Homework 5, due on Friday, April 28.

Reading:

Read §3.5. You may skip the Preview Activities this time and start with "The Division Algorithm" in the middle of p. 143. The book mentions the Preview Activities a few times in the chapter, but skipping them shouldn't interfere with following the discussion. If it does, then go back to the Preview Activity mentioned.

Read §4.1. (Don't skip the Preview Activities in *this* section.)

Practice Problems

§3.5, p. 153: 4,5,6,7. NOTE: These are not difficult, and they build up to the result in 7 that you need to do Hand-In problem 8. Lots of help in the appendix if you get stuck.

§4.1, pp. 180-181: 3a.

Hand-In Problems

IMPORTANT ANNOUNCEMENT: Starting with this assignment, you do not have to justify every step of algebraic manipulation in your proofs. This means we are switching to the same standards as the book for the level of justification in proofs.

Corrected **Problem A3.** Assume a and b are integers. Prove the biconditional $4|(a^2 + b^2)$ if and only if a and b are even.

§3.3, p. 127: 7c. Remark: In an email about the exam practice problems, I said to assume $\sqrt{5}$ is irrational to do this problem. It's possible to do it using only that $\sqrt{2}$ is irrational (which we have proved). Try to use only the latter in your proof.

§3.5, p. 154: 8,12.

§3.6, p. 162: 3.

§4.1, pp. 180-186: 3bc, 18c. For 18c, just identify the major error in the use of induction.