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/m175.fa05/handouts175/t3_175_B07/review_suggestions_3.tex

1 This list is now in final form, content-wise.

2 Test #3 is

Friday
11/4/05.

3 Let's have a with-calculator portion based on chapter 11. So bring the thing along with new batteries.

The with-calculator part will be handed out first. It should not take more than 10-12 minutes.

When you have finished the with-calculator part, put your calculator away and trade in your with-calculator part on the no-calculator part.

4 The test will cover the material of Assignments #14 – #22, roughly, that is, sections 11.1 - 11.7. Or the first seven items in the Review list on page 786.

5 The odd-numbered 11.7 problems are fair game. And 37 and 38.

6 Be sure you know how to

(a) explain the difference between a **sequence** and a **series**.

(b) find the limit of a **sequence** using tools such as

(A) L'Hôpital's Rule

(B) Long division

(C) Partial Fractions

(D) Group Work

(c) write down the formal definition of the limit of a sequence.

(d) write down the formal definition of the limit of a series.

(e) cook up an **N recipe** for a sequence limit.

(f) maintain a list of known divergers and convergers, both sequences and series.

(g) use the **Geometric Series** facts.

- (h) use the **p-Series** facts.
- (i) test a series for convergence (or absolute convergence) via
 - (i) geometric-series facts
 - (ii) comparison
 - (iii) limit form of comparison
 - (iv) integral test - $\left(\sum_{n=0}^{\infty} ne^{-2n} \right)$
 - (v) ratio test
 - (vi) root test
 - (vii) alternating-series test
- (j) do factorial and factorial-like algebra, successfully (click here for some relevant stuff).
- (k) be able to write cogently, with examples, about the difference between **convergence** and **absolute convergence**.

7 In the old-test collection

- (i) Test #1, 2/8/02: problems 1, 2, 3, 6, 7, 8.
- (ii) Final, 5/13/05: problem 1.

8 Some relevant end-of-chapter problems:

- (a) Page-786 True-False Quiz
- (b) Page 787: 1-25 odds, 35, 38