

## 18.01 End of Term

### Part I (do not hand in)

**Lecture 37.** Fri. Dec. 8 Taylor series.

Read: 14.4 through p. 498 (bottom); skip everything involving the remainder term  $R_n(x)$ .

Differentiation and integration of series. Read: 14.3-p.490(top); Examples 1-5.

7C/1ac; 7D/1adg; 7D/2bde (skip radius of convergence)

**Lecture 38.** Tues. Dec. 12 Continuation and review.

### Final Examination: Thursday, Dec. 21

The final examination will cover the entire semester's work, including all the material since Exam 4, namely, L'Hôpital's rule, improper integrals, infinite series, power series.

To prepare for it, make sure you understand the solutions to the problems on the four hour exams and to the practice problems given out for each of the hour exams. If you find you still have trouble with some topics, go back to the problem sets which covered those, and practice on the relevant Part I problems that were assigned for them. A practice final exam will be posted.

The table of formulas from Exam 4 will be printed with the final exam. Some problems on the exam related to techniques of integration may be in a new format, namely, you will be given an integral formula that follows a method of integration, (integration by parts, partial fractions, or substitution) and asked to find the mistake(s) in it. The final exam will test the notion of weighted average (see Problem 4, Exam 3).

### Makeup 18.01 during IAP

Students who receive a D in 18.01 this semester will be eligible to take a review course during IAP. It counts as 6 units on the IAP load, so students also in 8.01L can continue with that course. Students who pass this review course will receive the usual 12 units credit for having passed 18.01.

The IAP review course consists of daily one or two hour review sessions, going through the entire course, with the hour exams occurring at the relevant times (and a make-up hour exam the next day, for those who failed the earlier one). In general, there will be two or three review sessions preceding each exam. At the end is a final exam.

Students who receive an F in 18.01 this semester will in general not be eligible for the review course; they should retake 18.01 in the spring. If there are extenuating circumstances which make it likely that the student will be able to pass the review course, they can be considered.

Students who fail 18.01 will be notified by e-mail the day after the final, so they can make plans for the IAP course if they wish to do so and are eligible for it.