An original string, consisting of lowercase English letters, can be encoded by the following steps:

* Arbitrarily **split** it into a **sequence** of some number of **non-empty** substrings.
* Arbitrarily choose some elements (possibly none) of the sequence, and **replace** each with **its length** (as a numeric string).
* **Concatenate** the sequence as the encoded string.

For example, **one way** to encode an original string "abcdefghijklmnop" might be:

* Split it as a sequence: ["ab", "cdefghijklmn", "o", "p"].
* Choose the second and third elements to be replaced by their lengths, respectively. The sequence becomes ["ab", "12", "1", "p"].
* Concatenate the elements of the sequence to get the encoded string: "ab121p".

Given two encoded strings s1 and s2, consisting of lowercase English letters and digits 1-9 (inclusive), return true *if there exists an original string that could be encoded as* ***both*** s1 *and* s2*. Otherwise, return* false.

**Note**: The test cases are generated such that the number of consecutive digits in s1 and s2 does not exceed 3.

**Example 1:**

Input: s1 = "internationalization", s2 = "i18n"  
Output: true  
Explanation: It is possible that "internationalization" was the original string.  
- "internationalization"   
 -> Split: ["internationalization"]  
 -> Do not replace any element  
 -> Concatenate: "internationalization", which is s1.  
- "internationalization"  
 -> Split: ["i", "nternationalizatio", "n"]  
 -> Replace: ["i", "18", "n"]  
 -> Concatenate: "i18n", which is s2

**Example 2:**

Input: s1 = "l123e", s2 = "44"  
Output: true  
Explanation: It is possible that "leetcode" was the original string.  
- "leetcode"   
 -> Split: ["l", "e", "et", "cod", "e"]  
 -> Replace: ["l", "1", "2", "3", "e"]  
 -> Concatenate: "l123e", which is s1.  
- "leetcode"   
 -> Split: ["leet", "code"]  
 -> Replace: ["4", "4"]  
 -> Concatenate: "44", which is s2.

**Example 3:**

Input: s1 = "a5b", s2 = "c5b"  
Output: false  
Explanation: It is impossible.  
- The original string encoded as s1 must start with the letter 'a'.  
- The original string encoded as s2 must start with the letter 'c'.

**Constraints:**

* 1 <= s1.length, s2.length <= 40
* s1 and s2 consist of digits 1-9 (inclusive), and lowercase English letters only.
* The number of consecutive digits in s1 and s2 does not exceed 3.