Problem A. 2024 League of Legends World Championship

Time limit 1000 ms
Memory limit 256MB

Problem Description

This year's League of Legends World Championship has seen T1 once again display their incredible resilience and dominance. They defeated the originally favored team, GEN.G, in the semifinals to secure a spot in the finals. Their flawless macro play and lane rotation have been the talk of the community, with many industry professionals providing post-game analyses.

Now, BLG (Bilibili Gaming) is working tirelessly to prepare for this formidable opponent. Just then, they receive a mysterious document from GEN.G's analyst. This analyst had studied T1's vision control in depth and created a "hash table" of T1's warding habits. This table can reveal T1's ward placement patterns based on specific keywords. The GEN.G analyst explains that if BLG can find the Longest Common Subsequence (LCS) in this "garbled text," they can use it to look up T1's warding data in the table, giving them vital information for the match.

The BLG coach, puzzled, asks, "Why can't you just tell me directly?"

GEN.G's analyst responds cryptically, "Because I once posted it directly online in a certain timeline, and after T1 still won, I got flamed pretty hard. Oh, and one last tip—ban Galio in game five!"

Now you will get k files that were shared in communication between GEN.G's analyst and BLG. Each file contain two integer n,m, representing the lengths, ans two string $s1$, $s2$. Your mission is to find the Longest Common Subsequence (LCS) between $s1$ $s2$ and use this sequence as a key to uncover T1's strategic information.

Input format

The first line contains an integer k, representing the number of file pairs.($1 \leq k \leq 5$)

For each file pair, the input includes 3 lines :

- first line contains two integer n and m ($n \times m \leq 10^7$)., means the length of the first file and the second file.
- second line contains string $s1$.
- third line contains string $s2$

It is guaranteed that all strings consist solely of lowercase alphabetic characters.

Output format

For each file pair, output the length of the LCS on a new line

Subtask score

Subtask	Score	Additional Constraints
1	30	$n \times m \leq 100$
2	70	No constraints

Sample

Sample Input 1

```
2
3 4
abc
abcd
2 5
aa
abcde
```

Sample Output 1

```
3
1
```

Notes