

Indenting Brackets

Assignment 2

Computer Programming

Due date: 10th October, 2019

Description: You are given a string of brackets and you have to indent them, just like you indent code in C. Every new opening bracket is a new level of indentation. For example, the bracket sequence `(())()` is indented as :

```
(  
  (  
  )  
)  
(  
)
```

This has 2 levels of indentation, because the deepest level of indentation is 2.

Input

First line contains an integer T , the number of test cases. For each test case, you're given a string S of parentheses.

Output

Print the deepest level of indentation.

Constraints

$$1 \leq T \leq 50$$

$$1 \leq |S| \leq 5 * 10^5$$

Sample Test Case

Input	Output
2	2
<code>(())()</code>	4
<code>(((((((()))))))()</code>	