Algebra for Educators
E Term 2017
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June 7, 2017

MME529 Homework 3
Due Date: Tuesday June 13th, 2017

RECALL: BASIC RULES FOR ASSIGNMENTS

I) Each student must compose his/her assignments independently. However, rough work may be done in groups;

II) Write legibly and use only <u>one side</u> of each sheet of paper;

III) Write at a level that will be clear to a classmate; there is no need to justify arithmetic or review definitions covered in class, but explanations should be given for anything that is not obvious. Write in full sentences.

IV) In general, late assignments will not be accepted for credit.

Reading: In our introduction to rings, we have already touched on most of the material in Chapter 12. Please review this and then carefully read Chapters 13 and 16.

There are many good exercises in these chapters and I encourage you to spend some time familiarizing yourself with the easier problems. It has become clear in class and through the midterm that many students are unfamiliar with the examples in the assigned reading.

There are no shortcuts to studying mathematical material: one must pull out a pencil and paper and work with examples. When reading is only superficial, it is easy to ignore meaning and miss the key point of an exercise. (For example, what is really required in Exercise 14 on p243? Do you understand the question? When you see a massive calculation such as the one on Exercise 36 on p302, is it clear that the author wants you to <u>avoid</u> tedious computation rather than perform it?)

Please submit thoughtful solutions to the following twelve problems:

1. #3 on p242
2. #6 on p242
3. #23 on p243
4. #29 on p244 [Formal proof required.]
5. #8 on p255
6. #20 on p256
7. #21 on p256
8. #24 on p256
9. #53 on p258
10. #3 on p300
11. #6 on p301
12. #14 on p301