622 HW, due Tuesday Mar. 7. Please do not "look up" any of these on the internet. If you have a question, don't hesitate to ask (office hours Thursday, in class Thursday, by email.

1. Number 1, page 545. (Find the roots of the polynomial in $\mathbb{C}$.)

2. Number 2, page 545. (Find the roots of the polynomial in $\mathbb{C}$.)

3. Number 3, page 545. (Find the roots of the polynomial in $\mathbb{C}$.)

4. Number 5, page 545. (Very neat and interesting fact you'll be proving. We've done careful proofs of Theorem 8 and 27.)

5. Number 3, pg 551. (This is very basic...don't use any field theory..)

6. Number 4, pg 551 (This is very basic—it's the last part, which I'll mention in class on Thursday that's a piece of interesting finite field theory.)

7. Number 5, pg. 551 (Neat problem–text's suggestions should get you through it.)