## Homework 8

Math 416 (sections 200 [Honors] and 500 [Regular]), Spring 2017

This homework is due on Thursday, March 9. Write your section number on the top of your homework.

- 0. (This problem is not to be turned in.)
  - (a) Read Sections 34, 36–37.
  - (b) (Practice Problems) Section 36 #2, 3, 5
- 1. Suggest a problem for the next exam that pertains to Sections 16, 34, and/or 36–37.
- 2. Section 34 #8, 9
- 3. Section 36 #10, 14, 16, 20
- 4. Section 37 #3(a-b, f-j), 5
- 5. Is every simple group of order 56 simple? Prove your answer.
- 6. Is every group of order  $455 = 5 \cdot 7 \cdot 13$  simple? Prove your answer.
- 7. (Honors only!) Section 34 #5
- 8. (Honors only!) Section 37 #8, 10, 11