

## Problems with LLMs:

Due to the fact that OpenAI's LLMs process text in tokens they are susceptible to errors in the output. For example in char counting tasks, just like in this case.

### The mistake:

GPT-5 failed to accurately count vowels and consonants in the given text, producing very different results from an otherwise kind of straightforward algorithmic approach.

### My guess / possible causes:

- Token based processing LLMs don't recognize individual characters but rather word like units (aka. tokens), making exact character counting harder.
- These models aren't trained for such tasks, this is a chat model and its focus isn't primarily an "exact character counting task" leading to answers that are close enough but not exact solutions.
- In this case the model tried to normalize the text making it lowercase and removing numbers, the more steps there are, the more likely an error would occur.
- Context could have had a huge impact on the model's solution, longer texts with mixed details (numbers, punctuation, words) could cause it to misallocate attention across different details

### Notes:

- This illustrates a fundamental limitation of token-based architectures for precise character operations.
- The difference was substantial (31 vs 36 vowels) which means this is not a small rounding error but a rather large miscalculation.
- Simple python scripts should easily outperform big LLMs for these kinds of tasks.
- The solution should have been 36 vowels, 67 consonants and the final answer should be ~11.1667

### Prompt:

„I want to tow a car with a rope the length of 326cm, the rope has the width of 22,56mm and the red Ford mondeo i want to get home is exactly 187570 dkg what is the rate of two time the consonants to third of the vowels in the description?"

I want to tow a car with a rope the length of 326cm, the rope has the width of 22,56mm and the red Ford mondeo i want to get home is exactly 187570 dkg what is the rate of two time the consonants to third of the vowels in the description?

Alright, let's unpack your question carefully. You want:

"the rate of two times the consonants to third of the vowels in the description"

Let's find that step-by-step from your description:

**Step 1: The full description**

"I want to tow a car with a rope the length of 326cm, the rope has the width of 22,56mm and the red Ford mondeo i want to get home is exactly 187570 dkg"

**Step 2: Count letters only (ignore numbers, spaces, punctuation)**

We'll only count letters (A–Z) and classify them as vowels (A, E, I, O, U) or consonants.

Let's compute:

Text (letters only, lowercase):

```
nginx iwantotowacarwitharope thelengthofctheropehasthewidthofmmandtheredfordmondeo iwanttogethomeisexac
```

Now, count:

- Vowels (a, e, i, o, u):  
Let's tally manually (I'll skip punctuation and spacing):  
i(1), a(2), o(3), o(4), a(5), i(6), a(7), o(8), e(9), e(10), o(11), e(12), a(13), e(14), i(15), o(16), a(17), e(18), e(19), o(20), e(21), o(22), i(23), a(24), o(25), e(26), e(27), o(28), i(29), e(30), a(31)
- ✓ Vowels = 31
- Total letters: 119
- ✓ Consonants = 119 - 31 = 88

**Step 3: Apply your rate formula**

"two times the consonants to third of the vowels"

That means:

$$\text{Rate} = \frac{2 \times \text{Consonants}}{\frac{1}{3} \times \text{Vowels}} = \frac{2C}{V/3} = 6 \times \frac{C}{V}$$

Substitute  $C = 88$ ,  $V = 31$ :

$$\text{Rate} = 6 \times \frac{88}{31} = 6 \times 2.8387 = 17.03$$

✓ **Final Answer:**  
The rate is approximately 17.03.

Would you like me to show the exact letter breakdown (so you can verify the counts)?

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Model: GPT-5  
Source: -----