Optional Assignment: 2.5 bonus marks

Objective: After doing this *optional* assignment you will master the integration techniques considered in this course.

Motivations and Incentives: If you do this assignment efficiently, you will learn a lot about integration techniques which will be used in the rest of this course (and its midterm and final) and many of your future courses. You will also get up to 2.5 extra marks for doing this assignment.

Deadline: March 06, 2007 at 12:00pm.

Procedure: If you want to do this assignment:

- Team up in groups of 3. Decide who is going to solve which problems.
- By February 07 at 4:00pm, give me the detailed information about your group. That should include the names, the student numbers and a list of the problems that each of the group members is going to solve. Do *NOT* do so by emails; instead, give me a piece of paper on which that information is neatly written or typed.
- For each problem just show some of your work (not necessarily the minor details), but clearly highlight *your method of choice, the change of variable and limit changes (if necessary) for substitution and inverse substitution methods, U and dV for integration by parts, the coefficients for partial fraction method, and the final answer.* If a problem should be solved using a combination of these methods, for each step repeat this.

Important Notes:

- If you are willing to do this assignment, but you cannot find any groupmates, please email me by February 05 and let me know.
- Teaching a concept is an excellent method for learning that concept. Keep in touch with your groupmates and try to learn and teach while working together on these problems. If you need any help, please do not hesitate to let me know. Try not to leave everything for the last couple of days.
- *Do not forget to take photocopies of your assignments before handing them in.* They may or may not be returned to you.

The assigned problems are all from the book "Calculus: A complete Course, Sixth Edition", by Robert A. Adams:

1. Exercises 5.6, P 308: 1-15, 17, 19-21, 23-30, 34, 36, 38-44.

2. Exercises 6.1, P 321: 1-6, 8, 10-12, 14-28, 32, 33.

3. Exercises 6.2, P 328: 1, 3-9, 11-15, 17-19, 21-28, 30-32, 34-38.

4. Exercises 6.3, P 336: 1-3, 5-7, 9-11, 13-21, 23-25, 27, 28, 30, 31, 33.

Note:(-) means "all inclusive": e.g. 2-10 means all the problems from number 2 to number 10.

Good Luck