Calculus II
Homework One
Due Friday 9 January, 2009

Chapter 5.1:

1. 1
2. 7
3. 8
4. 17-19
5. 25
6. 26

Use Maple to do the following:

1. Determine the sum of the first 100 integers.
2. Determine the sum of the first 100 squares. I.e., $1 + 4 + 9 + 16 + \cdots + (99)^2 + (100^2)$.
3. Consider the following sum:

$$\frac{4}{1} - \frac{4}{3} + \frac{4}{5} - \frac{4}{7} + \frac{4}{9} + \cdots . \tag{1}$$

   Determine the value of this sum if it include 1000 terms. Determine the value of the sum if it include one million terms. Does this number look familiar?