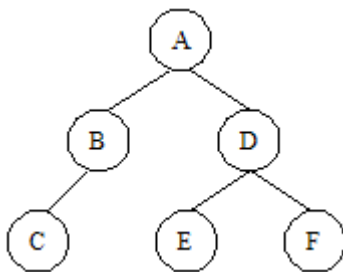


A common problem in data structures is to determine the traversal of a binary tree. There are three classic ways to do it:

- **Pre-order:** You must visit in sequence the root, left subtree and the right subtree.
- **In-order:** You must visit in sequence the left subtree, the root and the right subtree.
- **Post-order:** You must visit in sequence the left subtree, the right subtree and the root.

See the picture below:



The pre, in and post-order traversal are, respectively, ABCDEF, CBAEDF and CBEFDA. In this problem, you must compute the post-order traversal of a binary tree given its in-order and pre-order traversals.

Input

The input set consists of a positive number $C \leq 2000$, that gives the number of test cases and C lines, one for each test case. Each test case starts with a number $1 \leq N \leq 52$, the number of nodes in this binary tree. After, there will be two strings S_1 and S_2 that describe the pre-order and in-order traversal of the tree. The nodes of the tree are labeled with different characters in the range 'a'..'z' and 'A'..'Z'. The values of N , S_1 and S_2 are separated by a blank space.

Output

For each input set, you should output a line containing the post-order transversal for the current tree.

Sample Input

```
3
3 xYz Yxz
3 abc cba
6 ABCDEF CBAEDF
```

Sample Output

```
Yzx
cba
CBEFDA
```