Due at the start of class Friday, June 24, 2011.

**Problem 1.**

(a) Assume you use Selection Sort to find the median of 9 elements. Exactly how many comparisons do you use?

(b) Assume you use Mergesort to find the median of 9 elements. Exactly how many comparisons do you use?

**Problem 2.** It turns out that you can find the Median of 9 elements with 14 comparisons.

(a) Write down the recurrence for a Selection algorithm based on columns with 9 elements each. (You can ignore floors and ceilings, as we did in class.)

(b) Solve the recurrence.

**Problem 3.** Do Exercise 9.3-7 on page 223 of CLRS

**Problem 4.** Do Exercise 9.3-9 on page 223 of CLRS

**Problem 5. Challenge problem.** Show how to find the median of 5 numbers with only 6 comparisons.