Problem Set 4
Due: 9:00 a.m. on Wednesday, February 10

Instructions: Carefully read Sections 1.7, 2.1, 2.2, and 2.3 of the textbook. Submit solutions to all of the following problems. A subset of the problems will be graded. Be sure to adhere to the expectations outlined on the sheet *Guidelines for Problem Sets.* Submit your solutions in-class or to Dr. Cooper's mailbox in the Department of Mathematics.

Exercises: From pages 47–59 and 107–115 of the textbook.

1. Section 1.7 #1.42, page 57

2. Section 1.7 #1.43 parts (a), (b) and (c), page 57

3. Section 1.7 #1.44(a), pages 57–58

4. Section 1.7 #1.46(e), page 58

5. Section 1.7 #1.48, pages 58–59

6. Section 1.7 #1.50, page 59

7. Section 2.2 #2.3(c), pages 107–108

8. Section 2.2 #2.4(b), page 108

9. Section 2.3 #2.6, page 108

Note: You may use Maxima for tedious computations. If you do so, then please still show sufficient work. Recall that in Maxima, the command to find $a \pmod{n}$ is $\text{mod}(a, n)$. Also, the command to find the greatest common divisor of two positive integers a and b is $\gcd(a, b)$.