Jesse and Two Strings

Jesse loves playing with strings, so Wanda gives him two strings, A and B, and asks him to find the length of the longest palindrome that can be fomed using the characters from two palindromic subsequences such that one palindromic subsequence is chosen from A and the other palindromic subsequence is chosen from B.

Jesse has no idea of how to do this; can you help him solve Wanda's problem?

Time Limits: The time limit for C/C++ is 1 sec, Java is 2 sec, C# is 2 sec, Python2/Python3 is 15 sec, and all other languages have standard time limits. See the Environment Page for details.

Input Format

The first line contains T, the number of test cases.
The test cases are described over $2T$ subsequent lines; the first line of each test case contains string A, and the second line contains string B.

Constraints
$1 \leq T \leq 10$
$1 \leq |A| \leq 1000$
$1 \leq |B| \leq 1000$
Strings A and B only contain lowercase letters.

Output Format

For each test case, print the length of the longest palindrome that can be formed from two palindromic subsequences (chosen from A and B) on a new line.

Sample Input

```
2
abba
bccb
abccdba
zxdyyz
```

Sample Output

```
8
10
```

Explanation

For the first test case, we choose the palindromic subsequences **abba** from A and **bccb** from B. The longest palindrome we can form is **abbccbba**, and we print its length (8).

For the second test case, we choose the palindromic subesequences **abccba** from A and **zyyz** from B. The longest palindrome we can form is **abczyyzcba**, and we print its length (10).