

Math 1220 Midterm 3 Review Problems

Kelly MacArthur

Chapter 8 Review (pg 446-447)

Concepts Test Problems #18, 25

Sample Test Problems #22, 24, 27, 28, 31, 37, 38

Chapter 9 Review (pg 504-507)

Concepts Test Problems #1, 3, 6, 7, 9, 12-21 all, 26, 28, 30

Sample Test Problems #1-43 odd, 14, 24, 28, 30, 34, 40, 44

The exam covers sections 8.4, 9.1-9.7.

You can bring one 8.5 x 11 inch paper of notes (on both sides, if you want) to use as a reference. I would recommend that you bring the series' test flow chart as that paper, with whatever else you think you'll need written on the back side.

Topics:

- Improper Integrals (across VAs)
- Convergent/Divergent Sequences
 - take limit as n goes to infinity of n th term of sequence
 - squeeze theorem
 - is it monotonic and bounded?
- Absolutely Convergent/Conditionally Convergent/Divergent Infinite Series
 - n th term test for divergence
 - geometric series
 - p -series
 - absolute ratio test (ART)
 - integral test (IT)
 - ordinary comparison test (OCT)
 - limit comparison test (LCT)
 - argument by partial sums
 - alternating series test (AST)
- Power Series
 - basic (given) power series
 - algebraic or calculus manipulation of those given power series
 - convergence set