

Assignment #4 for **Mathematics for Economists**  
Economics 392M.8, Fall 2013

**Due date:** Mon. Sept. 30.

**Readings:** Chapters 4.4 and 4.5

### **Problems**

The following is a pair of uses of “a.a.” and “i.o.” that will be frequently useful:  
 $[x_n \rightarrow x]$  iff  $(\forall \epsilon > 0)[|x_n - x| < \epsilon]$  a.a., and  $\neg[x_n \rightarrow x]$  iff  $(\exists \epsilon > 0)[|x_n - x| \geq \epsilon]$  i.o.

- A. **From Chapter 4.4:** 4.4.3, and 4.4.6.
- B. **From Chapter 4.4:** Any two of the following three; 4.4.12, 4.4.13, 4.4.14.
- C. **From Chapter 4.5:** 4.5.2, 4.5.8, and 4.5.9.
- D. **From Chapter 4.5:** 4.5.10, and 4.5.11.
- E. **From Chapter 5.1:** 5.1.14 and 15 (p. 177)