

# Bracelets

Lea's neighbours have two daughters: Lara and Sarah. Last Christmas, Lea bought two nice silver bracelets for them. She had hoped they would like them, but they reacted as every child does: Each of them wanted to have the other's bracelet, but neither of them was willing to trade. Lea soon realized that she should have bought absolutely identical gifts.

Luckily, she had an idea how to fix this. The bracelets are built from smaller segments, each of them having a tiny picture on it. Lea is able to remove any of the segments, but by doing so she destroys them. Therefore, she may not exchange segments, but only remove some of them. She quickly figured out which segments to remove that both bracelets look the same. But now, weeks later, she still worries whether she could have removed other segments in a way that the remaining bracelets would have been longer.

## Input

The first line of the input contains an integer  $t$ .  $t$  test cases follow, each of them separated by a blank line. Each test case consists of two lines containing one string  $a$  and  $b$ , respectively, describing the bracelets. The strings contain only the lower-case characters "a" to "z", representing the different pictures on the segments. Note that you may rotate the bracelets or turn them around, for instance "abcd" describes the same bracelet as "bcda" and "dcba" do. Also, the given bracelets may have different lengths.

## Output

For each test case, output one line containing "Case # $i$ :  $x$ " where  $i$  is its number, starting at 1, and  $x$  is the maximum length of the identical bracelets after removing some segments. Each line of the output should end with a line break.

## Constraints

- $1 \leq t \leq 20$
- $1 \leq |a|, |b| \leq 250$

### Sample Input 1

```
2
abcdef
dcbafe
```

```
abcdd
dbac
```

### Sample Output 1

```
Case #1: 6
Case #2: 3
```

**Sample Input 2****Sample Output 2**

17	Case #1: 0
qbt	Case #2: 0
aoygjd	Case #3: 3
	Case #4: 1
zjj	Case #5: 0
ohl	Case #6: 2
	Case #7: 1
plk	Case #8: 3
kceplsidfw	Case #9: 2
	Case #10: 3
gskztvi	Case #11: 0
cowv	Case #12: 1
	Case #13: 0
cyico	Case #14: 0
dvu	Case #15: 1
	Case #16: 2
opzohlhojv	Case #17: 1
lr	
ossvcg	
khfvkbelkt	
qkoybfurhb	
aodnquw	
hdiin	
omnerhn	
tlhah	
extpcafhg	
fnn	
jkidv	
lypb	
ciymmmwc	
oturhkf	
vwqwl	
zhmrvh	
iguft	
glf	
xvigra	
gpxz	
hmgbldgw	
qlmp	
qxxxxsvtes	