PMAT 501/601 L01
Winter 2009 Assignment 6

Questions taken from the text by D. Cohn will be specified by page and number. Due April 17, 2009.

1. Consider the function $g : \mathbb{R} \to \mathbb{R}$ defined on p.61-6, say on the interval $[a, b]$, $-\infty < a < b < \infty$.
   (a) Is g Riemann integrable? Explain.
   (b) Is g Lebesgue integrable? Explain.
   (c) If integrable, determine $\int_a^b g d\lambda$.
2. p.83, 1
3. p.83, 2
4. p.83, 3
5. p.83, 7
6. Complete the proof of the Lebesgue dominated convergence theorem, as sketched in the last paragraph of the proof (p.73).
7. p.90, 2