FIN 591: Homework #2

Due on Wednesday, February 28, 2018

Wanbae Park

Problem 1

a.

b.

Problem 2

a. Since the optimal choice satisfies $U_C(C_{T-1}, T-1) - \mathrm{E}_{T-1}[B_W(W_T, T)R_{T-1}] = 0$, $\delta^{T-1}C_{T-1}^{\gamma-1} = \mathrm{E}_{T-1}[\delta^T W_T^{\gamma-1}]$ satisfies if the given utility function and bequest function is plugged in. Therefore, $C_{T-1}^{\gamma-1} = \mathrm{E}_{T-1}[\delta W_T^{\gamma-1}] = \mathrm{E}_{T-1}[\delta(S_{T-1}R_{T-1})^{\gamma}]$, $C_{T-1} = (\mathrm{E}_{T-1}[\delta(S_{T-1}R_{T-1})^{\gamma}])^{\frac{1}{\gamma-1}}$ holds.

b.

c.

d.