Decoded String at Index

You are given an encoded string s. To decode the string to a tape, the encoded string is read one character at a time and the following steps are taken:

- If the character read is a letter, that letter is written onto the tape.
- If the character read is a digit d, the entire current tape is repeatedly written d - 1 more times in total.

Given an integer k, return *the* k^{th} *letter (**1-indexed**) in the decoded string*.

Example 1:

Input: s = "leet2code3", k = 10

Output: "o"

Explanation: The decoded string is "leetleetcodeleetleetcodeleetleetcode".

The 10^{th} letter in the string is "o".

Example 2:

Input: s = "ha22", k = 5

Output: "h"

Explanation: The decoded string is "hahahaha".

The 5^{th} letter is "h".

Example 3:

Input: s = "a2345678999999999999999", k = 1

Output: "a"

Explanation: The decoded string is "a" repeated 8301530446056247680 times.

The 1^{st} letter is "a".

Constraints:

- 2 <= s.length <= 100
- s consists of lowercase English letters and digits 2 through 9.
- s starts with a letter.
- 1 <= k <= 10^9
- It is guaranteed that k is less than or equal to the length of the decoded string.
- The decoded string is guaranteed to have less than 2^{63} letters.