Letter Hunt

Lea is a very sophisticated woman and likes art very much, that is why she and his friends are visiting the amazing museums of Paris. Her favourite museum is the Musée d'Chaîne; it has a huge art collection, but the masterpiece of the exhibition is a world famous string of n characters. Lea has spent hours and hours looking for exquisite pairs of substrings inside the masterpiece. A substring of a string $S = s_1 s_2 \dots s_n$, represented as $T_{i,j}$ for a pair of indexes $i \leq j$, is described as the concatenation $s_i s_{i+1} \dots s_{j-1} s_j$ of characters from S. Two substrings of S are considered distinct if their indexes i and j are not the same. The group does not want to observe a single string all day long. In order to leave the museum as soon as possible, you want to help Lea counting every pair of distinct substrings of the exhibition string that are exquisite. If you don't have as much artistic taste as Lea, a pair of strings is considered exquisite if they share a common prefix of at least k characters. If you don't have idea what a prefix is *sigh*, we define it as a substring with starting index i equal to 1.

Input

The first line of input contains a positive integer T representing the number of test cases. The following T lines contain a non-empty string of $l \leq n \leq 10^5$ lowercase letters of the English alphabet representing the museum exhibition string, followed by an integer number $1 \leq k \leq n$; the length of the minimum prefix required in an exquisite pair of strings.

Output

For each test case in the input, print a single line with an integer representing the number of exquisite substring pairs, modulo $1.000.000.007$ ($10^9 + 7$). See format below for details.

Sample Input 1	**Sample Output 1**
5 aaaa 3 ababab 4 cdabcdab 5 qwertyuiop 2 abcabcabcabcx 5	Case #1: 3 Case #2: 7 Case #3: 10 Case #4: 120 Case #5: 313