DMOPC '18 Contest 3 P3 - Bob and Math Class

Time limit: 1.0s **Memory limit:** 256M

Bob has a pop quiz in math! Fortunately, it's only a true and false quiz. He has already finished and is checking over his answers to the N questions. His answers are a string of N `T`s and `F`s. Bob calls an array *suspicious* if it contains a subarray of only `T`s or only `F`s such that the length of the subarray is at least half of the length of the entire array. For example, `TTTTFTF` is a suspicious subarray since it contains `TTTT` while `TFTTTFT` is not suspicious. Given Bob's answers, how many of its subarrays are suspicious?

Constraints

Subtask 1 [10%]

$1 \leq N \leq 400$

Subtask 2 [30%]

$1 \leq N \leq 2\,000$

Subtask 3 [40%]

$1 \leq N \leq 200\,000$

Subtask 4 [20%]

$1 \leq N \leq 1\,000\,000$

Input Specification

The first line contains a single integer, N.
The next line contains a string of N characters, either `T` or `F`.

Output Specification

Output a single integer, the number of suspicious subarrays.

Sample Input 1

```
5
TFTFF
```

Sample Output 1

```
11
```

Explanation of Sample 1

The 11 suspicious subarrays are

```
T
 F
  T
   F
    F
TF
 FT
  TF
   FF
  TFF
 FTFF
```

Sample Input 2

```
5
TFTFT
```

Sample Output 2

```
9
```