1. Go over all HW problems in HW 5, 6, and 7 with solution key posted on the website.
2. Memorize all definitions and formula/rules.
3. All problems in HW 5, 6, and 7 including minimizing the distance of two points problem, Bisection/Newton’s methods, and the applications of IVT, Rolle’s and MVT Theorems and are important.
4. Include the following problems together with all HW problems in HW 5, 6, and 7 for practice problems.

(1) Find the following for \( f(x) = x^3 - 3x + 1 \).
   (a) critical points
   (b) inflection points (explain)
   (c) local max/local min
   (d) sketch the graph of \( f \)
   (e) find the range of \( x \) at which \( f \) is increasing/decreasing.
   (f) global max and global min of \( f \) on \([-2, 2]\)

(2) Find critical points, inflection points, local max and local min of \( f \) where \( f'(x) = -(x + 1)(x - 2) \).

(3) Find critical points, inflection points, local max and local min of \( f \) where \( f'(x) = -(x + 1)(x - 2)^2 \).

(4) Find two numbers whose product is \(-5\) and the sum of whose squares is a minimum.

Good-luck!

Date: March 3, 2006.