

1. 20 points: Chapter 1, Problem 2 (page 23).
2. 20 points: Chapter 1, Problem 15a, 15b, and 15c (page 24).
3. 20 points: Chapter 1, Problem 17 (page 24).
4. 20 points: Chapter 1, Problem 18 (page 24).
5. 20 points: Chapter 1, Problem 24 (page 25).
6. 20 points extra credit: Use Mathematica to solve Problem 15 and 18 of Chapter 1 (Problem 2 and 4 on this homework assignment). In order to receive the extra credit, you should create a Mathematica Notebook, showing on the relevant calculations, and submit it electronically to Prof. Wolfs at wolfs@pas.rochester.edu. The name of the file should be hw01p06XXYYYYYYYYY.nb where XX are your initials and YYYYYYYYYY is your student id number. The subject of the email should start with hw01p06XXYYYYYYYYY. If you use the Mathematica results also as part of the solutions of Problems 2 and 4, you should print out the Notebook and attach it to the assignment you hand in. Make sure you refer to these calculations in your written solutions of these problems. **But remember:** on exams you will not have access to Mathematica so you still need to understand how to work these problems out by hand.