H: Not Regex

Time Limit: 1 second

You have just finished writing your cutting-edge CS theory paper. You are about to send it off to journals and want to maximize the number of people who read it. The journal happens to sort the papers according to a particular metric. Since most people read a few papers and then put the journal down, you want to get the minimum possible score.

Your paper is a string s of lowercase letters, and s_j denotes the j^{th} character of s. For any letter ℓ, let $v(\ell)$ denote the value of ℓ. The value of a letter is its position in the alphabet, so $v(\texttt{a}) = 1$, $v(\texttt{b}) = 2$, and so on, up to $v(\texttt{z}) = 26$. For each index j, let $f(j)$ be the number of indices $k < j$ such that s_k comes strictly before s_j in the alphabet. The score the journal calculates is equal to the sum of $v(s_j) \cdot (f(j) + 1)$ over all indices j.

You don't want to make it too obvious that you messed with your paper to appeal to the journal, so you don't want to change it too much. You boot up your favorite text editor, vi, and decide to do a find and replace on a suffix of your paper. More concretely, you choose a string t, and apply the following algorithm to s, where $n = |s|$ and $m = |t|$:

1. Choose an index i $(1 \le i \le n - m + 1)$, and let p be the substring $s_i s_{i+1} \ldots s_{i+m-1}$.
2. Replace the substring $s_i s_{i+1} \ldots s_{i+m-1}$ with t.
3. Find the smallest index $j \ge i + m$ such that the substring $s_j s_{j+1} \ldots s_{j+m-1}$ is equal to p. If no such index exists, the operation ends. Otherwise, set i to j and go back to step 2.

Compute the minimum possible score of your paper after applying the algorithm exactly once.

Input

The first line of input contains a single integer T $(1 \le T \le 10^5)$, representing the number of test cases.

The descriptions of T test cases follow. Each test case consists of two lines. The first line contains a string s $(1 \le |s| \le 2 \cdot 10^5)$ of lowercase letters, your paper. The second line contains a string t $(1 \le |t| \le |s|)$ of lowercase letters, the string you will replace into your paper.

The sum of $|s|$ over all test cases will not exceed $2 \cdot 10^5$.

Output

For each test case, output the minimum possible score of your paper after applying the algorithm exactly once.

Sample Input 1	Sample Output 1
2 icpcicpcicpc fun abca d	528 16