

A subsequence of a given sequence is just the given sequence with some elements (possibly none) left out. Formally, given a sequence $X = x_1x_2 \dots x_m$, another sequence $Z = z_1z_2 \dots z_k$ is a subsequence of X if there exists a strictly increasing sequence $\langle i_1, i_2, \dots, i_k \rangle$ of indices of X such that for all $j = 1, 2, \dots, k$, we have $x_{i_j} = z_j$. For example, $Z = bcdb$ is a subsequence of $X = abcbdad$ with corresponding index sequence $\langle 2, 3, 5, 7 \rangle$.

In this problem your job is to write a program that counts the number of occurrences of Z in X as a subsequence such that each has a distinct index sequence.

Input

The first line of the input contains an integer N indicating the number of test cases to follow. The first line of each test case contains a string X , composed entirely of lowercase alphabetic characters and having length no greater than 10,000. The second line contains another string Z having length no greater than 100 and also composed of only lowercase alphabetic characters. Be assured that neither Z nor any prefix or suffix of Z will have more than 10100 distinct occurrences in X as a subsequence.

Output

For each test case in the input output the number of distinct occurrences of Z in X as a subsequence. Output for each input set must be on a separate line.

Sample Input

```
2babgbag
bag
rabbbit
rabbtt
```

Sample Output