1. Program a Cox-Ross-Rubinstein tree to price a call option with strike 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 ($\sigma$) is 30%. Use 5,000 increments (divide the 1-month period into 5,000 intervals).

2. Using two trees, compute the option’s delta.

3. Verify your results (for both the option’s price and its delta) using the Black Scholes formula.

Note: the option price and the delta that you obtain using the tree should be within 0.01 of the Black-Scholes theoretical price and theoretical delta.