CSci 1302 Assignment 10
Due Mon., November 20

Problem 1 (10 points). Exercise 26 p. 570.

Problem 2 (10 points). Some implementations of the quick sort algorithm choose a pivot the following way: take the first three elements in the array, compare them to each other, and take pivot to be the middle one.

1. How many comparisons does this add to a pass of quick sort (a pass here means separating an array into two sub-arrays and the pivot)? Please explain your answer.

2. Does it change the worst-case efficiency of the algorithm? Please explain, use the result from question 1.

3. What is the purpose of this procedure? Please give a detailed answer.

Problem 3 (10 points). Exercise 11 p. 267.

Problem 4 (2 points). Exercise 14 p. 268.

Problem 5 (3 points). Exercise 22 b,c,e p. 268.

Problem 6 (6 points). Exercises 28c, 29 b,d p. 268.