

MA 426-003/591M-003 Homework

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Assigned March 3, 2003, due March 21, 2003

1. Let $f_n(x) = \frac{1}{nx}$, $n = 1, 2, \dots$
 - (a) Let $a > 0$. Prove that f_n converges uniformly on $[a, \infty)$.
 - (b) Prove that f_n does not converge uniformly on $(0, \infty)$.
2. Sec. 5.1, problem 3. The answer is yes. Give a proof modeled on the proof of Prop. 5.1.4.
3. Sec. 6.2, problem 1.
4. Sec. 6.2, problem 3.