

# Promising string

Input file:            **standard input**  
Output file:         **standard output**  
Time limit:          2 seconds  
Memory limit:       256 megabytes

We will call a non-empty string **balanced** if it contains the same number of plus and minus signs. For example: strings “+--+” and “++-+--” are balanced, and strings “+-->”, “--” and “” are not balanced.

We will call a string **promising** if the string can be made balanced by several (possibly zero) uses of the following operation:

- replace two **adjacent** minus signs with one plus sign.

In particular, every balanced string is prospective. However, the reverse is not true: not every promising string — is balanced.

For example: the string “-+---” is promising, because you can replace two adjacent minuses with plus and get a balanced string “-++-”, or get another balanced string “-+-+”.

How many substring of the given string  $s$  are promising?

Recall that a substring —is a nonempty sequence of consecutive characters of the string. For example, for string “+-+” its substring are strings “+>”, “->”, “+->”, “+-+” (the string is a substring of itself) and some others. But the following strings are not its substring: “”, “--”, “++”, “-++”.

## Input

The first line of input data contains an integer  $t$  ( $1 \leq t \leq 10^4$ ) —the number of input test cases in the test.

The descriptions of the input test cases follow.

Each test case of input data consists of two lines. The first line gives the number  $n$  ( $1 \leq n \leq 2 \cdot 10^5$ ) — the length of  $s$ .

The second line of the test case gives the string  $s$  itself of length  $n$ , consisting only of characters “+” and “-”.

It is guaranteed that the sum  $n$  over all test cases does not exceed  $2 \cdot 10^5$ .

## Output

For each set of input data, print a single number — the number of promising substring of string  $s$ .

## Example

standard input	standard output
3	2
3	4
+--+	2
5	
-+---	
4	
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## Note

In the third case, the string “-+---” has promising substrings: “---”(substring  $s$  from 1th to 3th character), “---”(substring  $s$  from 2nd to 4th character).