A binary search tree is a binary tree with the property that all items in the left subtree are less than the root item, all items in the right subtree are greater than the root item, and the subtrees are also binary search trees.

(a) Specify the binary search tree property formally.
(b) How many binary search trees are there with three items?
(c) Write a program to find an item in a binary search tree.
(d) Write a program to add an item to a binary search tree as a new leaf.
(e) Write a program to make a list of the items in a binary search tree in order.
(f) Write a program to determine whether two binary search trees have the same items.