

MA 425-002 Homework

S. Schechter

October 5, 2005

1. Let $a \in \mathbb{R}$, let $f : (a, \infty) \rightarrow \mathbb{R}$ be a function, and assume that $f(x) > 0$ for all $x \in (a, \infty)$. Prove that if $\lim_{x \rightarrow a} f(x) = \infty$, then $\lim_{x \rightarrow a} \frac{1}{f(x)} = 0$.
2. Sec. 4.3 problem 11.