CS 3520: Algorithms

Homework 4

**Due Date: Wednesday, March 27, 2019 at beginning of class**

***Please write legibly. Show your steps to receive partial credit.***

1. (30 points) Find the order of growth for the solution of the following recurrences.
   1. T
   2. T
   3. T
2. (30 points) Sort the list P, R, A, C, T, I, C, E in alphabetical order by merge sort. Show your process of sorting by listing the result after each iteration. Mark the groups with parentheses.
3. (40 points) Use Quicksort with Hoare’s Partition on pages 176 and 178 of the textbook to sort the list P, R, A, C, T, I, C, E in alphabetical order. Show your process of sorting by listing the result after each iteration. Mark the pivot, and in each iteration.