



# Mastering Options Strategies

A step-by-step guide to understanding profit & loss diagrams



Because Money Doesn't Grow on Trees

Written by the Staff of The Options Institute  
of the Chicago Board Options Exchange

# Mastering Options Strategies

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In order to simplify the computations, commissions have NOT been included in the examples used in these materials. Commission costs will impact the outcome of all stock and options transactions and must be considered prior to entering into any transactions.

Options involve risk and are not suitable for all investors. Prior to buying or selling an option, a person must receive a copy of *Characteristics and Risks of Standardized Options*, available to download at [www.cboe.com](http://www.cboe.com). Copies of this document are also available from your broker or The Options Clearing Corporation (OCC), One North Wacker Drive, Suite 500, Chicago, IL 60606 or by calling 1-888-OPTIONS. The OCC Prospectus contains information on options issued by The Options Clearing Corporation. Copies of this document are also available from the OCC at the above address. The documents available discuss exchange-traded options issued by The Options Clearing Corporation and are intended for educational purposes. No statement in the documents should be construed as a recommendation to buy or sell a security or to provide investment advice.

ANY STRATEGIES DISCUSSED, INCLUDING EXAMPLES USING ACTUAL SECURITIES AND PRICE DATA, ARE STRICTLY FOR ILLUSTRATIVE AND EDUCATIONAL PURPOSES ONLY AND ARE NOT TO BE CONSTRUED AS AN ENDORSEMENT, RECOMMENDATION, OR SOLICITATION TO BUY OR SELL SECURITIES.

PAST PERFORMANCE IS NOT A GUARANTEE OF FUTURE PERFORMANCE.

# Why You Need This Workbook

## Learning the basics of options involves three steps:

1. Understand the rights and obligations of long and short options,
2. Learn to calculate profit and loss at expiration, and
3. Master the mechanics of exercise and assignment.

This workbook takes you through each step. First, by drawing diagrams, you will learn how to calculate profit and loss on an option's expiration date. This will also teach you recognize the potential profit, potential risk and break-even point of different positions. This knowledge will serve you well when choosing strategies. Second, the problems that ask you to recognize when option exercise and assignment occurs will reinforce how options can interact with a position in the underlying stock.

After mastering the concepts taught in this workbook, your options education will *not* be complete! You will still need to learn the tradeoffs that different strategies offer and about option price behavior. Finally, to use options successfully for either investing or trading, you must learn a two-step thinking process. After identifying a goal, the first step is initiating an option position, and the second step is closing the position on or before the expiration date. These concepts along with many strategies are taught in classes at The CBOE's Options Institute.

**To learn more about The Options Institute classes,  
schedules and/or to register,  
call 1-877-THE-CBOE  
or visit  
[www.cboe.com](http://www.cboe.com)**

# How to Draw Profit and Loss Diagrams

## Step 1: Describe the opening transaction completely

Strategy: Long Call

EXAMPLE: Buy a 50 Call @ \$2

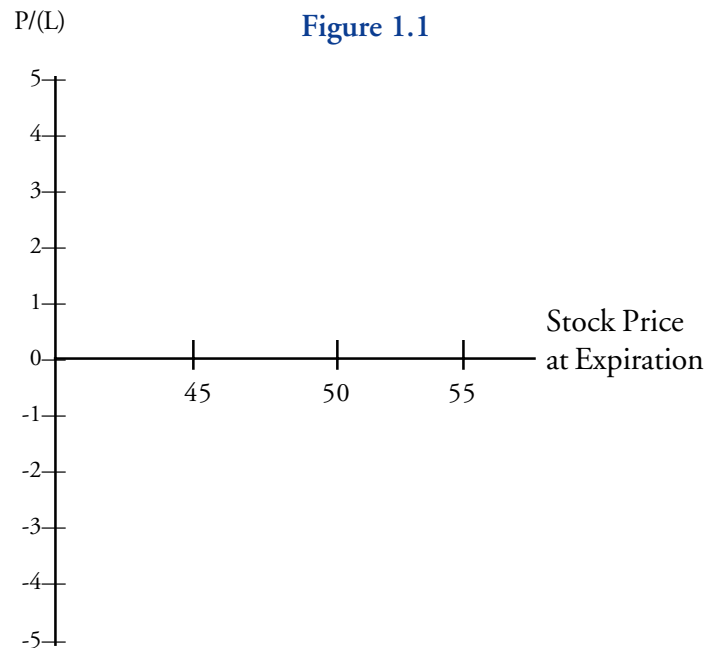
## Step 2: Make a profit/loss table and a grid for the diagram.

The table (Table 1.1) should have one column for each option and one column for the total profit/loss. On the grid (Figure 1.1), the vertical line represents profit and loss, labeled P/(L), and the horizontal line represents a range of stock prices.

