PROBLEM SET 2b

1. Suppose $\{f_n\}$ is a sequence of continuous functions and let E be the set of x's where the seqeunce converges. Show that E is Borel, and hence Lebesgue measurable.

2. Is the set of rational numbers equal to the intersection of some countable collection of open sets?

3. Must the continuous image of a measurable set be measureable?