Solve the following important exercises from SLP. In some cases you only have turn in a subset of the exercises you are required to do. However, you are expected and encouraged to solve and learn the material in all the problems even if not graded on them at this point. Doing these exercises will help you absorb more permanently the readings of these sections.

(a) *Normed Vector spaces*: Exercises 3.2, 3.3, 3.4, 3.5, 3.6. However, no need to hand in exercises 3.2 and 3.3.

(b) *Contraction Mapping Theorem*: Exercise 3.9.


(d) *Principle Of Optimality*: Exercises 4.2 and 4.3. Only hand in 4.3.

(e) *Bounded Returns*: Exercise 4.4.