Strategy: Long Call

EXAMPLE: Buy a 50 Call @ \$2

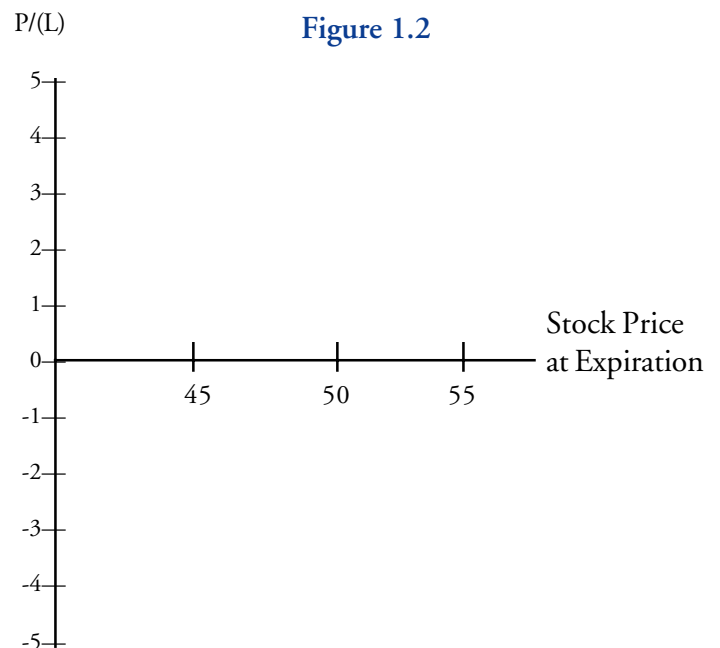
Stock Price at Expiration	Long 50 Call @ 2 P/(L)
57	
56	
55	
54	
53	
52	
51	
50	
49	
48	
47	



## Step 3: Select a stock price at expiration and calculate the option's value.

With a stock price of \$55 at expiration, for example, the 50 Call has a value of \$5.

Stock Price at Expiration	Long 50 Call @ 2 P/(L)
57	
56	
55	3
54	
53	
52	
51	
50	
49	
48	
47	

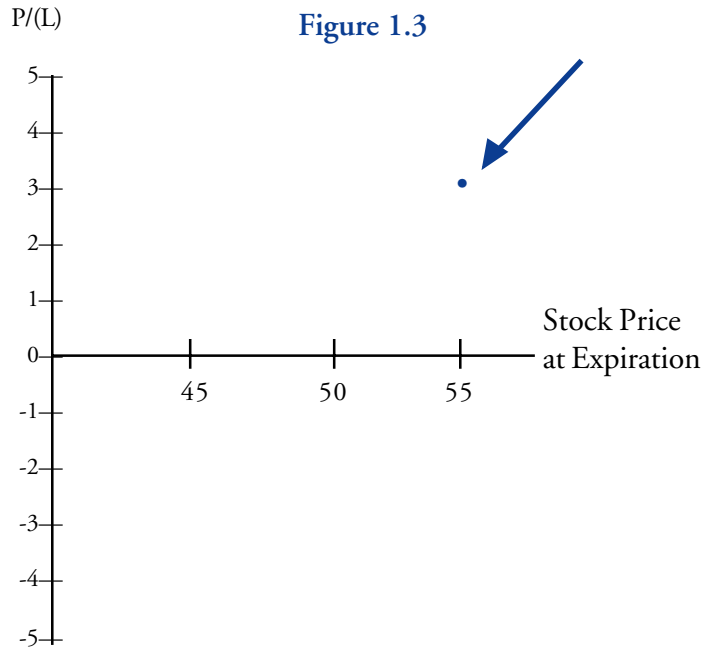


# How to Draw Profit and Loss Diagrams

## Step 4: Calculate the profit or loss.

For a purchased (long) option, subtract the purchase price from the value at expiration. For a sold (short) option, subtract the value at expiration from the selling price. In this example, 5 (value at expiration) minus 2 (purchase price) equals a profit of 3. Plot the profit on the graph in Figure 1.3.

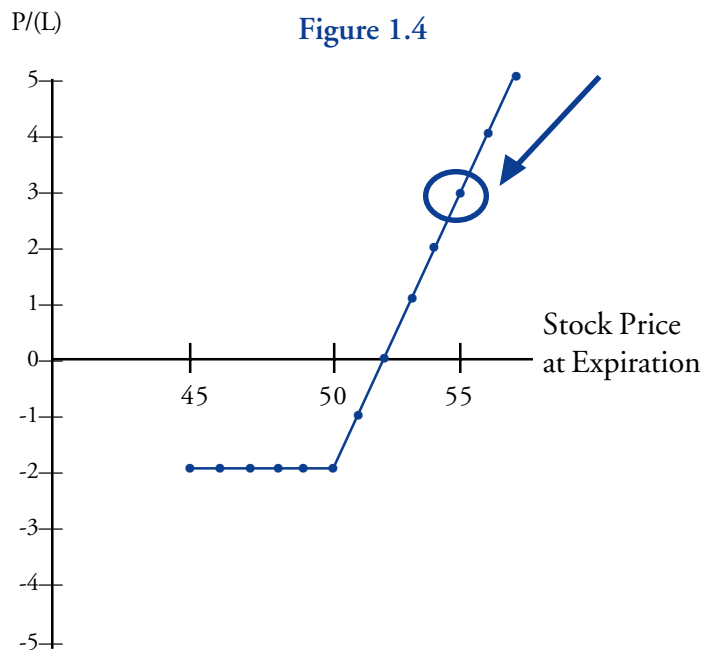
Stock Price at Expiration	Long 50 Call @ 2 P/(L)
57	
56	
55	3
54	
53	
52	
51	
50	
49	
48	
47	



## Step 5: Plot the profit or loss

A stock price of \$55 at expiration, in this example, yields a profit of 3 and creates the point (55, 3) on the grid.

