Theory of partial differential equations MWF 9-9:50am CB343 Spring 2013 Instructor: Russell Brown Office: POT741 Phone: 257-3951 russell.brown@uky.edu Office Hours: MWF 10-11 and by appointment.

Homework 5, due on Wednesday, 27 February

- 1. Evans, #17, page 308.
- 2. Evans, #19, page 308.
- 3. Prove that there is no $f \in L^1(\mathbf{R}^n)$ which satisfies

$$\int_{\mathbf{R}} f\phi \, dx = \phi(0), \qquad \phi \in C_c(\mathbf{R}).$$

Reading for February 18–22

- It will take a few days to get through Poincaré inequalities, and difference quotients
- §6.1. Definition of weak solutions.

February 17, 2013