

Assignment #9 for **Mathematics for Economists**
Economics 392M.8, Fall 2013

Due date: Mon. Nov. 11.

Readings: CSZ, Ch. 5.1-8.

We are now putting in place the material that we will need for the Kuhn-Tucker theorem. The K-T theorem is a basic tool for constrained optimization, and this makes the material worth the price of learning it. However, along the way we will also see the basics of: neo-classical duality theory; Farkas's Theorem of the Alternative and its implications for the equivalence of arbitrage free pricing and the existence of a martingale measure; Blackwell's ranking of the informativeness of statistics/information structures.

- A. **From Chapter 5.4:** 5.4.3, 5.4.4, and 5.4.5.
- B. **From Chapter 5.4:** 5.4.24.
- C. **From Chapter 5.5:** 5.5.3, 5.5.4, and 5.5.7.
- D. **From Chapter 5.6:** 5.6.11, 5.6.13, and 5.6.15.
- E. **From Chapter 5.6:** 5.6.23, and 5.6.24.
- F. **From Chapter 5.6:** 5.6.30, and 5.6.31.