

- A) BSTSet is the fastest at inserting uniform random inputs but only by a degree of .001. AVLTreeSet & TreeSet are considerably faster than BSTSet at inserting increasing inputs. TreeSet being the fastest. The height of BSTSet for increasing inputs (1000) is absurd compared to AVLTreeSet (14).
- B) Complexity of AVLTreeSet insert and BSTSet insert are both $O(h)$, h is the height of the tree. Since AVLTreeSet is balanced it runs in $O(\log n)$. BSTSet is $O(N^2)$ because it runs through the whole set looking for a place to insert.