Chapter-2: Learning and Understanding

The concepts in chapter-2 that you should know after learning and understanding the material are:

Section 2.1

1. Basic Analysis framework of Algorithms.
2. Measuring Input Size.
3. Units for Measuring Running Time.
4. Order of Growth.
5. Best/Worst/Average case of algorithms.

Section 2.2

1. Review Topics: Computation of derivatives of functions, Limits, L Hopital Rule.
2. Definitions and Applications of O, Ω and Θ notation.
3. Comparison of Orders of Growth and efficiency classes.

Section 2.3

1. Understand and learn the general plan for analyzing the time efficiency of non-recursive algorithm.
2. Review topics – Appendix A and Appendix B.
3. Application of summation formulas to compute the time efficiency of the algorithm.

Section 2.4

1. Understand and learn the general plan for analyzing the time efficiency of recursive algorithm.
2. Ability to construct recurrence relation from a given recursive algorithm.
3. Review Appendix B.
4. Ability to solve recurrence relation to compute the order of efficiency of the algorithm.

The examples, practice problems and the problems in the assignments are expected to support learning.