

CSc 437
Homework 2 (100 pts.)
Due: 9/27/01

Instructions. All assignments are to be completed on separate paper in neat, legible pencil. Use only one side of the paper. Assignments will be due at the beginning of class, or if you can not make it to class give your assignment to Kim Wilson in GS 721. Please hand in your assignment inside a manilla envelope. To receive full credit, you must show all of your work.

All questions are taken from the textbook

1. 3.1
2. 3.7
3. 3.10
4. 3.11
5. draw an “interesting” simple polygon and show the result of the $O(n \log n)$ -time triangulation algorithm describes in the textbook. “Interesting” means that all cases that the algorithm handles arises in this polygon.
6. 8.1
7. 8.3
8. Let R be a set of n axis-parallel squares in the plane. Give an $O(n^2)$ time algorithm for finding the line in the plane that intersects that maximum number of triangles. (hint - find the dual of a square).
9. 8.10