

21-111 Calculus I - Fall 2004

Homework 3

September 22, 2004

The homework consists of questions from the text-book. Hand in the ones marked with *. The other homeworks are practice problems and should be worked out.

Note: The questions with odd numbers have their answers in the back of the book. Try to work the answers out yourself and then check your answers.

Five points will be awarded if every question is attempted. Three questions will be graded for the remaining 5 points. Answers given without explanation or justification are not counted as attempted questions. The homework is due at the beginning of the recitation on Thursday Sep. 30.

Section 0.5: 86, 93*, 96

Section 0.6: 16, 24, 25*, 37*, 40

Section 1.1: 6, 7*, 11*, 16, 51*, 58

Also, hand in the following two problems:

1. Solve the following inequalities for x :

(a) $\frac{|x-5|}{x+4} > 3$

(b) $x^2 - 3x + 2 \leq 0$

2. Suppose $f(x) = x^2 + 2x - 3$ for $x \geq 1$ and $g(x) = \sqrt{1-x}$ for $x \leq 1$. Find the functions and the domains for $g(f(x))$ and $f \circ g$.