Econ 703 Homework 3

Fall 2008, University of Wisconsin-Madison

Prof. Raymond Deneckere

Due on Sep. 25, Thu. (in the class)

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1. Sundaram, #18, p. 68.

2. Sundaram, #23, p. 68.

3. Sundaram, #28 p. 69.
   Hint: You should break this problem into these three steps.
   1) Show that there exists a closed set C such that $A \subset C$.
   2) Show that if C_1 and C_2 are closed sets such that $A \subset C_1$ and $A \subset C_2$. Then, $C_1 \cap C_2$ is closed and contains A.
   3) Consider the intersection of all closed sets that contain A.

4. Consider the sequence $\{(x_k, y_k)\}_{k=1}^{\infty} \subset \mathbb{R}^2$ s.t. $y_k = f(x_k)$ for some continuous function f. Suppose that this sequence has a limit. Describe its limit and prove your answer.