Problem G. Streak Manipulation

Input file:	`standard input`
Output file:	`standard output`
Time limit:	1 second
Memory limit:	256 megabytes

This semester, Mr. Ham spent a lot of time in training for ICPC. He has n classes this semester, and he only attended some of them. He uses a binary string $s_{1..n}$ to represent which classes he attended. If the i-th character of the string is `1`, he attended the i-th class. Otherwise, he didn't attend the i-th class.

If Mr. Ham attended k consecutive classes, he would get a *streak* of length k. Formally, if $1 \le i \le j \le n$ satisfies the following conditions, we say that Mr. Ham has a streak of length $j - i + 1$:

- $s_i = s_{i+1} = \cdots = s_j = \texttt{1}$;
- $i = 1$ or $s_{i-1} = \texttt{0}$;
- $j = n$ or $s_{j+1} = \texttt{0}$.

For example, if $s = \texttt{101101}$, Mr. Ham has one streak of length 2 and two streaks of length 1.

Mr. Ham found that he was absent from too many classes. So he stole the attendance record and wants to change it (It's not allowed, so please don't do that). Given m and k, he can change **at most** m records from `0` to `1`. He wants to know the **maximum** length of the k-th longest streak he can get.

If there are less than k streaks, we define the length of k-th longest streak as -1.

Input

The first line contains three integers n, m and k ($1 \le m \le n \le 2 \times 10^5$, $1 \le k \le \min(n, 5)$).

The second line contains a string s of length n. It is guaranteed that $\forall 1 \le i \le n, s_i \in \{\texttt{0}, \texttt{1}\}$.

Output

Output the maximum length of the k-th longest streak Mr. Ham can get by changing **at most** m records from `0` to `1`.

Examples

standard input	standard output
8 3 2 10110110	3
12 3 3 100100010011	2
4 4 4 0000	-1