In the following we consider the price of a discrete Asian option given by :

Asian-Price = $e^{-rT}\mathbb{E}[(\frac{1}{n}\sum_{i=0}^{n-1} s_{ti} - k)_+]$

We will use two variate control to reduce the variance of our computations :

- for the first variate control we will use the random variable
  $Y = e^{-rT} exp(\frac{1}{T}\int_0^T log(S_u)du)$
- for the second variate control we will use the random variable
  $Z = e^{-rT}(exp(\frac{1}{T}\int_0^T log(S_u)du) - K)_+$
- Finally, we compute the Greek parameter v (Vega) of the option price, using both pathwise derivative and the log-likelihood ratio methods.