

DS-605: Project 2  
Assigned April 26, 2018  
Due May 10, 2018

We discussed in class the binomial tree method for pricing call options on a security,  $S$ , with strike price  $K$ , and expiration  $T$ . In this project you will use a binomial tree to price both a European and American call option.

The call option to be priced is on a security whose current price is \$144.00 with a strike price equal to \$150.00 and a time to expiration of three months. You may assume that the current annual risk free rate  $r = .02$  and that  $\sigma^2 = .1$ .

1. Code the binomial tree method in Octave to price the call option as a European option. Please write your code so that the number of binomial tree steps,  $N$ , is a variable in your code.
2. Provide an appropriately modified version of your code from 1. to price the call option as an American option.