

6

Vowels ratio

5 points

Introduction

We want to explore if the frequency of consonants in a text is proportional to the frequency of vowels and if this frequency is something that can be characterized. To do so we will evaluate different texts and will compute the ratio of vowels versus consonants. Does this follow a pattern that can be generalized?

Input

The input of the program will be a text to calculate the ratio, ending with the '#' sign. The text will always be shorter than 2000 characters.

Example 1 (*The Iliad Book X, Homer, 800 BC*)

Now the other princes of the Achaeans slept soundly the whole night through, but Agamemnon son of Atreus was troubled, so that he could get no rest. As when fair Juno's lord flashes his lightning in token of great rain or hail or snow when the snow-flakes whiten the ground, or again as a sign that he will open the wide jaws of hungry war, even so did Agamemnon heave many a heavy sigh, for his soul trembled within him. When he looked upon the plain of Troy he marvelled at the many watchfires burning in front of Ilius, and at the sound of pipes and flutes and of the hum of men, but when presently he turned towards the ships and hosts of the Achaeans, he tore his hair by handfuls before Jove on high, and groaned aloud for the very disquietness of his soul. In the end he deemed it best to go at once to Nestor son of Neleus, and see if between them they could find any way of the Achaeans from destruction. He therefore rose, put on his shirt, bound his sandals about his comely feet, flung the skin of a huge tawny lion over his shoulders- a skin that reached his feet- and took his spear in his hand. #

Example 2 (*The lord of the rings, J.R.R Tolkien, 1955*)

I don't like anything here at all. said Frodo, step or stone, breath or bone. Earth, air and water all seem accursed. But so our path is laid. Yes, that's so, said Sam, And we shouldn't be here at all, if we'd known more about it before we started. But I suppose it's often that way. The brave things in the old tales and songs, Mr. Frodo, adventures, as I used to call them. I used to think that they were things the wonderful folk of the stories went out and looked for, because they wanted them, because they were exciting and life was a bit dull, a kind of a sport, as you might say. But that's not the way of it with the tales that really mattered, or the ones that stay in the mind. Folk seem to have been just landed in them, usually their paths were laid that way, as you put it. But I expect they had lots of chances, like us, of turning back, only they didn't. And if they had, we shouldn't know, because they'd have been forgotten. We hear about those as just went on, and not all to a good end, mind you; at least not to what folk inside a story and not

outside it call a good end. You know, coming home, and finding things all right, though not quite the same; like old Mr Bilbo. But those aren't always the best tales to hear, though they may be the best tales to get landed in! I wonder what sort of a tale we've fallen into? I wonder, said Frodo, But I don't know. And that's the way of a real tale. Take any one that you're fond of. You may know, or guess, what kind of a tale it is, happy-ending or sad-ending, but the people in it don't know. And you don't want them to. #

Output

The program must output: the number of consonants, the number of vowels and the ratio of between them (vowels / consonants). If the ratio cannot be computed, the word "*Infinite*" should be written instead.

Example 1

Consonants: 546
Vowels: 327
Ratio: 0.598

Example 2

Consonants: 742
Vowels: 454
Ratio: 0.612