You have a set of tiles, where each tile has one letter tiles[i] printed on it.  Return the number of possible non-empty sequences of letters you can make.

**Example 1:**

**Input:** "AAB"

**Output:** 8

**Explanation:** The possible sequences are "A", "B", "AA", "AB", "BA", "AAB", "ABA", "BAA".

**Example 2:**

**Input:** "AAABBC"

**Output:** 188

**Note:**

1. 1 <= tiles.length <= 7
2. tiles consists of uppercase English letters.