

Study Guide for Chap 04

1. Classify possible locations of global minimum or maximum for a continuous function on a closed interval.
2. Read and study the difference between Intermediate Value Theorem and Mean Value Theorem.
3. Study how to determine whether a critical point is a local minimum, local maximum, or neither using the first derivative test.
4. Review procedures for sketching a curve. Such as how to determine whether the curve is increasing/decreasing and concave up/down.
5. Review how to determine an indeterminate form using L'Hopital's Rule. Go through all examples in section 4.5.
6. Review standard procedure for applied optimization: determine relevant range of the unknown, find possible locations of maximum/minimum, and how to verify a candidate point is actually a maximum/minimum.
7. Understand how to derive Newton's method. Study examples where Newton's method does not converge or converge to a wrong solution.
8. Understand the meaning of Antiderivatives and how to find them in the simple cases.