Red-Black Trees

Definition: A binary search tree is a red-black tree if:
A. Except for the root, every non-leaf vertex must have a sibling.
B. Every vertex is red or black; the root is always black.
C. All root to leaf paths have the same number of black vertices.
D. A red vertex may not have a red sibling and if it is not a leaf, it must have two black children.
E. Black leaves must have a sibling; red leaves may not have a sibling.

Example: All of the following are red-black trees: