isHeap

Implement a method isHeap to verify whether a given array of integers is a valid binary heap. isHeap should return true if the array is a binary heap, false otherwise. You may assume that the array provided represents a valid structure (in other words, check to see if the order property is satisfied. For example, suppose a variable array contains the following sequence of values: [2, 4, 6, 10] isHeap( array ) would return true.

heapSort

Write pseudocode to sort an array using a minHeap. What is the asymptotic worst case runtime of your method?
Binary Search Tree Dictionaries

Assume we are implementing a Dictionary ADT using a Binary Search Tree where the keys are ints and the values are Strings.

```java
public class IntTree {
    private IntTreeNode root;
    private class IntTreeNode {
        IntTreeNode left;
        IntTreeNode right;
        int key;
        String value;
    }
    // Add your methods here....
}
```

Implement the `boolean contains(key k)` method for this class. What is the runtime for this method? How does this method compare to a similar function in a heap or queue?