

## A. Regular Bracket Sequence

time limit per test: 5 seconds

memory limit per test: 256 megabytes

A bracket sequence is called regular if it is possible to obtain correct arithmetic expression by inserting characters «+» and «1» into this sequence. For example, sequences « ( ) ) ( ) », « ( ) » and « ( ( ) ( ( ) ) ) » are regular, while « ) ( ) », « ( ( ) » and « ( ( ) ) ) ( » are not.

One day Johnny got bracket sequence. He decided to remove some of the brackets from it in order to obtain a regular bracket sequence. What is the maximum length of a regular bracket sequence which can be obtained?

### Input

Input consists of a single line with non-empty string of « ( » and « ) » characters. Its length does not exceed  $10^6$ .

### Output

Output the maximum possible length of a regular bracket sequence.

### Examples

input	Copy
(((( )(	
output	Copy
4	

input	Copy
(((( ))	
output	Copy
6	

### → Attention

The package for this problem was not updated by the problem writer or Codeforces administration after we've upgraded the judging servers. To adjust the time limit constraint, a solution execution time will be multiplied by 2. For example, if your solution works for 400 ms on judging servers, then the value 800 ms will be displayed and used to determine the verdict.

### ICPC Assiut University Training - Juniors Phase 1 Sheets-2022

Public
Participant


### → Group Contests

- Juniors Phase 1 Practice #5 (Bitmask, Bitset, Bits)
- Juniors Phase 1 Practice #4 ( Binary search , Two pointers )
- Juniors Phase 1 Practice #3 ( STL 2 )
- Juniors Phase 1 Practice #2 ( STL 1 )
- Juniors Phase 1 Practice #1 ( Prefix sum , Frequency Array )

### Juniors Phase 1 Practice #2 ( STL 1 ).

Finished
Practice


### → About Time Scaling

This contest uses time limits scaling policy (depending on a programming language). The system automatically adjusts time limits by the following multipliers for some languages. Despite scaling (adjustment), the time limit cannot be more than 30 seconds. Read the details by the [link](#).

### → Virtual participation

Virtual contest is a way to take part in past contest, as close as possible to participation on time. It is supported only ICPC mode for virtual contests. If you've seen these problems, a virtual contest is not for you - solve these problems in the archive. If you just want to solve some problem from a contest, a virtual contest is not for you - solve this problem in the archive. Never use someone else's code, read the tutorials or communicate with other person during a virtual contest.

Start virtual contest

### → Submit?

Language: GNU G++20 13.2 (64 bit, win