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What is the worst case time complexity for search, insert and delete operations in a general Binary Search Tree?

(A) O(n) for all

(B) O(Logn) for all

(C) O(Logn) for search and insert, and O(n) for delete

(D) O(Logn) for search, and O(n) for insert and delete

Which of the following is a true about Binary Trees

a Every binary tree is either complete or full.

b Every complete binary tree is also a full binary tree.

c Every full binary tree is also a complete binary tree.

d No binary tree is both complete and full.

e None of the above

The number of leaf nodes in a rooted tree of n nodes, with each node having 0 or 3 children is:

n/2

(n-1)/3

(n-1)/2

(2n+1)/3

The height of a binary tree is the maximum number of edges in any root to leaf path. The maximum number of nodes in a binary tree of height h is:

$2^h - 1$

$2^{(h-1)} - 1$

$2^{(h+1)} - 1$

$2*(h+1)$

In a complete k-ary tree, every internal node has exactly k children or no child. The number of leaves in such a tree with n internal nodes is:

nk

(n – 1) k+ 1

n(k – 1) + 1

n(k – 1)