67.

Consider the following investment strategy involving put options on a stock with the same expiration date.

i) Buy one 25-strike put

ii) Sell two 30-strike puts

iii) Buy one 35-strike put

Calculate the payoffs of this strategy assuming stock prices (i.e., at the time the put options expire) of 27 and 37, respectively.

(A) –2 and 2

(B) 0 and 0

(C) 2 and 0

(D) 2 and 2

(E) 14 and 0

68.

For a non-dividend-paying stock index, the current price is 1100 and the 6-month forward price is 1150. Assume the price of the stock index in 6 months will be 1210.

Which of the following is true regarding forward positions in the stock index?

(A) Long position gains 50

(B) Long position gains 60

(C) Long position gains 110

(D) Short position gains 60

(E) Short position gains 110

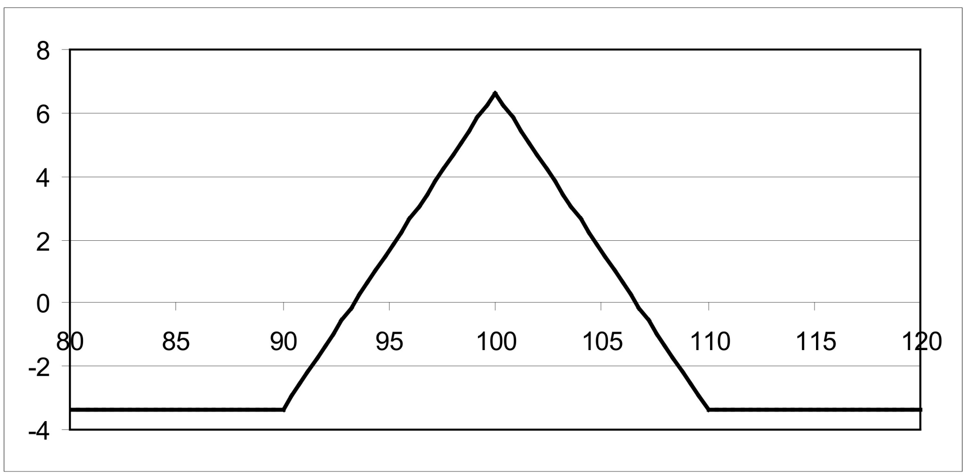
9.

Stock ABC has the following characteristics:

- The current price to buy one share is 100.
- The stock does not pay dividends.
- European options on one share expiring in one year have the following prices:

Strike Price	Call option price	Put option price
90	14.63	0.24
100	6.80	1.93
110	2.17	6.81

A butterfly spread on this stock has the following profit diagram.



The continuously compounded risk-free interest rate is 5%.

Determine which of the following will NOT produce this profit diagram.

(A) Buy a 90 put, buy a 110 put, sell two 100 puts

(B) Buy a 90 call, buy a 110 call, sell two 100 calls

(C) Buy a 90 put, sell a 100 put, sell a 100 call, buy a 110 call

(D) Buy one share of the stock, buy a 90 call, buy a 110 put, sell two 100 puts

(E) Buy one share of the stock, buy a 90 put, buy a 110 call, sell two 100 calls.

7.

A non-dividend paying stock currently sells for 100. One year from now the stock sells for 110. The continuously compounded risk-free interest rate is 6%. A trader purchases the stock in the following manner:

- The trader pays 100 today
- The trader takes possession of the stock in one year

Determine which of the following describes this arrangement.

(A) Outright purchase

(B) Fully leveraged purchase

(C) Prepaid forward contract

(D) Forward contract

(E) This arrangement is not possible due to arbitrage opportunities

8.

Joe believes that the volatility of a stock is higher than indicated by market prices for options on that stock. He wants to speculate on that belief by buying or selling at-the-money options.

Determine which of the following strategies would achieve Joe's goal.

(A) Buy a strangle

(B) Buy a straddle

(C) Sell a straddle

(D) Buy a butterfly spread

(E) Sell a butterfly spread

16.

The current price of a non-dividend paying stock is 40 and the continuously compounded risk-free interest rate is 8%. The following table shows call and put option premiums for three-month European of various exercise prices:

Exercise Price	Call Premium	Put Premium
35	6.13	0.44
40	2.78	1.99
45	0.97	5.08

A trader interested in speculating on volatility in the stock price is considering two investment strategies. The first is a 40-strike straddle. The second is a strangle consisting of a 35-strike put and a 45-strike call.

Determine the range of stock prices in 3 months for which the strangle outperforms the straddle.

(A) The strangle never outperforms the straddle.

(B) $33.56 < S_T < 46.44$

(C) $35.13 < S_T < 44.87$

(D) $36.57 < S_T < 43.43$

(E) The strangle always outperforms the straddle.