Due in class: Nov 14.

(1) Given the exact locations and shapes of several rectangular buildings in a city, draw the skyline of these buildings after eliminating hidden lines. You may assume that all the buildings are resting on a straight line. Building $i$ is represented by a triple $(L_i, H_i, R_i)$ where $L_i$ and $R_i$ are the left and right $x$ coordinates of the building and $H_i$ denotes the height of the building. A skyline is a list of coordinates and the heights connecting them are arranged in order from left to right. Heights are indicated in boldface. $(1, 11, 5), (2, 6, 7)$ and $(3, 13, 9)$ could denote a possible input. The output is $(1, 11, 3, 13, 9)$. Design an $O(n \log n)$ algorithm.

(2) Problem 8.2-4 (page 170).

(3) Problem 9.3-8 (page 193).

(4) Problem 9.1-1 (page 185).