Math 131BH Winter 2012: Homework 2, Due 1/23

1-3. Rudin p.138, problem 9, 11, 12.

4. Problem 5 from Homework 1, if you have not done it yet.

5. Problem 6 from Homework 1, now under the assumption that f is continuous.

6. Find a sequence of smooth (let's say twice differentiable) functions $f_n : \mathbb{R}^n \to \mathbb{R}$. which converges uniformly to zero but the sequence of its derivatives diverge at every point x.

7-8. Rudin p165 Ex. 2-3.