

21-121 Calculus 1 (IM/Econ)

## Assignment 11

Solutions to *all* the following problems should be written up and hand in to your TA.

Due in recitation on Thursday, November 15, 2001

Section 5.1: Problems 4, 16

Section 5.2: Problems 3, 16, 22, 34, 46

Section 5.3: Problems 6, 12, 34

Supplementary Problem\*: A manufacturer has determined that the marginal cost function is

$$\frac{dc}{dq} = 0.003q^2 - 0.4q + 40,$$

where  $q$  is the number of units produced. If the marginal cost is \$27.50 when  $q = 50$ , and fixed costs are \$5000, what is the average cost of producing 100 units?

\*Problem taken from *Introductory Mathematical Analysis for Business, Economics, and Life Sciences*, ERNEST F. HAEUSSLER, JR. & RICHARDS S. PAUL (Eighth Edition)