227. Basic Calculator II

Description

Given a string `s` which represents an expression, *evaluate this expression and return its value*.

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 `[-2^31, 2^31 - 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 = "3+2*2"
Output: 7
```

Example 2:

```
Input: s = " 3/2 "
Output: 1
```

Example 3:

```
Input: s = " 3+5 / 2 "
Output: 5
```

Constraints:

- `1 <= s.length <= 3 * 10^5`
- `s` consists of integers and operators `('+', '-', '*', '/')` separated by some number of spaces.
- `s` represents **a valid expression**.
- All the integers in the expression are non-negative integers in the range `[0, 2^31 - 1]`.
- The answer is **guaranteed** to fit in a **32-bit integer**.