American Computer Science League

2020 Finals ● Program 3: Syllables ● Intermediate/Senior Divisions

PROBLEM: *Given a word, separate it into syllables following the ACSL rules.*

Words consist of *vowels* (a, e, i, o, and u) and *consonants* (all other letters). The letter y is always considered a consonant. There are *combo consonants* (ch, ck, ph, sh, th, wh, wr) that are treated as a single consonant and never separated. A word may also have a *prefix* (co, de, dis, pre, re, un) and/or a *suffix* (age, ful, ing, less, ment).

A *syllable* is a unit of pronunciation having one vowel sound, with or without surrounding consonants, forming the whole or a part of a word. For example, there are two syllables in 'cater': ca|ter. There are three syllables in 'inferno': in|fer|no.

To separate a word into its syllables, use the following rules. These rules are pretty similar to English, but not the same. Follow these rules and these rules only!

Separate the word into syllables using the following 4 rules:

1. Separate the prefix, if any. For example, "pre|paid" and "re|port".
2. Separate the suffix, if any. For example, "end|less" and "help|ing".
3. After removing the prefix and suffix, find any single consonants and split before the consonant. For example, "o|pen" , "pa|per", and "o|ther". Note there must be one or more vowels both before and after the consonant. Combo-consonants (e.g., the "th") are considered as a single consonant.
4. After removing the prefix and suffix, find any double consonants and split in the middle. For example, "hap|pen" , "bas|ket", "kick|ball", and "back|wraps".

We guarantee that there will be no more than 2 consonants in a row. The words "kickball" and "backwraps" are legal because the "th" and the "ck" are combo-consonants, but "string" is not valid.

INPUT: There will be 10 inputs. Each input is a word, a string of lowercase letters.

OUTPUT: For each input, break the word into syllables by inserting a '|' between syllables. Then print the sum of the location(s) of each '|' starting with position 0 for the first character in the string. For all one-syllable words, the answer should be 0.

SAMPLE INPUT:	**SAMPLE OUTPUT: (print the number only!)**	
choice	1. 4	`choi|ce`
rewriting	2. 9	`re|writ|ing`
seashell	3. 3	`sea|shell`

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TEST DATA

TEST INPUT:

blackberries
unimaginable
antidisestablishment
trigonometric
dealphabetized
disintegration
irregardless
tablespoonful
prelanguage
cobushwhacker

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PROBLEM（问题）：给定一个英文单词，按照下列ACSL规则，将单词分成音节。

单词包括元音(a, e, i, o, u) 和辅音(除元音外的其他字母)。字母y永远被视为一个辅音。组合辅音(ch, ck, ph, sh, th, wh, wr) 应被视作单辅音，不应将其分开。一个单词可能既有一个前缀(co, de, dis, pre, re, un) 也有一个后缀(age, ful, ing, less, ment)，也有可能只有前缀，或者只有后缀。

一个音节是一个发音单元，且一定有一个元音，可能有辅音，由一个单词的整体或部分组成。例如，"cater"中有两个音节：ca | ter。"inferno"中有三个音节：in | fer | no。

请使用以下规则，将英文单词的音节分隔开。这些规则与英语非常相似，但并不完全相同。遵循下列规则，且仅遵循这些规则！

按照下列4个规则，将单词按照音节分隔开。

1. 将前缀（如果有的话）分隔开来。例如，“pre|paid”和“re|port”。
2. 将后缀（如果有的话）分隔开来。例如，“end|less”和“help|ing”。
3. 除了前缀和后缀，找到任何单辅音并在其之前进行分隔。例如，“o|pen”，“pa|per”和“o|ther”。请注意，辅音前后必须有一个或多个元音。组合辅音（例如“th”）被视为单辅音（不可分隔）。
4. 除了前缀和后缀，找到任何两个连续出现的辅音并从这两个辅音中间分隔。例如，“hap|pen”，“bas|ket”，“kick|ball”和“back|wraps”。

测试题中保证不会有超过2个连续的辅音。“kickball”和“backwraps”是有效的，因为其中“th”和“ck”是组合辅音（被视作为单辅音），但“string”是无效数据。

INPUT（输入）：将会有10个输入。每一个输入都是一个单词，是一串小写的字母。

OUTPUT（输出）：“对于每个输入，请在每个音节之间插入一个分隔符“|”将单词的音节隔开。然后从字符串的第一个字符位置0开始打印每个“|”位置的总和。对于所有单音节单词，输出答案应为0。

SAMPLE INPUT 示例输入:

choice
rewriting
seashell

SAMPLE OUTPUT 示例输出: **(只需输出数字)**

1. 4 `choi|ce`
2. 9 `re|writ|ing`
3. 3 `sea|shell`

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