

1(a)

The procedure involves two cases.

Case 1: node x has a right child. If so, then the successor of x is the minimum key in x 's right subtree.

Case 2: node x has no right child. If so, follow the path from x to the root, the first node with left child subtree containing x is x 's successor. If such node could not be found, x has no successor.

This case can be further divided. If x is the left child of a node, its parent is x 's successor. If not, traceback to the root until reaching the first node containing x in its left subtree.