Problem A. Zero String

Time Limit	1000 ms
Code Length Limit	50000 B
OS	Linux

You are given a binary string S of length N. You are allowed to perform the following types of operations on string S:

- Delete any **one** character from S, and concatenate the remaining parts of the string. For example, if we delete the third character of $S = 1101$, it becomes $S = 111$.
- Flip all the characters of S. For example, if we flip all character of $S = 1101$, it becomes $S = 0010$.

Given that you can use either type of operation any number of times, find the **minimum** number of operations required to make all characters of the string S equal to 0.

Input Format

- The first line of input will contain a single integer T, denoting the number of test cases.
- Each test case consists of multiple lines of input.
  - The first line of each test case contains an integer N — the length of the string.
  - The next line contains a binary string S of length N.

Output Format

For each test case, output on a new line, the **minimum** number of operations required to make all characters of the string S equal to 0.

Constraints

- $1 \leq T \leq 2000$
- $1 \leq N \leq 10^5$
- S contains 0 and 1 only.
- The sum of N over all test cases won't exceed $2 \cdot 10^5$.

Sample 1

Input	Output
4 2 01 3 101 3 111 4 0000	1 2 1 0

Test case 1: You can use one operation to delete the second character of the string S. Thus, the string becomes 0. Note that all characters of this string are 0 and thus, it satisfies the conditions.

Test case 2: You can perform the following operations:

- Operation 1: Flip all characters of the string. Thus, string becomes 010.
- Operation 2: Delete the second character of the string. Thus, string becomes 00.

Note that we have obtained a string having all characters as 0 in two operations. It can be shown that this is the minimum number of operations required.

Test case 3: You can use one operation to flip all characters of the string S. Thus, the string becomes 000. Note that all characters of this string are 0 and thus, it satisfies the conditions.

Test case 4: The existing string satisfies the conditions. Thus, we require zero operations.