

# Assignment 5

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1. When the root list is consisted of singleton trees, then our insert action will enable the heap to be linear chain.
2. (a) The time complexity is not  $O(1)$ . Actually it equals to the degree of the node, so it should be  $O(x.degree)$ .  
(b) The time complexity of CASCADING-CUT is  $O(1)$ . So the total time complexity is  $O(c + x.degree)$ .