILIPEK
[and 9 test cases more]

Output:
4
[and 9 test cases more]