Stock Price at Expiration	Long 50 Call @ 2 P/(L)
57	5
56	4
55	3
54	2
53	1
52	0
51	(1)
50	(2)
49	(2)
48	(2)
47	(2)



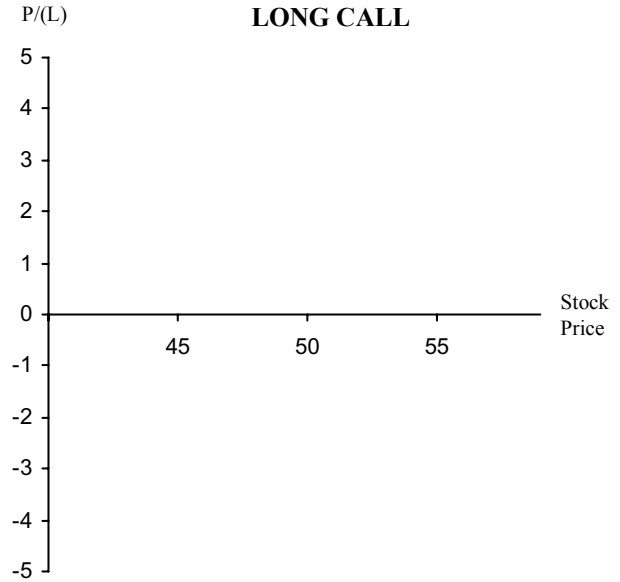
## Step 6: Repeat steps 3, 4 and 5

Repeating the steps above over a range of stock prices creates a set of points which, when connected, becomes the profit and loss diagram.

# Call Strategies

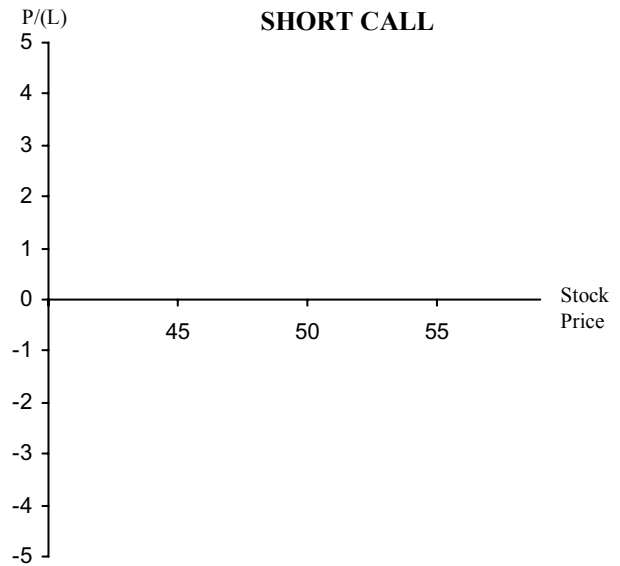
STRATEGY: Long Call  
 EXAMPLE: Buy \$50 Call @ 3

<u>Stock Price at Expiration</u>	<u>Long Call P/(L)</u>
58	
57	
56	
55	
54	
53	
52	
51	
50	
49	
48	



STRATEGY: Short Call  
 EXAMPLE: Sell \$50 Call @ 3

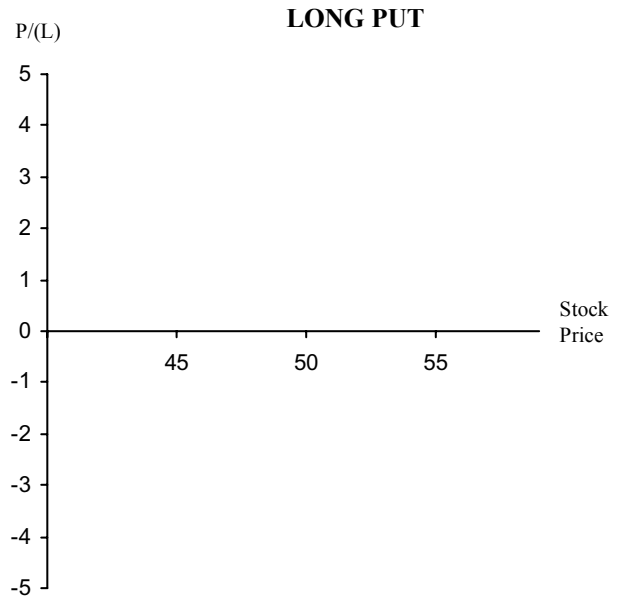
<u>Stock Price at Expiration</u>	<u>Short Call P/(L)</u>
58	
57	
56	
55	
54	
53	
52	
51	
50	
49	
48	



# Put Strategies

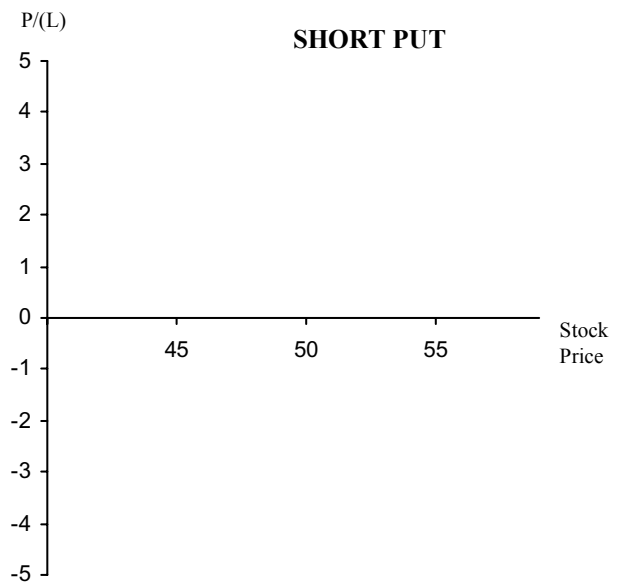
STRATEGY: Long Put  
 EXAMPLE: Buy \$50 Put @ 2

