

# Weekly Homework 9

Math 250

November 18, 2013

- A. Section 5.3: 1- 19 odds, 57-69 odds.
- B. Extra credit (5 points) 29-56, all with proper explanation.
- C. Extra credit (5 points) Go back to 5.3, problem 9. Verify that you can do the following and the relation  $A = PDP^{-1}$  still holds (of course with different  $D$ s and  $P$ s).
  - a) Change the order of the eigenvalues on  $D$ .
  - b) Change the choice of basis for eigenvectors (in order for the computation to be nontrivial, for the eigenvalue  $\lambda = 3$ , choose a completely different basis, not just multiples of the old basis).