

## MA 241 HONORS REVIEW SHEET FOR TEST 4 (8.2-8.7)

**NOTE: YOU WILL BE EXPECTED TO NAME EACH TEST YOU USE**

- **Take the practice test at [www4.ncsu.edu/~lakurtz/241H.html](http://www4.ncsu.edu/~lakurtz/241H.html)**
- **8.2 Series**
  - Be able to determine if a given series is convergent
  - Know when a geometric series is convergent and what it converges to p. 567
  - Know about the Harmonic Series
  - Know the Test for Divergence
  - Know about Telescoping Sums
  - Examples: p. 572 #1,9,11,13,15,19,21,23,25,29,31
- **8.3 The Integral and Comparison Tests; Estimating Sums**
  - Know when the Integral test, Comparison Test, and Limit Comparison Tests can be applied.
  - Know when a p-series converges and when it diverges
  - Examples: p. 583 # 3,5,13, 17,19, 21,27,29
- **8.4 Series Other Convergence Tests**
  - Know the Alternating Series Test, the Ratio Test
  - Examples: p. 591 #3,5,17, 21,27,29,35,36
  - Know the Alternating Series Estimation Theorem (p. 587)
- **8.5 Power Series**
  - Be able to find the radius and interval of convergence for a given Power Series & be able to justify your work
  - Examples: p. 597 # 3,5, 7,13,16,19,26
- **8.6 Representations of Functions as Power Series**
  - Understand how to use the Geometric series to represent a Power series
  - Examples: p. 603 # 5, 9,11,21,23,38
- **8.7 Taylor and Maclaurin Series**
  - Know the difference between a Taylor and Maclaurin series.
  - Be able to use a Taylor polynomial to approximate different values
  - Examples: p. 616 # 7,9,13,43,45