

Construct tree from Inorder and LevelOrder

Given inorder and level-order traversals of a Binary Tree, construct the Binary Tree and return the root Node.

Input:

First line consists of T test cases. First line of every test case consists of N, denoting number of elements is respective arrays. Second and third line consists of arrays containing Inorder and Level-order traversal respectively.

Output:

Single line output, print the preOrder traversal of array.

Constraints:

$1 \leq T \leq 100$

$1 \leq N \leq 100$

Example:

Input:

```
2
3
1 0 2
0 1 2
7
3 1 4 0 5 2 6
0 1 2 3 4 5 6
```

Output:

```
0 1 2
0 1 3 4 2 5 6
```

```
def buildTree(level, ino):
    #code here
    #return root of tree
    return buildTreeHelper(level, ino)

def buildTreeHelper(level, inorder):
    if len(inorder) == 0:
        return None
    node = Node(level[0])
    idx = inorder.index(level[0])
    hasSet = set()
```

```
leftSet = []
rightSet = []
i = 0
while i<idx:
    hasSet.add(inorder[i])
    i = i+1
for ele in level[1:]:
    if ele in hasSet:
        leftSet.append(ele)
    else:
        rightSet.append(ele)
node.left = buildTreeHelper(leftSet,inorder[:idx])
node.right = buildTreeHelper(rightSet,inorder[idx+1:])
return node
```