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.

Unless otherwise specified, all questions are taken from the textbook, from the version spreaded in class.

1. Let P_r be sets of n red points, and let P_b be a set of b blue points. Given a linear time algorithm that finds a line ℓ seperating P_r fronm P_b, or determines that no such line exists. Hint, use duality, and tread differently the case that ℓ is vertical.

2. 4.9 (4.10 In the new version of the textbook - only the first part)

3. 4.11 (4.13 In the new version)

4. 4.14 (4.15 in the new version)

5. 4.15 (4.16 in the new version)

6. Show that if a set of halfplanes are given with increasing order of slopes of their bounding lines, then the intersection of these halfplanes can be computed in linear time.