Constructor University
Fall 2025

October 17, 2025

Stochastic Modeling and Financial Mathematics

Quiz 3

Name: ____

1. **(10 points)** Suppose the interest rate $r = 0$, and we consider a binary model where the current stock price is 150 EUR, and after one time step it can either go up to 360 EUR or down to 60 EUR. Determine the fair price of a call option with strike price $K = 260$ EUR.

2. **(10 points)** We consider a binomial tree model with two time steps.

   (a) Draw the corresponding stock price model. Add the stock price at each vertex.

   (b) Draw the corresponding option pricing model. Add the option price at each vertex (for European calls).