1995 East-Central Regionals

ACM International Collegiate Programming Contest

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Problem F - Word Index

Encoding schemes are often used in situations requiring encryption or information storage/transmission economy. Here, we develop a simple encoding scheme that encodes particular types of words with five or fewer (lower case) letters as integers.

Consider the English alphabet {a,b,c,...z}. Using this alphabet, a set of *valid* words are to be formed that are in a strict lexicographic order. In this set of *valid* words, the successive letters of a word are in a strictly ascending order; that is, later letters in a *valid* word are always *after* previous letters with respect to their positions in the alphabet list {a,b,c...,z}. For example,

abc aep gwz

are all *valid* three-letter words, whereas

aab are cat

are not.

For each *valid* word associate an integer which gives the position of the word in the alphabetized list of words. That is:

a → 1
b → 2
.
.
z → 26
ab → 27
ac → 28
.
.
az → 51
bc → 52
.
.
vwxyz → 83681

Your program is to read a series of input lines. Each input line will have a single word on it, that will be from one to five letters long. For each word read, if the word is *invalid* give the number 0. If the word read is *valid,* give the word's position index in the above alphabetical list.

INPUT

The input consists of a series of single words, one per line. The words are at least one letter long and no more that five letters. Only the lower case alphabetic {a,b,...,z} characters will be used as input. The first letter of a word will appear as the first character on an input line.

The input will be terminated by end-of-file.

OUTPUT

The output is a single integer, greater than or equal to zero (0) and less than or equal 83681. The first digit of an output value should be the first character on a line. *Note: This may not be a default-format.* There is one line of output for each input line.

EXAMPLE

Input File	Output File
z	26
a	1
cat	0
vwxyz	83681