Homework 6: Due Tuesday March 4
Math 3593H: Honors Calc II
Spring 2008

All problems from the text of Hubbard and Hubbard:
Section 4.7: 1,2
Correction: In the first problem here, change the limit to read,

$$\lim_{k\to\infty} \frac{1}{(2^k)^3} \sum_{0\le n,m\le 2^k} m e^{-\frac{mn}{(2^k)^2}}$$

where k is a positive integer. That is, we are replacing N with 2^k and taking k to ∞.

In the second problem, we make similar changes. We consider the disc $x^2 + y^2 \le (2^k)^2$, where again k signifies a positive integer. Show that the limit

$$\lim_{k\to\infty} \frac{A(2^k)}{(2^k)^2}$$

exists. In the second part you make a similar change - working again with the disc of radius 2^k instead of R.

Section 4.9: 3, 4, 5
Section 4.10: 1,2,4, 5, 6, 10