Homework 1
CS 581 Algorithms, Spring 2016

1. Problem 1-1 in the book (use base 2 logarithm).

2. Exercise 2.3-4 in the book. Also give pseudocode for the recursive algorithm.


4. Exercise 2.3-7 in the book. Write pseudocode.

5. For each of bubblesort, insertion sort, and merge sort, give the best and worst case running time, as well as (small) arrays that realize each. Note that the pseudocode for bubblesort is given in Problem 2-2 in the book.

6. Part b of Problem 2-3 in the book. Be sure to analyze the algorithms in terms of the total number of additions and multiplications performed.

7. Part b of Problem 2-4 in the book.