

Maximum Color Segment

Input file: **standard input**
Output file: **standard output**
Time limit: 2 seconds
Memory limit: 256 megabytes

You are given a rope n units long, where each unit is painted either red or black. The rope can be represented as a string of length n consisting of characters R (red) and B (black). You are also given two integers m and k .

You may perform the following operation **at most** m times (possibly, zero times):

- Choose any contiguous substring* of the rope of length exactly k .
- Flip the color of every unit in the substring: each R becomes B, and each B becomes R.

For example, consider the rope **RRRRBRRR** with $k = 4$. If you choose the 3-rd to 6-th characters (**RRRRBRRR**), then after flipping, the rope becomes **RRBBRBRR**.

Define the number of color segments as the smallest number of contiguous segments into which the rope can be divided so that each segment consists of units of a single color. For instance, the rope **RRBRRRBB** has 4 color segments: **RR**, **B**, **RRR**, and **BB**.

Your task is to determine the maximum possible number of color segments after performing **at most** m operations.

Input

The first line contains three integers n , m , and k , representing the length of the rope, the maximum number of operations allowed, and the length of each operation's flip window, respectively.

The second line contains a string of length n consisting only of the characters R and B, representing the initial content of the rope.

- $1 \leq n \leq 3000$
- $0 \leq m \leq 3000$
- $1 \leq k \leq n$

Output

Output an integer in a single line, representing the maximum possible number of color segments after performing at most m operations.

Examples

standard input	standard output
5 4 3 RRBRR	5
10 3 3 RRRRBBRRRB	8
7 4 7 RRBRBBR	5

*A string t is a substring of a string s if t can be obtained from s by the deletion of several (possibly, zero or all) characters from the beginning and several (possibly, zero or all) characters from the end.