Recitation 16 MA113:004–006
15 October 1998 Fall 1998

Reminders: 1. A notebook is on reserve in the math library for this course. This notebook contains tests from last year and solutions to tests, homework, quizzes and projects. The math library is located in the basement of the Patterson Office Tower.
2. The second exam will be Tuesday night, 20 October from 7:30 to 9:30 in CB114.
3. The last homework assignment for Chapter 2 is §2.9 #12, §2.10 #16. This assignment is due on Monday, 19 October at the beginning of class.
4. There is a quiz on Friday, 16 October.
5. The last day to withdraw is 23 October. After the second test is returned, you will have the opportunity to compute your midterm grade and you may wish to use this information to help decide if you will continue in this course.

Below is a selection of problems related to sections 2.9 and 2.10. These problems will not be collected or graded. However, you should understand how to work each of these problems. You should begin working on these problems in groups in recitation. You will probably want to finish these problems outside of class. If you have questions, please ask your TA or instructor. If you find a problem difficult, consider working similar problems from the text for additional practice.

1. (Review) Rationalize the denominator
$$\frac{1}{\sqrt{2}+\sqrt{3}}.$$
2. (Review) Find the limits using the limit laws:
$$\lim_{x\to\infty} x^2 + 1x^2 - 1, \qquad \lim_{x\to 1} x^2 - xx^2 - 1.$$
3. (Review) Let
$$f(x) = \begin{cases} x & x \le -1 \\ 2x & -1 < x \le 2 \\ x+2 & 2 \le x \end{cases}$$
For which x is this function continuous? For which x is this function differentiable? Justify your answers.
4. (Review) Find the following limits.
$$\lim_{x\to 1} \frac{x^2+1}{x^2-1} \qquad \lim_{x\to\infty} e^x \qquad \lim_{x\to\infty} \ln x$$
5. Section 2.9 #1, 3, 5, 11.
6. Section 2.10 # 1, 3, 9, 11, 15, 21, 23, 26.