<u>Stock Price at Expiration</u>	<u>Long Put P/(L)</u>
53	
52	
51	
50	
49	
48	
47	
46	
45	
44	
43	



STRATEGY: Short Put  
 EXAMPLE: Sell \$50 Put @ 2

<u>Stock Price at Expiration</u>	<u>Short Put P/(L)</u>
53	
52	
51	
50	
49	
48	
47	
46	
45	
44	
43	

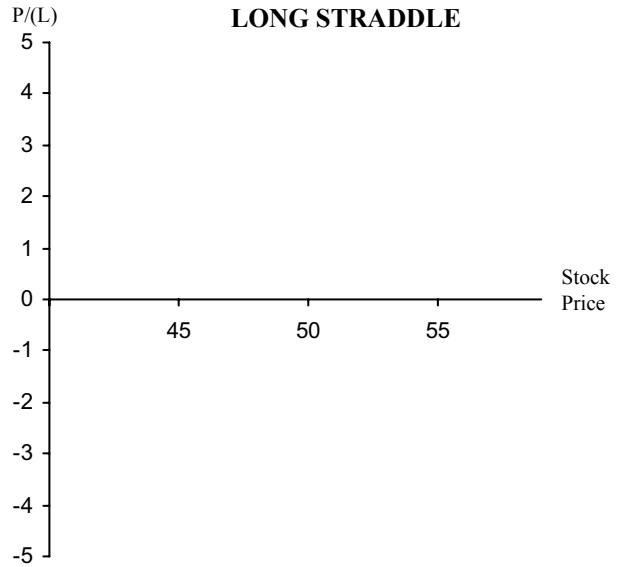


# Straddles

STRATEGY: Long Straddle

EXAMPLE: Buy \$50 Call @ 3 and  
Buy \$50 Put @ 2

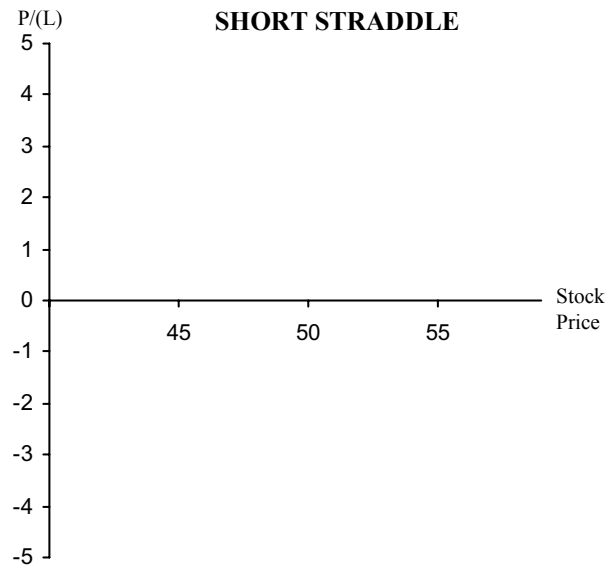
Stock Price at Expiration	Long Call P/(L)	Long Put P/(L)	Total P/(L)
59			
57			
55			
53			
51			
50			
49			
47			
44			
43			
41			



STRATEGY: Short Straddle

EXAMPLE: Sell \$50 Call @ 3 and  
Sell \$50 Put @ 2

Stock Price at Expiration	Short Call P/(L)	Short Put P/(L)	Total P/(L)
59			
57			
55			
53			
51			
50			
49			
47			
45			
43			
41			



