Challenge: Electro-equivalence

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Difficulty: Medium

Submission Constraints:

- Time limit per test: **0.005 seconds**
- Memory limit per test: **Default (65 MB)**

Description

Welcome to the frontier of the Electro-equivalence challenge, where resistances reign supreme! Picture this: a tangled network of resistances, that can be connected in various ways, wrapped inside special functions.

- **Parallels** [ ]: Here, the placed resistances, boosts the circuit's strength in a parallel way.
- **Series** ( ): This is where resistances march in a straight line, each one adding its strength in a series way.
- **Burned** { }: These are the fallen resistances, lost to the flames. They're like ghosts of circuits past, as they don't affect our network no matter how much they weigh.

Our western gang needs to bypass this reign supreme, as they simply need to calculate the equivalent resistance of the different networks they encounter throughout their trip!

To navigate this wild frontier, we've got our well-known equations:

❖ For series connections, this is the rule to get the equivalent resistance value:

$$R_{eq} = R_1 + R_2 + \ldots + R_n$$

- ❖ For parallel connections, to get the equivalent resistance value:

$$\frac{1}{R_{eq}} = \frac{1}{R_1} + \frac{1}{R_2} + \ldots + \frac{1}{R_n}$$

Now, we're ready to tackle any challenge thrown in our way. Let's rustle up those resistance values and find out what lies beyond the horizon!

Inputs

Here's what you've got:

- A single string that has a '**,**' separated resistance values that can be written inside a **()**, **[]**, **{}** or a mix of the three with each one explained above!

Outputs

- The equivalent resistance float value with two digits fixed.

Constraints

- No negative values on the string.
- All units are in ohm, no need for conversion.

Examples

Input	Output
(5, 8, 9, [10, {15, 60}, 24])	29.06
(10, 5, 16, [(16, 14), [(15, 10), 5]])	2.10
(10, 24, [15, 26, (12, 94, 26, {16, 94}), 16, [10, 5]])	36.10