Homework 10

Math 114: Analysis II
Measure, Integration and Banach Spaces
Due Tuesday, 27 November 2007

Chapter 7: 38. Chapter 8: 8(b), 18, 20.

1. Give an example of a countable set $E \subset \mathbb{R}^2$ that is closed in the usual topology, but is dense in the Zariski topology. (This means there is no polynomial $0 \neq f \in \mathbb{R}[x, y]$ such that $f(E) = 0$).