

## Problem Set 7

**Due: 9:00 a.m. on Wednesday, March 2**

*Instructions:* Carefully read Sections 2.8, 2.9 and 3.1 of the textbook. Submit your solutions to the following problems. 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 107–115 and 180–191 of the textbook.

1. Section 2.8 #2.18(d), page 111
2. Section 2.8 #2.23(c), pages 111–112
3. Section 2.9 #2.28(a), page 112
4. Section 3.1 #3.5, page 181

**Note:** You may use Maxima for tedious computations. If you do so, then please still show sufficient work. The following commands may be helpful:

- to find  $a \pmod{n}$  type the command `mod( $a, n$ )`;
- to find the greatest common divisor of two positive integers  $a$  and  $b$  type the command `gcd( $a, b$ )`;
- to find the prime factorization of a positive integer  $n$  type the command `factor( $n$ )`.