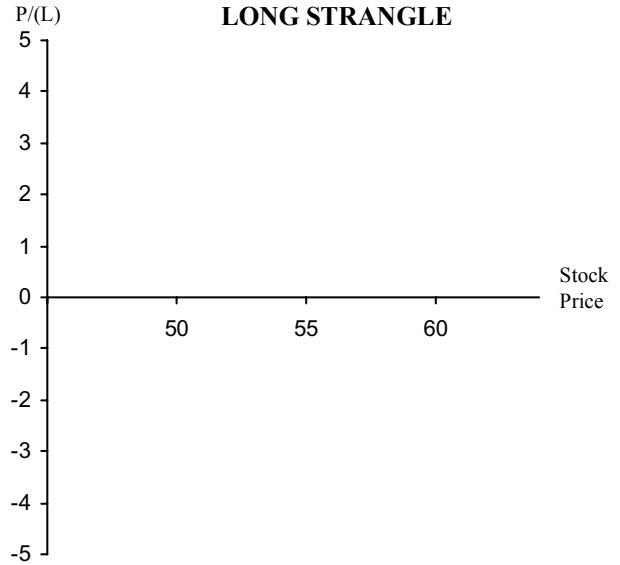


# Strangles

STRATEGY: Long Strangle

EXAMPLE: Buy \$55 Call @ 1 1/2 and  
Buy \$50 Put @ 1 1/2

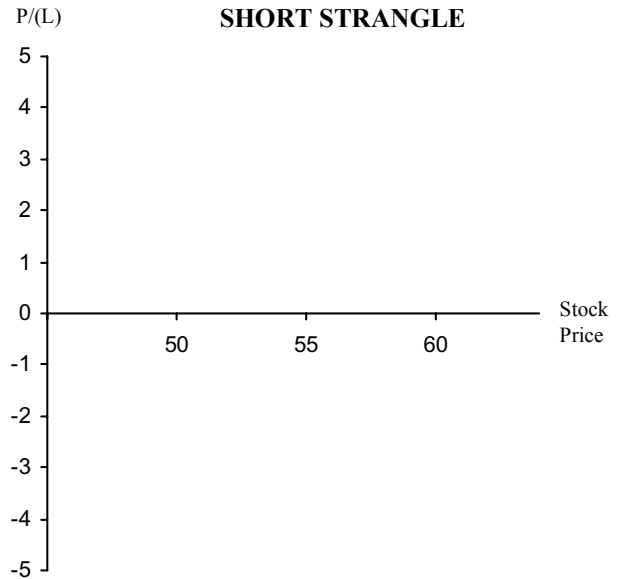
<u>Stock Price at Expiration</u>	<u>Long Call P/(L)</u>	<u>Long Put P/(L)</u>	<u>Total P/(L)</u>
61			
59			
57			
55			
53			
51			
50			
49			
47			
45			
43			



STRATEGY: Short Strangle

EXAMPLE: Sell \$55 Call @ 1 1/2 and  
Sell \$50 Put @ 1 1/2

<u>Stock Price at Expiration</u>	<u>Short Call P/(L)</u>	<u>Short Put P/(L)</u>	<u>Total P/(L)</u>
61			
59			
57			
55			
53			
51			
50			
49			
47			
45			
43			

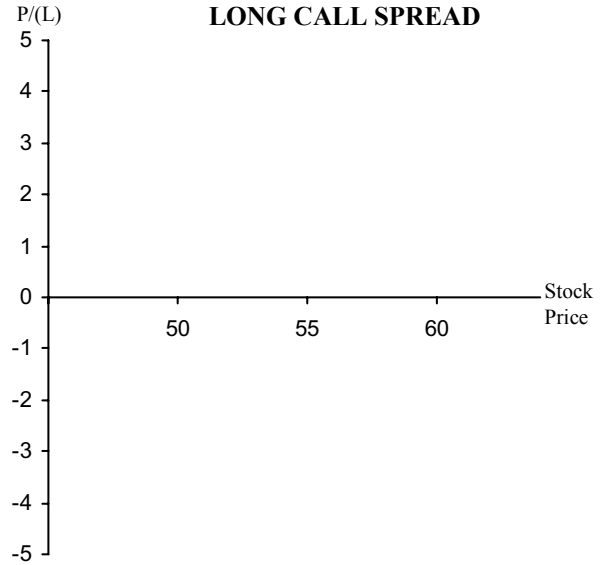


# Call Spreads

STRATEGY: Long Call Spread

EXAMPLE: Buy \$50 Call @ 4 and  
Sell \$55 Call @ 2

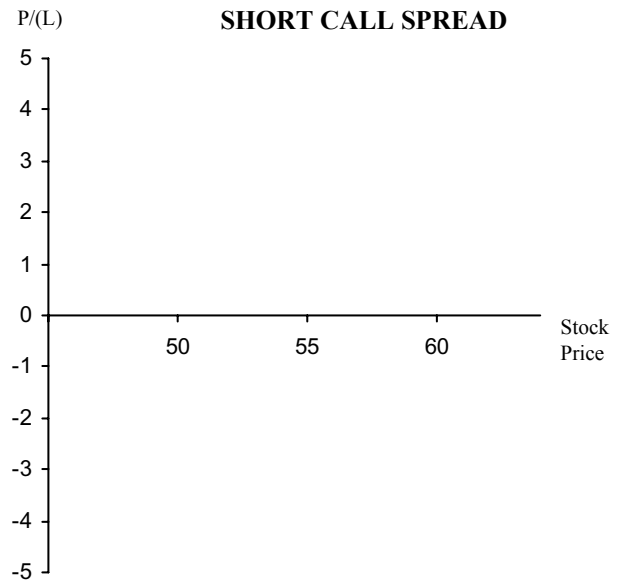
<u>Stock Price at Expiration</u>	<u>Long Call P/(L)</u>	<u>Short Call P/(L)</u>	<u>Total P/(L)</u>
58			
57			
56			
55			
54			
53			
52			
51			
50			
49			
48			



STRATEGY: Short Call Spread

EXAMPLE: Sell \$50 Call @ 4 and  
Buy \$55 Call @ 2

<u>Stock Price at Expiration</u>	<u>Short Call P/(L)</u>	<u>Long Call P/(L)</u>	<u>Total P/(L)</u>
58			
57			
56			
55			
54			
53			
52			
51			
50			
49			
48			

