

VII BXComp

7º Campeonato de Programação para Calouros do Curso de Sistemas de Informação 2017

Etapa 6 – Desafio 1

Changing Strings

Joana, after taking the discipline of Introduction to Programming, was fascinated by Strings. She decided to handle given sequences of characters, incrementing them one by one, in order to discover the new words that were formed. For example: the word “tang” was derived from the word “hang” by shifting forward the first character twelve times.

hang → iang → jang → ... → rang → sang → tang

Task

You and Joana decided to build a program that, given two sequences of characters, calculates the minimum amount of displacement (for every or any of the characters) necessary in order to turn the first word into the second one. Each character must be forward shifted individually.

For example, in order to turn “ac” into “dd”, only four displacements are necessary, in two possible ways: $ac \rightarrow bc \rightarrow cc \rightarrow dc \rightarrow dd$ and $ac \rightarrow ad \rightarrow bd \rightarrow cd \rightarrow dd$

You must consider the alphabet to be arranged in a circular manner, meaning that after the letter ‘z’ comes the letter ‘a’.

Input

The input is composed of a set of test cases, in which the first line contains a positive integer **T**, such that $1 \leq T \leq 100$, indicating the number of test cases to be considered. Each one of the **T** test cases will consist of a line with two strings (**S1** and **S2**) separated by a single blank space with the same number of characters.

Output

The output of the program must have, for each case, an integer representing the minimum number of displacements to be taken in order to turn **S1** into **S2**.

Input Samples

```
3
dada dada
yz ba
abcdefghijklhiz aaaaaaaaaa
```

Output Samples

```
0
4
173
```