Mock CCC '20 Contest 1 J4 - A Binary Problem

Time limit: 1.0s **Memory limit:** 1G

koosaga lives on a street with N houses, all equally spaced apart. Each house either has the lights on or off. **koosaga** rates a house with a score equal to the minimum distance, in house units, that he must travel to be at a house that has its lights on.

koosaga wants to compute the sum of the ratings of all the houses on his street.

Constraints

$1 \leq N \leq 10^6$

In tests worth 5 marks, $N \leq 10^3$.

At least one house will always have its lights on.

Input Specification

The first line contains a single positive integer, N.

The next line contains a binary string. If the ith character of the string is `1`, then the ith house has its lights on. Otherwise, the ith character of the string is `0` and that house has its lights off.

Output Specification

Output the sum of all the ratings.

Sample Input 1

```
3
111
```

Sample Output 1

```
0
```

Explanation for Sample 1

Every house is illuminated, so every house has a rating of 0.

Sample Input 2

```
4
1001
```

Sample Output 2

```
2
```

Explanation for Sample 2

The first and last house have ratings of 0, and the second and third house each have a rating of 1.