E. Code Distance

Input File: E.txt
Run Time Limit: 10 sec

There are many distances in our world. The distance to the moon is 384.4 million meters and the distance to Alpha Centauri is 4.367 light years. There are also distance measures between bit fields. For example, the Hamming Distance between two n bit binary code words is the number of bits that must be changed in one of them to make it equal to the other.

Two Strings of characters have a Levenschtein distance D between them if a minimum of D of the following operations are necessary to transform one of the Strings into the other.

* Add one character
* Remove one character
* Substitute one character for another

The two Strings "Hello World" and "Hell Word" have a distance of 2. And the two strings, "abcghijkpq" and "bcdehijprt" have a distance of 7.

Given a series of pairs of Strings, calculate the distance between each pair.

Input:
There are multiple test cases in the input, each occupying two lines of text. For n test cases there will be $2n+1$ lines of text, $1 < n < 100$, the last being a line containing the word "End". Do not process this line. Each String will contain between 1 and 50 characters inclusive. All characters will be chosen from the alpha-numeric set plus the space character:
{A,B,C, . . ., Z} ∪ {a,b,c, . . ., z} ∪ {1,2,3, . . ., 9} ∪ {' '}

Output:
For each of the n pairs of Strings in the input, print the case number as shown below and the distance between those two Strings.

Sample Input	Output for Sample Input
Hello World	Case 1: 2
Hell Word	Case 2: 12
Magic moments	Case 3: 3
All Magic	Case 4: 7
Tu eres Hermosa	
Tu estas Hermosa	
abcghjkpq	
bcdehijprt	
End	