Lab Week 7 - Arithmetic Asian option pricing under the Black-Scholes Model

Write a Matlab code that computes the price of an arithmetic average Asian call option under the Black-Scholes model using the Monte Carlo method. Use the price of a geometric average Asian option as a control variate and demonstrate its effectiveness. The closed-form formula for the price of geometric average Asian option can be found in [2] and Chapter 7 [1].

References

[1] Nielsen, L. Pricing Asian Options. Master of Science Dissertation, University of Aarhus.

[2] Vorst, T. Prices and hedge ratios of average exchange rate options. International Review of Financial Analysis. Vol 1:3, 179-193,1992.