

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: `"+", "-`, `"\u00d7"`, or `"/"`, 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:
```