Implement a basic calculator to evaluate a simple expression string.

The expression string contains only non-negative integers, '+', '-', '\*', '/' operators, and open '(' and closing parentheses ')'. The integer division should **truncate toward zero**.

You may assume that the given expression is always valid. All intermediate results will be in the range of [-231, 231 - 1].

**Note:** You are not allowed to use any built-in function which evaluates strings as mathematical expressions, such as eval().

**Example 1:**

Input: s = "1+1"  
Output: 2

**Example 2:**

Input: s = "6-4/2"  
Output: 4

**Example 3:**

Input: s = "2\*(5+5\*2)/3+(6/2+8)"  
Output: 21

**Constraints:**

* 1 <= s <= 104
* s consists of digits, '+', '-', '\*', '/', '(', and ')'.
* s is a **valid** expression.