

Assignment 1 (Due: Sept. 26, 2009)

Exercise: Problems 1, 3, 4, 5, 6, 7

Extra Problem 1: Let $G \subset \mathbb{R}^n$ be an open set and $f : G \rightarrow \mathbb{R}$ be a real function. Show that the set $\{x \in G \mid f \text{ is not continuous at } x\}$ is a F_σ set.

Extra Problem 2: Suppose that f is a continuous function on \mathbb{R}^1 . Show that the set $\{x \mid f \text{ is differentiable at } x\}$ is a $F_\sigma\delta$ set.