**Project 3 Part 3 (full recursive approach O(nlog^2n))**

Name: Vivian Feng Period: \_\_\_\_\_\_\_\_\_\_\_\_

Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Is your lab name l033?(lowercase L followed by digits 033) \_\_\_\_\_\_\_\_\_\_\_

Did you created a class to store a point? \_\_\_\_\_\_\_\_\_\_\_

Did you use a vector to store the points you generated? \_\_\_\_\_\_\_\_\_\_\_

Did you use at least one iterator to traverse the vector you created (optional)? \_\_\_\_\_\_\_\_\_\_\_

Did you sort using the sort method offered by C++? \_\_\_\_\_\_\_\_\_\_\_

Does your main has the part1 commented out? \_\_\_\_\_\_\_\_\_\_\_

Does your main contain only 3 calls of: part0(), part2() and part3() (NO part1!!)? \_\_\_\_\_\_\_\_\_\_\_

(in main you may also have the part to display results for the 2 methods and then also in the txt file)

Obs: the part1 and part2 may have a return type like the time it took to complete the algorithm, the minimum distance, the points for the minimum distance, or you may create global variables for these.

1. **Paste here a clear picture of the graph that compares the running times of the “initial recursive” algorithm and “full recursive” algorithm versus number of points. (use 2 different colors for the 2 graphs, colors that can be visible even if you print in black and white). Each point on this graph should be an average of several runs for that size:**
2. **Paste here the content of the results.txt when you run your lab on the content of the file points10k.txt and points100k.dat**

**For 10k:**

**For 100k:**