

Mathematic 405, Fall 2015: Assignment #9

Due: **Wednesday, April 22nd**

Instructions: Please ensure that your answers are legible. Also make sure that sufficient steps are shown. Page numbers refer to the course text.

Problem #1. p. 231 # 3

Problem #2. p. 231 # 5

Problem #3. p. 231 # 9

Problem #4. Let $\{x_n\}$ be a non-increasing sequence with $\lim_{n \rightarrow \infty} x_n = 0$. Show that $\sum_{n=1}^{\infty} (-1)^n x_n$ is convergent. (This is the alternating sequence test).

Problem #5. p. 262 # 1

Problem #6. p. 262 # 5

Problem #7. p. 262 # 6

Problem #8. p. 274 # 2