Calculus II
Homework Eight point Five
Due Friday 1 June, 2007

But I'd suggest doing it well before then

Chapter 9.1:

1. 8
2. 9
3. 13
4. 14
5. 20-29
6. 48
7. 56

Chapter 9.2:

1. 18-21
2. 30
3. 31
4. Two trains are 100 km apart. At noon, they start moving directly toward each other at a speed of 10 m/s. Eventually, they crash. Initially, a bird is sitting on one of the trains. At noon, the bird flies directly toward the other train at 20m/s. As soon as it reaches the train, it turns around and heads to the other train. As soon as it reaches this train, it again turns around and heads toward the other one, and so on, traveling at 20 m/s all the while. The bird zigs and zags back and forth between the two trains. Eventually, when the trains crash, the bird is crushed, too. How far did the bird travel?

   (a) Do this problem the easy way.

   (b) Do this problem the hard way, by expressing the distance traveled as a geometric series and summing the series.

Chapter 9.3:

1. 10-16, even only. Be sure to explain your reasoning