Each problem that I solved became a rule which served afterwards to solve other problems.
—Descartes

Honors Calculus – Math 129 – Fall 2010 – R. Pollack
HW #4

Textbook questions:

1. Chapter 8: 8.1(a,b,c), 8.2(d,e), 8.3
   (You should be using the definition of the limit to do these questions.)

2. Chapter 9: 9.1, 9.2
   (You may use the limit laws discussed in class and in the book to do these questions.)

Some more questions to try but not to hand in:

3. Chapter 8: 8.5(a), 8.7(b)

Extra credit question:

4. Consider the Fibonacci sequence \( \{F_n\} \) defined recursively by \( F_1 = 1, F_2 = 1, \) and \( F_n = F_{n-1} + F_{n-2} \)
   for \( n \geq 2 \). Does the sequence \( \left\{ \frac{F_{n+1}}{F_n} \right\}_{n \in \mathbb{N}} \) converge, and if so, to what number?