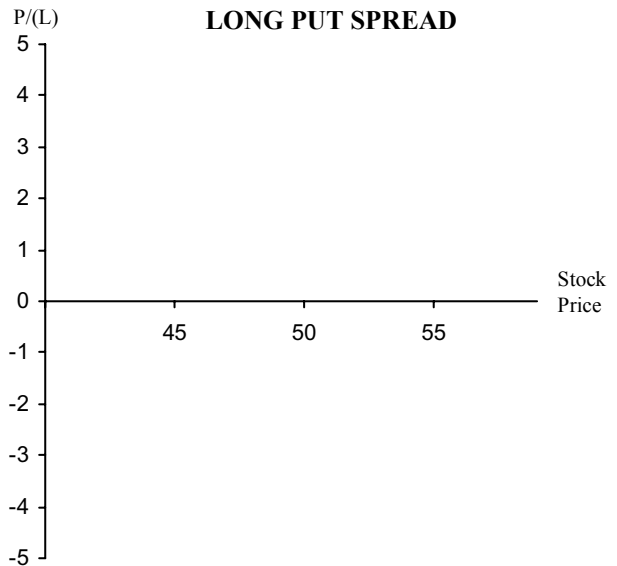


# Put Spreads

STRATEGY: Long Put Spread

EXAMPLE: Buy \$50 Put @ 3 1/2 and  
Sell \$45 Put @ 1 1/2

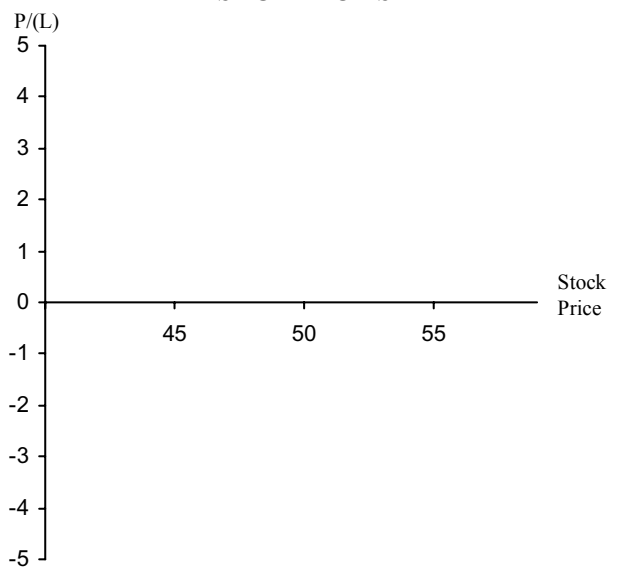
Stock Price at Expiration	Long Put P/(L)	Short Put P/(L)	Total P/(L)
53			
52			
51			
50			
49			
48			
47			
46			
45			
44			
43			



STRATEGY: Short Put Spread

EXAMPLE: Sell \$50 Put @ 3 1/2 and  
Buy \$45 Put @ 1 1/2

Stock Price at Expiration	Short Put P/(L)	Long Put P/(L)	Total P/(L)
53			
52			
51			
50			
49			
48			
47			
46			
45			
44			
43			

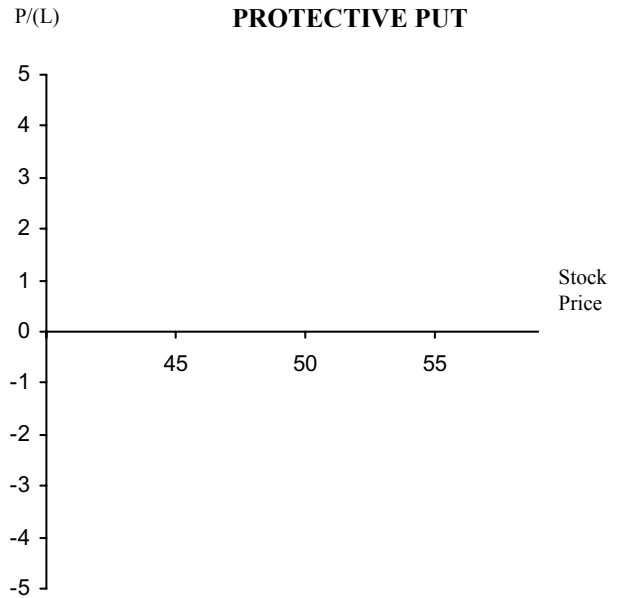


# Stock and Option Strategies

STRATEGY: Protective Put

EXAMPLE: Buy Stock @ 50 and  
Buy \$50 Put @ 2

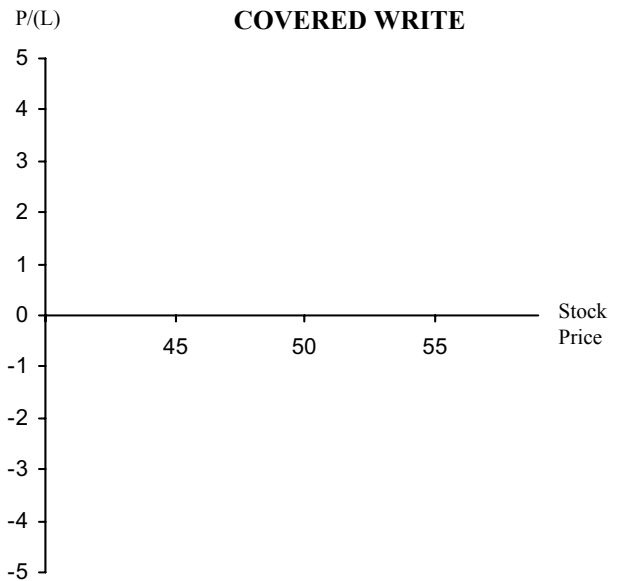
Stock Price at Expiration	Long Stock P/(L)	Long Put P/(L)	Total P/(L)
57			
56			
55			
54			
53			
52			
51			
50			
49			
48			
47			



STRATEGY: Covered Write

EXAMPLE: Buy Stock @ 50 and  
Sell \$50 Call @ 3

Stock Price at Expiration	Long Stock P/(L)	Short Call P/(L)	Total P/(L)
53			
52			
51			
50			
49			
48			
47			
46			
45			
44			
43			



