

Problem E. Haiku

Time limit: 1 second
Memory limit: 512 megabytes

Haiku — is a type of short form poetry originally from Japan. Traditional haiku consist of three phrases that contains 17 phonetic units. First 5 of them are on the first line, next 7 of them are on the second line, and the last 5 on the last line.

You have found a big text about haiku. However, there were no line breaks in it. You have already broken the text into words and now you want to find all potential haiku in it: segments of consecutive words that can form a haiku.

For simplicity, the following conventions are adopted in this problem. A word is a sequence of lowercase letters of the English alphabet. A phonetic unit is a sequence of consecutive vowels. Vowels are the letters "a", "e", "i", "o" and "u". For example, the word "contest" contains two phonetic units, and the word "beautiful" contains three of them.

The problem is to find the number of segments of consecutive words, which, if two line breaks are added to them after any two words, would form a haiku.

For example, there are two potential haiku in the text "if the real beauties of sunset in a suspended moment call for the thunder forever":

the real beauties of
sunset in a suspended
moment call for the

and

beauties of sunset
in a suspended moment
call for the thunder

Input

The first line of input contains integer n — the number of words in text that you have found ($1 \leq n \leq 10^5$). The next n lines contain words of lowercase letters. The length of each word does not exceed 20. It is guaranteed that each word contains at least one phonetic unit.

Output

Output the number of potential haiku in this text.

Example

standard input	standard output
15 if the real beauties of sunset in a suspended moment call for the thunder forever	2