MATH 3162 Homework Assignment 3

Instructions: Solve and turn in all of the assigned problems, showing ALL steps or reasoning used in your solutions.

Due on Monday, February 4th, at the BEGINNING of class.

Abbott: 5.2.9(a), 5.3.7, 5.3.8, 5.4.5, 6.2.1(a,c,d), 6.2.7, 6.2.8

Extra problems for graduate students:

Abbott: 5.4.7(a), 6.2.11

• If $f : \mathbb{R} \to \mathbb{R}$ is differentiable on $\mathbb{R}$ and bounded (i.e. $\exists M$ s.t. $\forall x \in \mathbb{R}, |f(x)| < M$), prove that there exists an increasing unbounded sequence (x_n) so that $f'(x) \to 0$.