

NAME (Please Print): \_\_\_\_\_

HONOR PLEDGE (Please Sign): \_\_\_\_\_

Statistics 218

### **Homework 4**

You are allowed to discuss problems with other students, but the final answers must be your own work. Please attach this page to your solutions.

**YOU MUST ATTACH SEPARATE PAGES, NEATLY WRITTEN, THAT SHOW YOUR WORK.** You may include computer printout.

Report all numerical answers to at least two correct decimal places.

**DUE DATE: IN CLASS ON WEDNESDAY, OCTOBER 28.**

1. Exercise 10.4, parts a, b, and c, on p. 385.
2. Exercise 7.1, p. 257.
3. Verify that the Haar mother wavelet has regularity  $(0,0)$ , and that the father wavelet satisfies the first two conditions. For the Haar wavelets, describe the spaces  $V_0$  and  $W_0$  in multiresolution analysis. Derive the two-scale identities for the Haar wavelets.