MA/CSSE 473   Day 15 Announcements and Summary

Announcements:
1. HW6 (11 problems) due today; **No late days may be used for this one.** It is big!
2. **Exam1 date:** Tuesday Sept 30. In class.
      o   Exam 1 specification document is linked from Day 16 on the schedule page.
3. HW 7 due Thursday.
4. In my office today: Hours 6-8, first half of 10..

Main ideas from today:

1. List some divide-and-conquer algorithms from previous courses or earlier in this course.

2. In the divide-and-conquer algorithm for the closest points problem, what is the basis for the "divide" part?

3. Once we have found the minimum distance between two points in each half, what is left to do?

4. If we calculate the distance between every point in S_1 and every point in S_2; what is the total running time then?

5. Describe how we can reduce the "combining" work after the divide and conquer from $\Theta(N^2)$ to $\Theta(N)$.

6. What is the big-theta running time of the new closest points algorithm?