

# Rotations

Given a string  $S$  over the alphabet  $[a-z]$ , the 'cyclic rotation' that chain is obtained by removing one or more characters from the beginning of the string and place them in the same order at the end of this. Eg. if  $S = 'abcd'$  some of its cyclic rotations are 'bcda' and 'dabc'. Given two strings  $P$  and  $Q$ , both of the same length, decide whether  $Q$  is a cyclic rotation of  $P$ .

## Input

The first line contains an integer  $T$ , which represents the number of cases to solve. Each case consists of two lines, the first containing the string  $P$  and the second line contains the string  $Q$ .

$T \leq 100$

length  $P \leq 100000$

## Output

For each case should print 'Si' (without quotes) if the string  $Q$  is a cyclic rotation of  $P$ , and 'No' otherwise.

## Example

**Input:**

2

abc

cab

aabb

abab

**Output:**

Si

No