Submit this homework in Xiyuan’s mailbox, neatly written and stapled. Make sure to write your full name. You may – and are encouraged to – discuss and collaborate. However, you must write up your homework alone, and submit completely original work. Your solutions will be graded both on correctness and presentation clarity.

Study sections 2.5, 2.6 and 3.1.

- Section 2.5: problems 1, 2(b,d), 7, 10.
- Section 2.6: problems 1, 3, 13, 14, 19, 20.
- Section 3.1: problems 1, 2.

Always justify your solution. You may use any result stated in the sections we covered. In the “true or false” problems, give a proof if you believe the statement is true, or give a counterexample if you believe the statement is false.