

## Assignment for Thursday, 2/22

### I Exercises from the Book:

Section 5.2  $\rightarrow$  18a, 19, 21.

Section 5.3  $\rightarrow$  5, 6, 7, 10, 12, 13, 18.

### II Supplementary Exercises

(20) Let  $p \equiv 1 \pmod{4}$  be a prime.  
Show that

$$\left[ \left( \frac{p-1}{2} \right)! \right]^2 \equiv -1 \pmod{p}$$

~~(21) If  $p > 3$  is a prime, then~~

~~$$1 + \frac{1}{2} + \frac{1}{3} + \dots + \frac{1}{p-1} \equiv 0 \pmod{p}$$~~

~~Do S.E. #19 instead.~~

Removed.

(Hint: Both these problems use Wilson's Thm.)