

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.