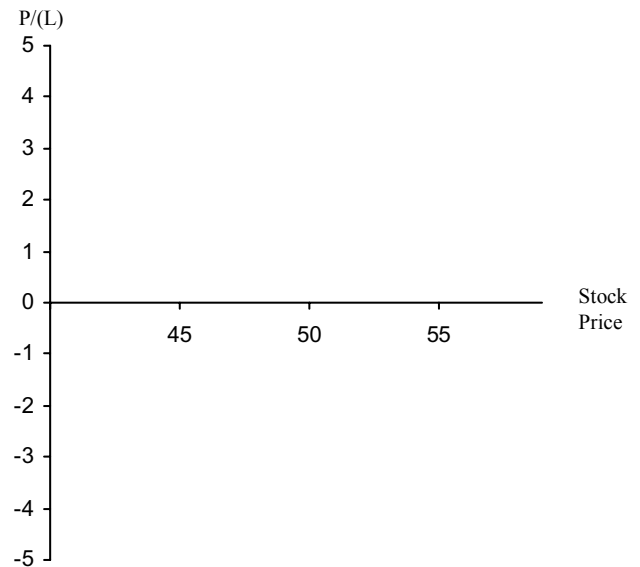
# Stock and Option Strategies

STRATEGY: Long Stock + Short Straddle

EXAMPLE: Buy Stock @ 50 and  
 Sell \$50 Call @ 3 and  
 Sell \$50 Put @ 2

Stock Price at Expiration	Long Stock P/(L)	Short Call P/(L)	Short Put P/(L)	Total P/(L)
55				
54				
53				
52				
51				
50				
49				
48				
47				
46				
45				

**LONG STOCK + SHORT STRADDLE**

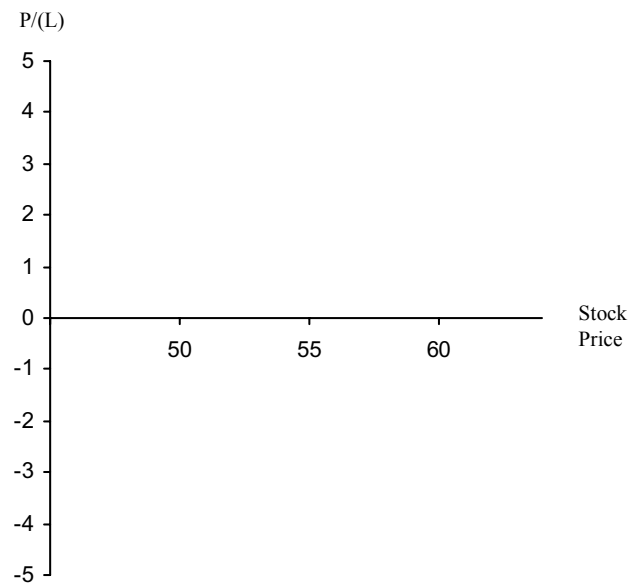


STRATEGY: Long Stock + Short Strangle

EXAMPLE: Buy Stock @ 52 and  
 Sell 1 \$55 Call @ 1 and  
 Sell 1 \$50 Put @ 1

Stock Price at Expiration	Long Stock P/(L)	Short Call P/(L)	Short Put P/(L)	Total P/(L)
56				
55				
54				
53				
52				
51				
50				
49				
48				
47				
46				

**LONG STOCK + SHORT STRANGLE**



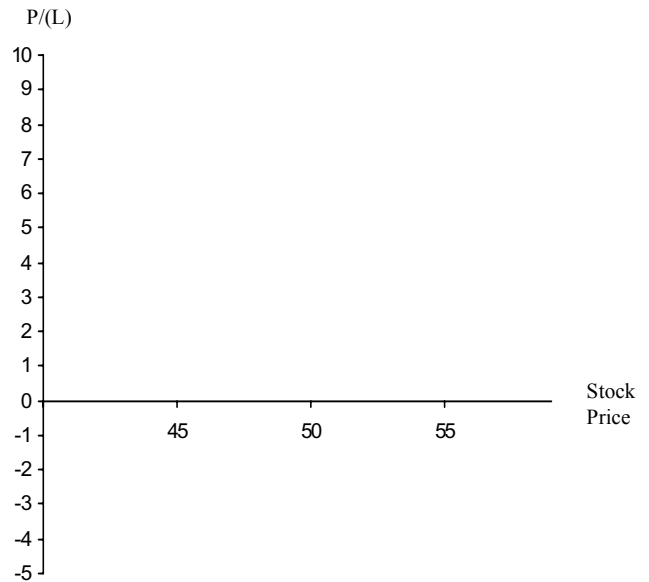
# Stock and Option Strategies

STRATEGY: Long Stock + Ratio Call Spread

EXAMPLE: Buy Stock @ 50 and  
Buy 1 \$50 Call @ 3 and  
Sell 2 \$55 Calls @ 1 1/2 each

Stock Price at Expiration	Long Stock P/(L)	Long Call P/(L)	Short Calls P/(L)	Total P/(L)
56				
55				
54				
53				
52				
51				
50				
49				
48				
47				
46				

