Sample problem 16 – Binomial Asian Options

Examine the following two-period binomial model:

- \( S_0 = 200 \)
- \( U = 1.1 \)
- \( D = 0.92 \)
- \( R = (1+r) = 1.01 \text{ per period} \)

Present value of $1 to be received at \( T \) is \((1+r)^2 = 0.9803\).

\[
\begin{align*}
S_U &= S_{UU} = 242.00 \\
S_D &= S_D = 169.28 \\
S_0 &= S_0 = 200 \\
S &= S_{UD} = 202.40 \\
220 &= S_{UD} \\
184 &= S_D
\end{align*}
\]

Use risk-neutral probabilities to find the following values:

a) Asian (Average price) Call with exercise price of $200

b) Asian (Average Price) Put with exercise price of $200