

## Problem Set 1

- (1) Reading: Read Section 5.1-5.3.
- (2) Do problems 1, 3, and 4 from section 5.10 of Evans.
- (3) Prove parts i) - iii) of Theorem 1 from Section 5.2 of Evans.
- (4) Show that  $u(x) = \sqrt{|x|}$  is in  $W^{1,1}([-1, 1])$ .