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PROBLEMS   SUBMIT CODE   MY SUBMISSIONS   STATUS   HACKS   STANDINGS   CUSTOM INVOCATION

D. AB-string

time limit per test: 2 seconds
memory limit per test: 256 megabytes
input: standard input
output: standard output

The string $t_1 t_2 \ldots t_k$ is good if each letter of this string belongs to at least one palindrome of length **greater** than 1.

A palindrome is a string that reads the same backward as forward. For example, the strings A, BAB, ABBA, BAABBBAAB are palindromes, but the strings AB, ABBBAA, BBBA are not.

Here are some examples of good strings:

- t = AABBB (letters t_1, t_2 belong to palindrome $t_1 \ldots t_2$ and letters t_3, t_4, t_5 belong to palindrome $t_3 \ldots t_5$);
- t = ABAA (letters t_1, t_2, t_3 belong to palindrome $t_1 \ldots t_3$ and letter t_4 belongs to palindrome $t_3 \ldots t_4$);
- t = AAAAA (all letters belong to palindrome $t_1 \ldots t_5$);

You are given a string s of length n, consisting of **only** letters A and B.

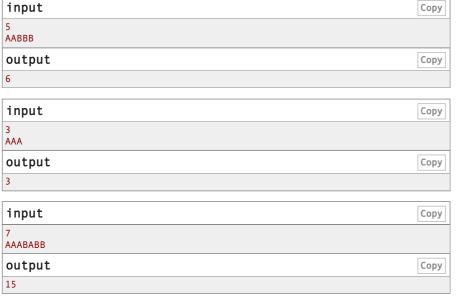You have to calculate the number of good substrings of string s.

Input

The first line contains one integer n ($1 \le n \le 3 \cdot 10^5$) — the length of the string s.

The second line contains the string s, consisting of letters A and B.

Output

Print one integer — the number of good substrings of string s.

Examples

input	Copy
5 AABBB	

output	Copy
6	

input	Copy
3 AAA	

output	Copy
3	

input	Copy
7 AAABABB	

output	Copy
15	

Note

In the first test case there are six good substrings: $s_1 \ldots s_2$, $s_1 \ldots s_4$, $s_1 \ldots s_5$, $s_3 \ldots s_4$, $s_3 \ldots s_5$ and $s_4 \ldots s_5$.

In the second test case there are three good substrings: $s_1 \ldots s_2$, $s_1 \ldots s_3$ and $s_2 \ldots s_3$.

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