

## Equal point in a string of brackets

Difficulty: **Easy**Accuracy: **40.8%**Submissions: **20K+**Points: **2**

Given a string **str** of opening and closing brackets '(' and ')' only. The task is to find an equal point. An **equal point** is an index (0-based) such that the number of closing brackets on the right from that point must be equal to the number of opening brackets before that point.

### Examples:

**Input:** str = "(()))("

**Output:** 4

**Explanation:** After index 4, string splits into (()) and )( . Number of opening brackets in the first part is equal to number of closing brackets in the second part.

**Input :** str = ")))"

**Output:** 2

**Explanation:** As after 2nd position i.e. )) and "empty" string will be split into these two parts: So, in this number of opening brackets i.e. 0 in the first part is equal to number of closing brackets in the second part i.e. also 0.

**Expected Time Complexity:**  $O(n)$

**Expected Auxiliary Space:**  $O(n)$

### Constraints:

$1 \leq \text{str.size()} \leq 10^6$

str consists of only '(' and ')' brackets.