You are keeping the scores for a baseball game with strange rules. At the beginning of the game, you start with an empty record.

You are given a list of strings operations, where operations[i] is the ith operation you must apply to the record and is one of the following:

* An integer x.
  + Record a new score of x.
* '+'.
  + Record a new score that is the sum of the previous two scores.
* 'D'.
  + Record a new score that is the double of the previous score.
* 'C'.
  + Invalidate the previous score, removing it from the record.

Return *the sum of all the scores on the record after applying all the operations*.

The test cases are generated such that the answer and all intermediate calculations fit in a **32-bit** integer and that all operations are valid.

**Example 1:**

Input: ops = ["5","2","C","D","+"]  
Output: 30  
Explanation:  
"5" - Add 5 to the record, record is now [5].  
"2" - Add 2 to the record, record is now [5, 2].  
"C" - Invalidate and remove the previous score, record is now [5].  
"D" - Add 2 \* 5 = 10 to the record, record is now [5, 10].  
"+" - Add 5 + 10 = 15 to the record, record is now [5, 10, 15].  
The total sum is 5 + 10 + 15 = 30.

**Example 2:**

Input: ops = ["5","-2","4","C","D","9","+","+"]  
Output: 27  
Explanation:  
"5" - Add 5 to the record, record is now [5].  
"-2" - Add -2 to the record, record is now [5, -2].  
"4" - Add 4 to the record, record is now [5, -2, 4].  
"C" - Invalidate and remove the previous score, record is now [5, -2].  
"D" - Add 2 \* -2 = -4 to the record, record is now [5, -2, -4].  
"9" - Add 9 to the record, record is now [5, -2, -4, 9].  
"+" - Add -4 + 9 = 5 to the record, record is now [5, -2, -4, 9, 5].  
"+" - Add 9 + 5 = 14 to the record, record is now [5, -2, -4, 9, 5, 14].  
The total sum is 5 + -2 + -4 + 9 + 5 + 14 = 27.

**Example 3:**

Input: ops = ["1","C"]  
Output: 0  
Explanation:  
"1" - Add 1 to the record, record is now [1].  
"C" - Invalidate and remove the previous score, record is now [].  
Since the record is empty, the total sum is 0.

**Constraints:**

* 1 <= operations.length <= 1000
* operations[i] is "C", "D", "+", or a string representing an integer in the range [-3 \* 104, 3 \* 104].
* For operation "+", there will always be at least two previous scores on the record.
* For operations "C" and "D", there will always be at least one previous score on the record.