

## D. Black and White Stripe

time limit per test: 2 seconds  
memory limit per test: 256 megabytes

You have a stripe of checkered paper of length  $n$ . Each cell is either white or black.

What is the minimum number of cells that must be recolored from white to black in order to have a segment of  $k$  consecutive black cells on the stripe?

If the input data is such that a segment of  $k$  consecutive black cells already exists, then print 0.

### Input

The first line contains an integer  $t$  ( $1 \leq t \leq 10^4$ ) — the number of test cases.

Next, descriptions of  $t$  test cases follow.

The first line of the input contains two integers  $n$  and  $k$  ( $1 \leq k \leq n \leq 2 \cdot 10^5$ ). The second line consists of the letters 'W' (white) and 'B' (black). The line length is  $n$ .

It is guaranteed that the sum of values  $n$  does not exceed  $2 \cdot 10^5$ .

### Output

For each of  $t$  test cases print an integer — the minimum number of cells that need to be repainted from white to black in order to have a segment of  $k$  consecutive black cells.

### Example

input	Copy
4 5 3 BBWBW 5 5 BBWBW 5 1 BBWBW 1 1 W	
output	Copy
1 2 0 1	

### Note

In the first test case,  $s = \text{"BBWBW"}$  and  $k = 3$ . It is enough to recolor  $s_3$  and get  $s = \text{"BBBBW"}$ . This string contains a segment of length  $k = 3$  consisting of the letters 'B'.

In the second test case of the example  $s = \text{"BBWBW"}$  and  $k = 5$ . It is enough to recolor  $s_3$  and  $s_5$  and get  $s = \text{"BBBBB"}$ . This string contains a segment of length  $k = 5$  consisting of the letters 'B'.

In the third test case of the example  $s = \text{"BBWBW"}$  and  $k = 1$ . The string  $s$  already contains a segment of length  $k = 1$  consisting of the letters 'B'.

Codeforces Round 797 (Div. 3)

Finished

Practice



→ Virtual participation

Virtual contest is a way to take part in past contest, as close as possible to participation on time. It is supported only ICPC mode for virtual contests. If you've seen these problems, a virtual contest is not for you - solve these problems in the archive. If you just want to solve some problem from a contest, a virtual contest is not for you - solve this problem in the archive. Never use someone else's code, read the tutorials or communicate with other person during a virtual contest.

Start virtual contest

→ Clone Contest to Mashup

You can clone this contest to a mashup.

Clone Contest

→ Submit?

Language: GNU G++20 13.2 (64 bit, win

Choose file: Choose File No file chosen

Submit

→ Last submissions

Submission	Time	Verdict
<a href="#">266485501</a>	Jun/19/2024 21:05	Accepted

→ Problem tags

implementation

two pointers

\*1000

No tag edit access

→ Contest materials

Announcement

Tutorial