Problem Set 8

1. Program a Finite-Difference Grid to price a call option with strike price of 1365 and time to maturity of 1 month under the Black and Scholes assumptions. Assume that the short-term interest rate is 4.5%, the spot price is 1365, the dividend yield is 2% and the volatility (σ) is 30%. Use 6,000 increments (divide the 1-month period into 6,000 intervals).

2. Verify your result using the Black Scholes formula.

Note: the option prices that you obtain using the Black-Scholes formula and the grid should be about between 3 and 4 cents apart of each other (in this particular example).