

Problem 150: Evaluate Reverse Polish Notation

Problem Information

Difficulty: Medium

Acceptance Rate: 56.16%

Paid Only: No

Tags: Array, Math, Stack

Problem Description

You are given an array of strings `tokens` that represents an arithmetic expression in a [Reverse Polish Notation](http://en.wikipedia.org/wiki/Reverse_Polish_notation).

Evaluate the expression. Return `an integer that represents the value of the expression`.

Note that:

- * The valid operators are `+`, `-`, `*`, and `/`.
- * Each operand may be an integer or another expression.
- * The division between two integers always **truncates toward zero**.
- * There will not be any division by zero.
- * The input represents a valid arithmetic expression in a reverse polish notation.
- * The answer and all the intermediate calculations can be represented in a **32-bit** integer.

Example 1:

Input: `tokens = ["2", "1", "+", "3", "*"]` **Output:** `9` **Explanation:** `((2 + 1) * 3) = 9`

Example 2:

Input: `tokens = ["4", "13", "5", "/", "+"]` **Output:** `6` **Explanation:** `(4 + (13 / 5)) = 6`

Example 3:

Input: `tokens = ["10", "6", "9", "3", "+", "-11", "*", "/", "*", "17", "+", "5", "+"]` **Output:** `22`
Explanation: `((10 * (6 / ((9 + 3) * -11))) + 17) + 5 = ((10 * (6 / (12 * -11))) + 17) + 5 = ((10 * (6 / -132)) + 17) + 5 = ((10 * 0) + 17) + 5 = (0 + 17) + 5 = 17 + 5 = 22`

****Constraints:****

* `1 <= tokens.length <= 104` * `tokens[i]` is either an operator: `"+", "-", "*", "/"`, or an integer in the range `[-200, 200]`.

Code Snippets

C++:

```
class Solution {
public:
    int evalRPN(vector<string>& tokens) {

    }
};
```

Java:

```
class Solution {
    public int evalRPN(String[] tokens) {

    }
}
```

Python3:

```
class Solution:
    def evalRPN(self, tokens: List[str]) -> int:
```