

Distant Control

Input file: **standard input**
Output file: **standard output**
Time limit: 1 second
Memory limit: 512 megabytes

You have n robot friends, arranged in a row, labeled from left to right as $1, 2, \dots, n$. Initially, some robots are turned off, while others are turned on.

Your phone can distantly control the power state of the robots, but unfortunately, it is not always very accurate. Specifically, there is a constant $1 \leq a \leq n - 1$, and you can only perform the following two types of operations with your phone:

- Select a robots with consecutive labels **which are all turned on** and turn them all off.
- Select $a + 1$ robots with consecutive labels **which are all turned off** and turn them all on.

You want to determine the maximum possible number of robots that are on after several (possibly, 0) operations.

Input

Each test contains multiple test cases. The first line of input contains a single integer t ($1 \leq t \leq 4 \cdot 10^4$) — the number of test cases. The description of the test cases follows.

The first line of each test case contains two integers n and a ($2 \leq n \leq 2 \cdot 10^5$, $1 \leq a \leq n - 1$).

The second line of each test case contains a string s of length n consisting only of **01**, describing the initial power states of the robots. Specifically, the i -th robot is initially turned on if and only if $s_i = 1$.

It is guaranteed that the sum of n over all test cases does not exceed $4 \cdot 10^5$.

Output

For each test case, output a single line containing an integer: the maximum possible number of robots that are on.

Example

standard input	standard output
4	3
3 1	2
001	5
4 3	5
0101	
5 2	
10110	
10 4	
1011010001	

Note

In the first test case, it is possible to perform a single operation to turn all robots on: select the robots labeled 1, 2, which are both off, and turn them on.

In the second test case, no operations can be performed, so the answer is the number of robots that are initially turned on, which is 2.