

Introduction to Partial Differential Equations
11-11:50am
Main 0003
Fall 2012

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and by appointment.

Homework 2. Due Wednesday, 12 September 2012.

- Evans, p. 85, # 2, 4, 5, and 6.

Hint: In #4, it will be helpful to know that if u is a twice differentiable function defined on an interval $(-\epsilon, \epsilon)$ for some $\epsilon > 0$ and u has a maximum at 0, then $u''(0) \leq 0$. This follows from one variable calculus. Apply this fact to $t \rightarrow u(x_1, \dots, x_{i-1}, x_i + t, x_{i+1}, \dots, x_n)$ when x is a maximum for u .

- Week 3, 4 September–6 September, read section 2.2. We will skip 2.2c, the section on the Green function for a half-space.
- On Friday, 6 September, I would like to meet in Mathskeller for our first recitation. I need two student volunteers to present problems.

August 30, 2012