HOMEWORK #4

PLEASE WRITE YOUR FULL NAME AND THEN SUBMIT YOUR HOMEWORK

Name: ANSWERS

Problems 13.4 a-13.4b

QUESTION 1

Use the input information below to calculate the Call option using both the BOPM Probability and Leveraged (6-step) methods. Show your detail work as suggested below

INPUT	
S =	$ 45.00
u =	1.25x
d =	0.95x
X =	$ 49.50
i =	5.00%
Freq=	1
Periods=	1

Method 2 (Probability Method)

PERIOD 0	PERIOD 1	Payoff
	Su= 56.25	Cu= 6.75
S= 45.00		
	Sd = 42.75	Cd= -

p =	0.33
1-p=	0.67

C(E)= 2.14 European Option Premium

Method 1 (Leverage 6-Step Method)

Step 1	Su - Sd =	13.50
Step 2	Cu - Cd =	6.75
Step 3	h =	0.50
Step 4	PV (Sd) =	40.71
Step 5	S-PV(Sd)=	4.29
Step 6	ı(S-Pv(Sd)=	2.14

QUESTION 2

Use the input information below to calculate the Call option using both the BOPM Probability method. Show your detail work as suggested below

INPUT	
S =	$ 65.00
u =	1.20x
d =	0.95x
X =	$ 60.00
i =	5.00%
Frequency=	1
Periods=	2

PERIOD 0	PERIOD 1	PERIOD 2		Payoff	Payoff
		Su^2= 93.60		Cu^2= 33.60 (Payoff)	
	Su= 78.00		Cu=		Cu= 20.86 (Payoff)
S= 65.00		74.10		Cud= 14.10 (Payoff)	
	Sd = 61.75		Cd=		Cd = 5.37 (Payoff)
		Sd^2= 58.66		Cd^2= - (Payoff)	

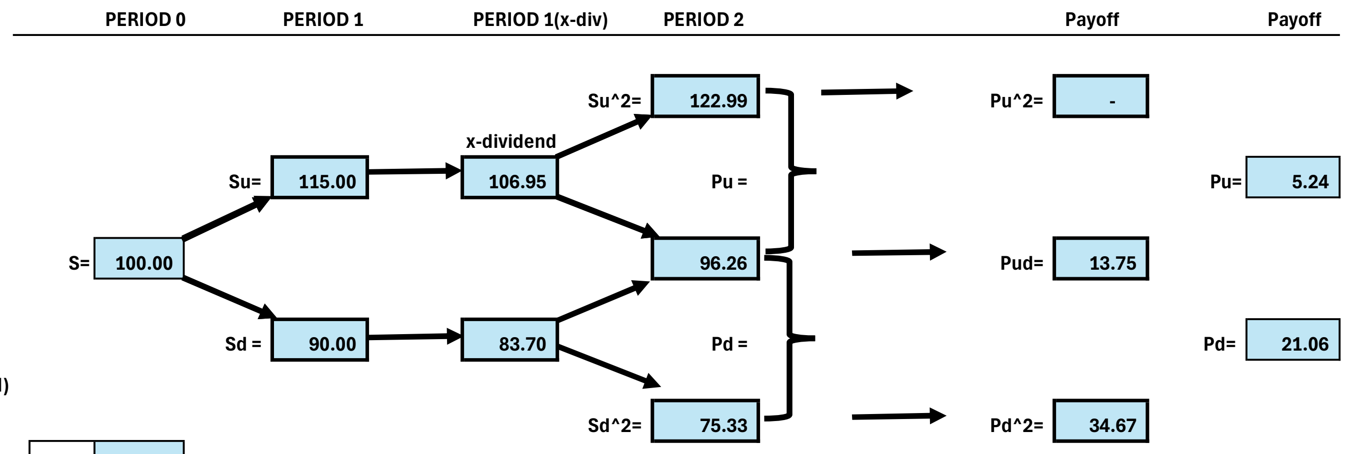
p =	0.40
1-p=	0.60

C(E)=	11.01	European Option Premium

QUESTION 3

Use the input information below to calculate the Put option using both the BOPM Probability method. Show your detail work as suggested below

INPUT	
S =	$ 100.00
u =	1.15x
d =	0.90x
X =	$ 110.00
i =	5.00%
Div (δ)=	7.00% (at 1st Period)
Annual=	1
Periods=	2



p =	0.60
1-p=	0.40

P(E)=	11.02	European Option Premium