Assignment 6

The deadline for submitting this assignment has passed.
As per our records you have not submitted this assignment.

1. Consider the binomial asset pricing model with parameters $S_0 = 10, r = 0.05, u = 2$ and $d = 0.8$. Then the value of $S(T)_{	ext{HPM}}$ equals:

No, the answer is incorrect.
Score: 0
Accepted Answers:
(Type: Numerical) 0

2. Consider the binomial asset pricing model with parameters $S_0 = 50, r = 0.06, u = 1.1$ and $d = 0.9$. A European call option with expiration after one year and strike price of $K = 50$ has the underlying asset value of $S(T)_{	ext{HPM}}$ at $T$. Which of the following cannot be the value of $K$ under the conditions $S(T)_{	ext{HPM}} < K < S(T)?$

- (A) 48
- (B) 49
- (C) 50
- (D) 51

No, the answer is incorrect.
Score: 0
Accepted Answers:

3. Consider the binomial asset pricing model with parameters $u = 1.2$ and $d = 0.8$. Then which of the following values of $S(T)_{	ext{HPM}}$ are achievable in this model, as it satisfies the no-arbitrage condition?

- (A) $S(T)_{	ext{HPM}} = 2$  
No, the answer is incorrect.
Score: 0
Accepted Answers:

4. Consider the binomial asset pricing model with parameters $r = 0.1, u = 1.5$ and $d = 0.7$. Then the risk-neutral probability $q$ (up to three decimal places) is:

No, the answer is incorrect.
Score: 0
Accepted Answers:

5. State whether the following statement is TRUE or FALSE.

When the binomial model is used in replication strategy for pricing of derivatives, then the value of $X_n - A_n S_n$ can be negative.

- (A) True
- (B) False

No, the answer is incorrect.
Score: 0
Accepted Answers:

6. The number of possible distinct values of $S_T$ (up to $n = 3$) in the binomial model equals:

No, the answer is incorrect.
Score: 0
Accepted Answers:

7. Consider the binomial asset pricing model with parameters $S_0 = 50, r = 0.05, u = 1.1$ and $d = 0.9$. Consider a European call option with expiration after two time steps ($n = 2$) from the initial time, with the risky asset as the underlying, and the strike price of $K = 60$. Then the value of $S(T)_{	ext{HPM}}$ equals:

No, the answer is incorrect.
Score: 0
Accepted Answers:

8. Consider an European option with expiration after three time steps ($n = 3$) from the initial time in the binomial asset pricing framework. Then which of the following statements is/are CORRECT?

- (A) $V_3(H) = \frac{1}{1+r} \left[ V_2(H) + \frac{1}{1+r} \left( V_2(H) + V_2(T) \right) \right]$
- (B) $V_3(T) = \frac{1}{1+r} \left[ V_2(T) + \frac{1}{1+r} \left( V_2(T) + V_2(H) \right) \right]$
- (C) $V_3(H) = \frac{1}{1+r} \left[ V_2(T) + \frac{1}{1+r} \left( V_2(H) + V_2(T) \right) \right]$
- (D) $V_3(T) = \frac{1}{1+r} \left[ V_2(H) + \frac{1}{1+r} \left( V_2(T) + V_2(H) \right) \right]$

No, the answer is incorrect.
Score: 0
Accepted Answers:

9. Consider an European option with expiration after three time steps ($n = 3$) from the initial time in the binomial asset pricing framework. Then which of the following statements is/are CORRECT?

- (A) $V_3(H) = \frac{1}{1+r} \left[ V_2(H) + \frac{1}{1+r} \left( V_2(H) + V_2(T) \right) \right]$
- (B) $V_3(T) = \frac{1}{1+r} \left[ V_2(T) + \frac{1}{1+r} \left( V_2(T) + V_2(H) \right) \right]$
- (C) $V_3(H) = \frac{1}{1+r} \left[ V_2(T) + \frac{1}{1+r} \left( V_2(H) + V_2(T) \right) \right]$
- (D) $V_3(T) = \frac{1}{1+r} \left[ V_2(H) + \frac{1}{1+r} \left( V_2(T) + V_2(H) \right) \right]$

No, the answer is incorrect.
Score: 0
Accepted Answers:

10. Consider an European option with expiration after three time steps ($n = 3$) from the initial time in the binomial asset pricing framework. Then which of the following statements is/are CORRECT?

- (A) $V_3(H) = \frac{1}{1+r} \left[ V_2(H) + \frac{1}{1+r} \left( V_2(H) + V_2(T) \right) \right]$
- (B) $V_3(T) = \frac{1}{1+r} \left[ V_2(T) + \frac{1}{1+r} \left( V_2(T) + V_2(H) \right) \right]$
- (C) $V_3(H) = \frac{1}{1+r} \left[ V_2(T) + \frac{1}{1+r} \left( V_2(H) + V_2(T) \right) \right]$
- (D) $V_3(T) = \frac{1}{1+r} \left[ V_2(H) + \frac{1}{1+r} \left( V_2(T) + V_2(H) \right) \right]$

No, the answer is incorrect.
Score: 0
Accepted Answers: