HOMEWORK #4 -BOPM (Leverage and Probability Methods)

13-4   Consider the following binomial option pricing problem involving a call. This call has one period to go before expiring. Its stock price is $45, and its exercise price is $49.50. The risk-free rate is 0.05%, the value of u is 1.25, and the value of the d is .95. Construct the 1-period binomial tree model and find the value of the call premium using

   a) Leverage (6-step, Method 1)

   b) Probability method (Method 2).

13-5   Consider the following binomial option pricing problem involving a call. This call has two periods to go before expiring. Its stock price is $65, and its exercise price is $60. The risk-free rate is 0.05%, the value of u is 1.20, and the value of the d is .95. Construct the 2-period binomial tree model and find the value of the European call premium.

13-6   Consider the following binomial option pricing problem involving a put. This put has two periods to go before expiring. Its stock price is $100, and its exercise price is $110. The company expects to pay dividends after the first period. The dividend yield is 7%, the risk-free rate is 0.05%, the value of u is 1.15, and the value of the d is .90. Construct the 2-period binomial tree model and find the value of the European put premium.