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Modern Algebra
MATH 325W – Spring 2015

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Monday:	Chapter 5: Fields	
Wednesday:	Chapter 5: Fields	**Week 4**
Friday:	Chapter 6: Solvability by Radicals	

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HOMEWORK

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Homework #6   **due Tuesday, February 10**

Ch. 4: #12, 16, 20, 22, 24, 25
Ch. 5: # 16
   Justify all steps with references to the field axioms.

Homework #7   **due Friday, February 13**

Ch. 5: #3, 14, 15, 17
   For #3, you want to carefully check the conditions of Proposition 5.2. For the rest, make sure to justify all steps with references to the field axioms.

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WRITING ASSIGNMENTS

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On writing assignments, part of your grade will reflect the quality of your **style**. Style includes everything from the basic mechanics of writing (complete, grammatically correct sentences with capitalization and proper punctuation) to the conventions of writing mathematics developed in Linear Algebra.

Writing Assignment #3   **due Wednesday, February 11**

Ch. 3: #54
   Hint: once you understand the definition, you should realize that you have essentially done this as a part of your proof of #53. But I do want you to rewrite everything in this new language.
Ch. 4: #29
Ch. 5: #18
   There is a typo in the book. The problem should read: "$\ldots a^{-1} + b^{-1} = (a + b)(ab)^{-1}$." Also, you can always use the results of problems that you have already proven, but be sure to properly cite them.
Extra Credit: Ch. 4: #36
   Only correct, well-justified, and beautifully written proofs will receive points!