Directions

1. This is an uncollected, ungraded homework. The answers can be found at the back of the Rosen text. (Why aren’t we having a ‘real’ homework over this material? For one reason, some of the questions are ‘review’ over prior topics that we think deserve more practice. For another, we don’t have time to grade another homework before the exam.)

2. Even though this is ungraded, the questions cover material that is “fair game” for the upcoming exam. Thus, we strongly recommend that you take them as seriously as you take normal homework questions. That is, write complete answers to all of the questions, do your own work, and show that work, when appropriate.

3. The class staff will be happy to answer your questions about these problems in SI sessions, during office hours, or via Piazza.

4. Incentive: To encourage you to work these problems, one of them will appear on the upcoming exam. Assuming that you work these problems – and remember what you did and learned – that exam question will be easy points.

Proofs:
- Section 1.7, 11.
- Section 1.7, 13.
- Section 1.7, 19(all).
- Section 1.7, 25.
- Section 1.7, 41. Use Contradiction.

Matrices:
- Section 2.6, 3(a,b).
- Section 2.6, 9.
- Section 2.6, 11.
- Section 2.6, 15.
- Section 2.6, 23.
- Section 2.6, 27(all).
- Section 2.6, 29(all).

Relations:
- Section 9.1, 5(a,c).
- Section 9.1, 9.
- Section 9.1, 15.
- Section 9.1, 23.
- Section 9.1, 35(a,c,e,g). See p. 145 for ⊕.
- Section 9.1, 37(d).

Digraph Representations of Relations:
- Section 9.3, 19(a).
- Section 9.3, 23.
- Section 9.3, 33.