FM 5111
Hw4

Chapter 12:

Questions: $2, 7, 11$.

In addition:

4) Assume the continuously compounded yield curve:

Maturity (Years)	Rate (annualized)
.25	1.0 %
.5	1.5 %
.75	1.75 %
1	2.0 %
1.25	2.25 %

(a) What is the swap rate for a 1 year swap that pays every 6 months and it starts today?

(b) What is the value of a swap with the following characteristics:

- Exchanges cash flows every 6 months.
- Expires in 15 months
- Started 3 months ago.
- Pays fixed and receives floating.
- The swap rate (the fixed interest rate) of 1.5%.
- 3 months ago the 6-month rate was 2%.

5) Suppose that X is a normally distributed random variable with parameters μ, σ^2.

a) Find the density of $Y = e^X$.

b) Find $\mathbb{E}(Y)$.

c) Find $\mathrm{Var}(Y)$.