Homework 11:

1. For a stock process that follows geometric Brownian motion, and a discount process $D(t) = e^{-rt}$, find
   (a) $\mathbb{E}[D(t)S(t)]$
   (b) $\widetilde{\mathbb{E}}[D(t)S(t)]$
2. Price a European call option for the following parameters (remember time must be in years)
   (a) $S(0) = 50$, $r = .03$, $K = 52$, $\sigma = .1$, and maturity in 1 year
   (b) $S(0) = 75$, $r = .02$, $K = 74$, $\sigma = .2$, and maturity in 3 weeks
   (c) $S(0) = 10$, $r = .005$, $K = 10$, $\sigma = .3$, and maturity in 2 months

   From Shreve volume II:
3. Exercise 4.9:
4. Exercise 4.15:
5. Exercise 5.1:

