Homework2

February 4, 2015

Finance 6320 Spring 2015

Dr. Brough
Homework 2
Due date: TBA

Problem 1

In this problem you will extend the `Option` class that we wrote together in class by providing a method to price an option with the single-period Binomial model.

Remember that our class was the following (minor changes):

```
In [1]: class EuropeanOption(object):
            def __init__(self, strike):
                self.strike = strike

            def GetStrike(self):
                return self.strike

            def SetStrike(self, strike):
                self.strike = strike
```

Which can used to instantiate objects as follows:

```
In [2]: opt1 = EuropeanOption(40)
        opt2 = EuropeanOption(45)

In [3]: whos

Variable         Type              Data/Info
-----------------------------------------
EuropeanOption   type              <class '__main__.EuropeanOption'>
opt1             EuropeanOption    <__main__.EuropeanOption object at 0x106e29d30>
opt2             EuropeanOption    <__main__.EuropeanOption object at 0x106e29710>
```

In this problem you will add a class method called `GetPrice` that implements the single-period Binomial model (for a call option). Also add any other class attributes that you think are needed.

Please enter your code in the cell below:

```
In []:
```

Figure out another way to implement the single-period Binomial model for a European Put option.

Problem 2

Now implement the multiperiod Binomial for both European calls and puts. Please enter your code below:

In []:

Problem 3

Now please implement the multiperiod Binomial model for American calls and puts including a continuous dividend yield. Please enter your code below:

In [3]: