Write the correct answer in your answer script:

Check the BST below:

4 − 4 = 0
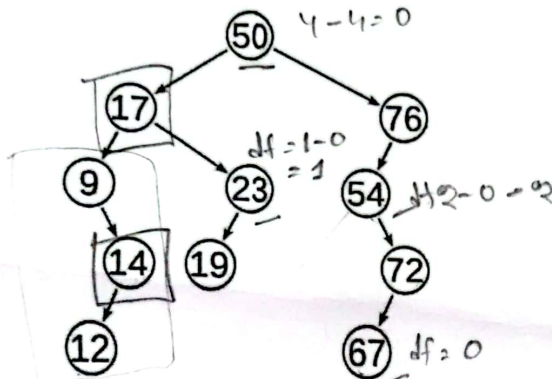
un balanced → height difference
between left & right subtree exceeds 1.

50
17   76
9   23   54   df = 1 − 0 = 1   df = 2 − 0 = 2
14 19   72
12   67   df = 0

I. Which is an unbalanced node in the above tree?

a. 50, b. 23, c. 54, d. 67

II. Which is the predecessor of Node 17 in the above BST?   left sub-tree exits.
a. 23,   b. 9,   c. 50,   d. 14   left-sub-tree's right most node

III. Which of the following <u>linear array</u> is the most accurate and <u>ideal representation?</u> (N indicates None value)
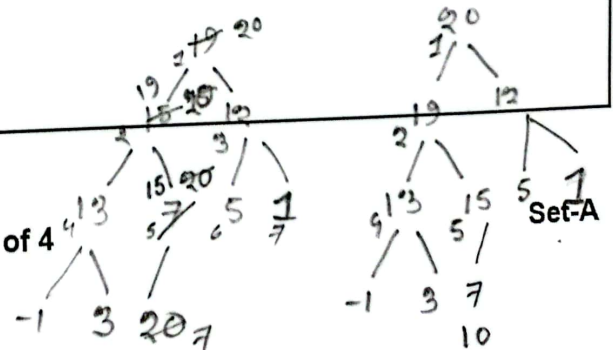
a. [1, 2, N, N, 4, 5]
b. [1, 4, -3, N, 5, 7]
c. [1, -2, 3, N, N, N]
d. [N, N, 1, 4, 5, 7]

IV. Heap = [N, 19, 15, 12, 13, 7, 5, 1, -1, 3]

1 2 3 4 5 6 7 8 9

This array indicates a maxHeap. Value 20 is inserted in the heap. What will be the index of the value 7 in the new heap?

a. 4, b. 5, c. 9, d. 10

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Set-A

V. Which of the following is FALSE?
- a. Linked List does not allow random access. ✓
- b. Head node cannot be directly accessed from the Tail node in a Singly Circular Linked List. ✗
- c. Each node has two pointers in a Doubly Circular Linked List. ✓
- d. Tail node can be directly accessed from the Head node in a Doubly Circular Linked List.