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

TEST OUTPUT (the word shows how the answer is found; it should not be printed)

1. 14 black|ber|ries
2. 37 un|i|ma|gi|nab|le
3. 64 an|ti|di|ses|tab|lish|ment
4. 31 tri|go|no|met|ric
5. 43 de|al|pha|be|ti|zed
6. 32 dis|in|teg|ra|tion
7. 17 ir|re|gard|less
8. 22 tab|les|poon|ful
9. 20 pre|lan|gu|age
10. 20 co|bush|wha|cker