Problem L
Maximum Color Segment

Time limit: 2 seconds

Problem Description

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 positive integers m and k.

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

- Choose any contiguous substring[2] 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 Format

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.

Output Format

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

[2] 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.

Technical Specification

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

Sample Input 1

```
5 4 3
RRBRR
```

Sample Output 1

```
5
```

Sample Input 2

```
10 3 3
RRRRBBRRRB
```

Sample Output 2

```
8
```

Sample Input 3

```
7 4 7
RRBRBBR
```

Sample Output 3

```
5
```