Given an encoded string, return its decoded string.

The encoding rule is: k[encoded\_string], where the *encoded\_string* inside the square brackets is being repeated exactly *k* times. Note that *k* is guaranteed to be a positive integer.

You may assume that the input string is always valid; No extra white spaces, square brackets are well-formed, etc.

Furthermore, you may assume that the original data does not contain any digits and that digits are only for those repeat numbers, *k*. For example, there won't be input like 3a or 2[4].

**Example 1:**

**Input:** s = "3[a]2[bc]"

**Output:** "aaabcbc"

**Example 2:**

**Input:** s = "3[a2[c]]"

**Output:** "accaccacc"

**Example 3:**

**Input:** s = "2[abc]3[cd]ef"

**Output:** "abcabccdcdcdef"

**Example 4:**

**Input:** s = "abc3[cd]xyz"

**Output:** "abccdcdcdxyz"