Java Subarray

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We define the following:

- A *subarray* of an n-element array is an array composed from a contiguous block of the original array's elements. For example, if $array = [1, 2, 3]$, then the subarrays are $[1]$, $[2]$, $[3]$, $[1, 2]$, $[2, 3]$, and $[1, 2, 3]$. Something like $[1, 3]$ would *not* be a subarray as it's not a contiguous subsection of the original array.
- The *sum* of an array is the total sum of its elements.
  - An array's sum is *negative* if the total sum of its elements is negative.
  - An array's sum is *positive* if the total sum of its elements is positive.

Given an array of n integers, find and print its number of *negative subarrays* on a new line.

Input Format

The first line contains a single integer, n, denoting the length of array $A = [a_0, a_1, \ldots, a_{n-1}]$.
The second line contains n space-separated integers describing each respective element, a_i, in array A.

Constraints

- $1 \leq n \leq 100$
- $-10^4 \leq a_i \leq 10^4$

Output Format

Print the number of subarrays of A having negative sums.

Sample Input

```
5
1 -2 4 -5 1
```

Sample Output

```
9
```

Explanation

There are nine negative subarrays of $A = [1, -2, 4, -5, 1]$:

1. $[1 : 1] \Rightarrow -2$
2. $[3 : 3] \Rightarrow -5$
3. $[0 : 1] \Rightarrow 1 + -2 = -1$
4. $[2 : 3] \Rightarrow 4 + -5 = -1$

5. $[3:4] \Rightarrow -5+1=-4$

6. $[1:3] \Rightarrow -2+4+-5=-3$

7. $[0:3] \Rightarrow 1+-2+4+-5=-2$

8. $[1:4] \Rightarrow -2+4+-5+1=-2$

9. $[0:4] \Rightarrow 1+-2+4+-5+1=-1$

Thus, we print $\mathbf{9}$ on a new line.

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Java 7

```
1  import java.io.*;
2  import java.util.*;
3  import java.text.*;
4  import java.math.*;
5  import java.util.regex.*;
6
7  public class Solution {
8
9      public static void main(String[] args) {
10         /* Enter your code here. Read input from STDIN. Print output to STDOUT. Your class should be named
   Solution. */
11     }
12 }
```

Line: 1 Col: 1

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