CATEGORY THEORY	Lesson $03/17$
Dr. Paul L. Bailey	Sunday, March 15, 2020

This week, I would like you all to review some ring theory. Begin by skimming Chapter 12 and 13 in Gallian. Keep in mind that we have defined a ring to contain a unity, and a subring to contain the same unity, and a homomorphism to send unity to unity. This is different from Gallian.

Next, review chapters 14 and 15 on ideals and factor rings and homomorphisms. You know this material, but Gallian has his own style in speaking about it, and the book contains some interesting examples.

Finally, review chapter 16 on polynomial rings.

Write full solutions to the following problems. Try to finish these in the next couple of days, and let me know if you run into troubles.

- Chapter 12 # 38, 44, 49
- Chapter 13 # 29, 41, 48, 55
- Chapter 14 # 28, 32, 39, 47, 50, 52
- Chapter 15 # 12, 38, 63
- Chapter 16 # 2, 13, 14, 15, 27, 32