Problems for Assignment 3
Due Friday, October 16, 2015
Total Points : 100

Assigned Problems. Do the six problems listed below from the Karatzas and Shreve textbook plus the proof of Lemma 2.9.4 part (iii). Each problem is worth 15 points and the Lemma problem is worth 10 points. Problems denoted with a "*" have answers given in the textbook. You will not get credit for simply copying in these answers. In particular, I ask that you NOT look at the answer in the back of the book for problem 3.2.29.

· 2.2.7 (page 53).
· Prove Lemma 2.9.4 part (iii) (page 104).
· 3.2.12 (page 141), 3.2.18* (page 144), 3.2.28 (page 147), 3.2.29*, 3.2.30 (page 148).

Things to Read and Understand. Please read carefully the following items.

· Section 2.2 A on the Consistency Theorem.
· Section 2.4 on the construction of Brownian Motion through weak convergence on $C[0, \infty)$.
· Lemma 3.2.7 on approximation by simple processes for $X \in \mathcal{L}_M^*$ when $\langle M \rangle$ is not necessarily absolutely continuous with respect to Lebesgue measure.