Consider a sequence of words formed by letters. The words are separated with dashes, which can appear also at the beginning and in the end of the sequence. The sequence ends with a dot.

Your task is to write a program that prints the number of short words (less than five letters), medium (between five and nine letters), and long (more than nine letters).

Input

The input consists of a line with letters and dashes, finished with a dot.

Output

Your program must print a line with the number of short, medium and long words separated by commas.

Observation

Using strings is not allowed in this problem.

Sample input 1
.
Sample output 1
0,0,0

Sample input 2
-----abcde-. 
Sample output 2
0,1,0 

Sample input 3
aaabbbccc.
Sample output 3
0,1,0

Sample input 4
-----------------. 
Sample output 4
0,0,0

Sample input 5
 easy--to-solve-problem----. 
Sample output 5
2,2,0

Sample input 6
-be-careful---repeated-dashes-and-final-word-. 
Sample output 6
3,4,0

Problem information

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