University of Wisconsin-Madison
Department of Economics

Econ 703   Prof. R. Deneckere
Fall 2002

Homework #3
(due on Sep. 24 , 2002)

1.   Is every point of every open set $E \subset R^2$ a limit point of E? Answer the same question for closed sets in R^2.

2.   Sundaram, #25, p. 68.

3.   Let (X,d) be a metric space. Prove the following statement : $A \subset X$ is closed iff for every sequence $\{x_n\} \subset$ A, $x_n \to x$ implies $x \in A$.

4.   Let (X,d) be a metric space, and let $A \subset X$. Prove that A is closed if and only if it contains all of its limit points.