

## MA515 Homework #5

**Due Thursday, September 30 (but it's also ok if you want to give it to me on Friday, October 1)**

Exercises to do from my course notes. Note the definitions of  $(\hat{P})$ ,  $(\hat{D})$ ,  $(P)$ , and  $(D)$ , at the top of page 74.

1. Exercise 10.2. Show that the statement is indeed false by producing a counterexample.
2. Exercise 10.7 parts 2 and 3. (Part 1 was a typo.)
3. Exercise 10.8 (Despite the length of the statement of this problem, the solution is just a few sentences.)
4. Exercise 10.10.
5. Exercise 10.16.

On your own:

1. Read Chapter 9 and report to me with any questions you may have.
2. Practice doing small examples of the simplex method by hand, including those requiring Phase I, or those that end up being unbounded.
3. Follow along the steps of the simplex method applied to the GGMC problem and see how the simplex method moves you from vertex to vertex of the feasible region.