

Math 116 Review Sheet for Exam 2

Date of Exam:	Tuesday, April 23
Time of Exam:	6:00–7:00 PM
Place of Exam:	Sections 1 & 9: CLAS 110
	Sections 2, 6, 8: PB 36
	Sections 3, 4, 5, 7: CLAS 108
Coverage:	Text Sections 8.7, 8.8, 12.1–12.6, 12.8–12.10, 11.1, 11.2

Suggested Review Procedure: Work as many of the following Review Exercises as time allows:

- p. 569: 33–45 odd, 63, 65, 67, 68.
- p. 722: 1, 3, 17, 21.
- p. 810: 1–27 odd, 39–53 odd
- p. 773: Suggested syllabus problems for Section 12.7

Do not refer to notes or earlier parts of the chapters. Doing this preparation in groups will speed things along, and also provide valuable give-and-take about techniques and concepts.

Things to Bring to the Exam:

- Sharpened pencils and an eraser. *Think hard before using a pen!* Neatness can only help your score; ink tends to work against neatness.
- Your UConn I. D. card. You may need to show it as you turn in your exam. If it is lost, bring some other form of positive (picture) I. D.
- Knowledge of your section number and instructor's name.
- A graphing calculator that does not do symbolic computation, or provide formulas for information (such as the derivative of $f(x) = \sin x$) that you should have memorized.

Things NOT to Bring to the Exam: Books, notes, or loose paper. You will not need any scratch paper and *may not* refer to books or notes at any time during the exam. Do any “last minute” studying *before* coming to the exam room.

Departmental Calculator Policy: Calculators that can perform symbolic operations or store symbolic formulas (such as the HP 28 or 48 or TI-92 or 89) are *not* allowed, even if all programs are erased before the exam begins. If you bring a calculator to the exam, make sure it does not do alphanumeric manipulation. The instructor may randomly ask for calculators and check programs stored in memory. No alphanumeric formulas stored as programs are allowable. On Exam 1, discovery of such material resulted in confiscation of some exam papers and assignment of grades of 0 for the exam.

Things to concentrate on:

- Section 8.7: the formulas for the Midpoint and Trapezoidal Rules. The other formulas, including Simpson's Rule and the Error Formulas, will be supplied if needed.
- Section 8.8: All three parts of Definitions 1 & 3; evaluations like those in Examples 1–3, 5–8.

- Sections 12.1, 12.2: Distinction between convergence of sequences and convergence of series; Theorem 2 and Examples 3–8 of Section 12.1; Theorems 4, 6 and 7 and Examples 3–5 and 7–9 of Section 12.2.
- Sections 12.3, 12.4: Use of the integral test as in Examples 1–4, boxed result (4) on p. 750 about the p -series (hyperharmonic series); the boxed comparison test and limit comparison tests (pp. 756–757) and their use as in Examples 1–4 (pp. 756–758).
- Section 12.5: Alternating series test and estimation theorem and their use as in Examples 1–3.
- Sections 12.6, 12.8: Absolute and conditional convergence, and use of the ratio test (p. 767) as in Examples 4 and 5 (pp. 768–769) and Examples 1, 2, 4 and 5 (pp. 774–777) to determine radius of convergence of a power series; how to check for convergence at the ends of the interval of convergence.
- Sections 12.9, 12.10: Term-by-term differentiation and integration of power series to obtain power series for derivatives and antiderivatives of function with known power series (see Examples 1–3, 5–8); use of power series to approximate definite integrals (as in Example 8, p. 782); power series in the box on p. 792 and generation of Taylor/Maclaurin series as in Examples 1, 3–8 (pp. 779–792).
- Sections 11.1, 11.2: Examples 1–3, 5 of first section; boxed formula (2), p. 683, and its use in Examples 1 and 2, pp. 683–684.