

3309 Anagrammatic Distance

Two words are said to be **anagrams of each other** if the letters from one word can be rearranged to form the other word. For example, *occurs* is an anagram of *succor*; however, *dear* is not an anagram of *dared* (because the *d* appears twice in *dared*, but only once in *dear*). The most famous anagram pair (in English) is *dog* and *god*.

The **anagrammatic distance** between any two words is the minimum number of letters which must be removed so that the remaining portions of the two words become anagrams. For example, given the words *sleep* and *leap*, we need to remove a minimum of three letters — two from *sleep* and one from *leap* — before what's left are anagrams of each other (in each case, *lep*). With words such as *dog* and *cat*, where the two have absolutely no letters in common, the anagrammatic distance is an extreme (explicitly 6) since all the letters need to be removed. (Here, a word is always an anagram of itself.)

You must write a program to calculate the anagrammatic distance between any two given words.

Input

The first line of the input will contain a positive integer value N (less than 60,000) indicating the number of cases. Each case will consist of two words, possibly empty, each given on a single line (for a total of $2N$ additional lines).

Although they may have zero length, the words are simple — the letters are all lowercase and are taken from the usual twenty-six letter English alphabet (abcdefghijklmnopqrstuvwxyz). The longest word is 'pneumonoultramicroscopicsilicovolcanoconiosis'.

Output

The output should consist of the case number and the anagrammatic distance, formatted as shown.

Sample Input

```
4
crocus
succor
dares
seared
empty

smell
lemon
```

Sample Output

```
Case #1: 0
Case #2: 1
Case #3: 5
Case #4: 4
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