

Weird Sort

Given a vector or a pair of strings S and R(both strings have same length), find the number of ways to rearrange these pairs such that the longest common substring of these pairs is in non-decreasing order.

The longest common substring between two strings is the longest sequence of characters that appears in both strings in the same order. The characters must be contiguous (adjacent to each other) within the substring.

Since the answer could be a very large integer, print only the remainder of dividing the result by 1,000,000,007 (i.e. $10^9 + 7$).

Input

The first line contains the size of vector q($1 \leq t \leq 5e4$). The description of the vector input follows.

The first line of each test case contains a single integer n($1 \leq n \leq 26$) — the length of the string S and string R.

The second and third line of each test case consists of string S and R respectively, consisting of lowercase English letters, and the same is true for R.

Output

For each test case, output number of ways

Example

Input

```
2
5
abdec
abdce
5
ceyfg
cefgy
```

Output

```
1
```

Explanation

There is only one way to rearrange these pairs, that is $\langle\langle \text{ceyfg}, \text{cefgy} \rangle, \langle \text{abdec}, \text{abdce} \rangle\rangle$
Lcs of above pairs are [2,3] which is non decreasing.