**Inorder Successor of Node in BST**

The inorder successor of a node p is the node q that comes just after p in the binary tree's inorder traversal.

Given the root node of a binary search tree and the node p, find the inorder successor of node p. If it does not exist, return null.

A diagram of a network

Description automatically generated

**Testing**

**Input Format**

The first line contains an integer ***T*** denoting the number of test cases.

For each test case, the input has 2 lines:

* The first line contains an integer ***n*** denoting the number of nodes in the tree (including the NULL nodes).
* The second line contains *n* space-separated integers that will form the binary tree. The integers follow level order traversal of the tree where -1 indicates a NULL node.
* The third line contains an integer denoting the 0-based index of p in the above list.

**Output Format**

For each test case, the output contains an integer with the value of the inorder successor. In case the successor doesn't exist the value is -1.

**Sample Input**

4

9

2 1 3 -1 -1 -1 5 4 7

2

7

6 3 21 -1 -1 -1 89

1

12

8 3 9 -1 4 -1 10 -1 -1 -1 12 11

11

4

28 14 -1 11

0

**Expected Output**

4

6

12

-1