Math 330, Handout 3: Review Problems for the Final Exam

The final exam will be comprehensive, with an emphasis on the material we have covered since the second midterm exam. The final exam will probably include at least one problem involving mathematical induction. To prepare for the final exam, you may wish to study the problems listed in this handout. I would suggest that you do as many of these problems as possible, but do not spend too much time on any single problem or on any single chapter. You may also wish to study your lecture notes and the textbook. You may *not* use calculators during the exam.

Many of the problems in this handout are ones that I have previously assigned. I will place solution keys to all problems from this handout in the file folder for this course in the Math Learning Center in Witmer Hall. The solutions may be confusing however. The reason for this is that some of the problems are associated with past homework assignments, while others are associated only with this handout. In the Math Learning Center, solutions to problems of different types may be in separate packets. I apologize for the inconvenience.

1. Do the following problems from Chapter 11: 1, 7.

2. Do the following problems from Chapter 18: 1, 2, 3 (parts a, b, and c), 4, 5, 6, 9.

   In Problem 6, above, use a pocket calculator as necessary.

3. Do the following problems from Chapter 19: 1 (parts i, ii, iii, iv, v, vii, and viii), 2 (parts i, ii, iii, iv, v, vii, and viii), 3, 4, 5, 6, 7, 8.

4. Do the following problems from Chapter 20: 1 (parts i, ii, iii, iv, and v), 2, 4 (all parts), 5 (parts a, b, c, and d), 6, 7.

   For Problem 1, Part iv, above, use the Fundamental Theorem of Arithmetic on page 99.

5. Do the following problems from Chapter 21: 1, 2, 3 (parts a and c), 4 (parts a, b, c, d, and e).

   In Problem 4, above, use $n = 5$, 6, 7, 8, and 12 (10, 12, 14, 16, and 24 cards, respectively).

6. Do the following problems from Chapter 22: 1, 3, 4 (parts b and c).

   In Problem 4, above, assume that you have already done Part a.

If you get stuck on any of these problems, see the solution keys in the Math Learning Center in Witmer Hall, or come to see me.