## LONG STOCK + RATIO CALL SPREAD

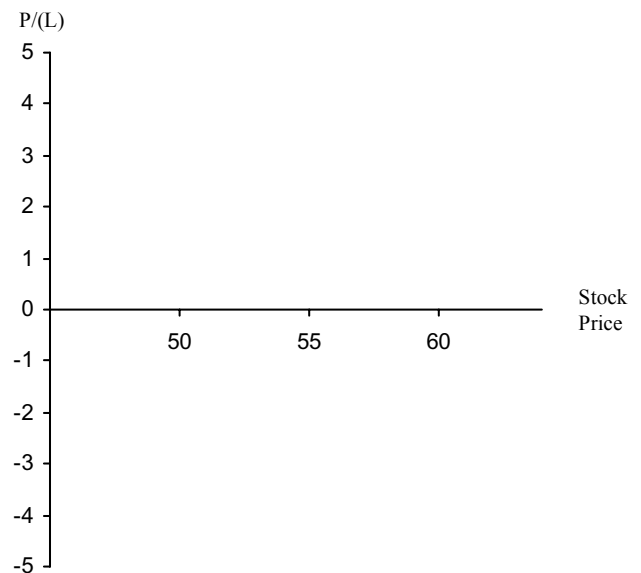


STRATEGY: Long Stock + Collar

EXAMPLE: Buy Stock @ 52 and  
Sell 1 \$55 Call @ 1 and  
Buy 1 \$50 Put @ 1

Stock Price at Expiration	Long Stock P/(L)	Short Call P/(L)	Long Put P/(L)	Total P/(L)
58				
57				
56				
55				
54				
53				
52				
51				
50				
49				
48				

## LONG STOCK + COLLAR

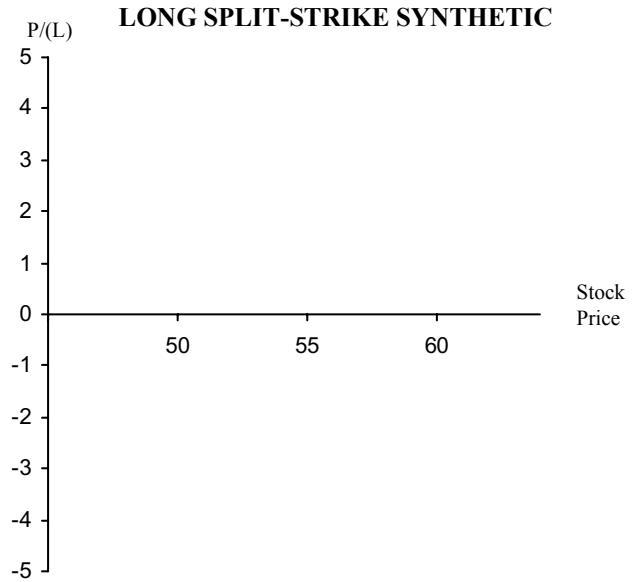


# Synthetic Combinations

STRATEGY: Long Split-Strike Synthetic

EXAMPLE: Buy 1 \$55 Call @ 1 1/2 and  
Sell 1 \$50 Put @ 1

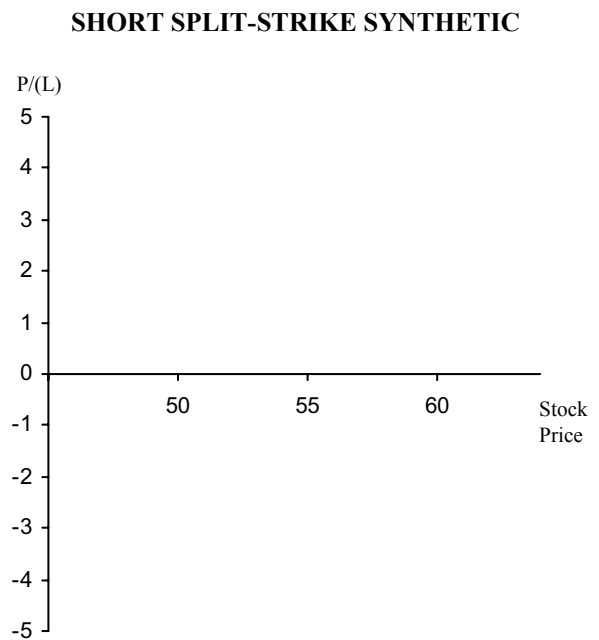
Stock Price at Expiration	Long Call P/(L)	Short Put P/(L)	Total P/(L)
59			
58			
57			
56			
55			
53			
51			
50			
49			
48			
47			



STRATEGY: Short Split-Strike Synthetic

EXAMPLE: Sell 1 \$55 Call @ 1 1/2 and  
Buy 1 \$50 Put @ 1

Stock Price at Expiration	Short Call P/(L)	Long Put P/(L)	Total P/(L)
59			
58			
57			
56			
55			
53			
51			
50			
49			
48			
47			

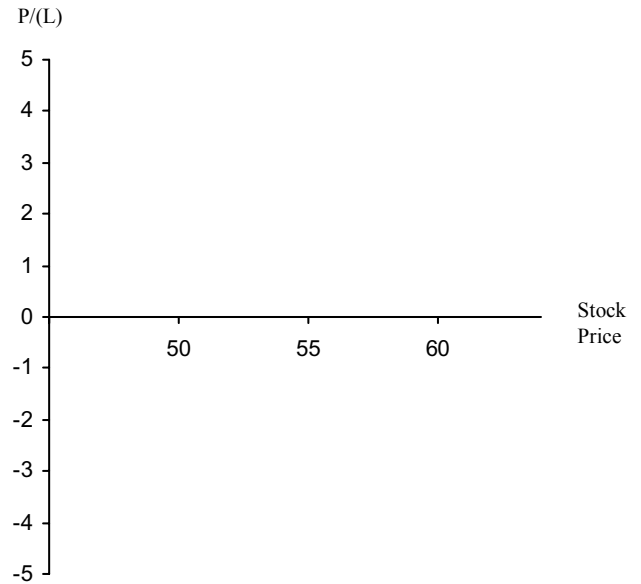


# Ratio Spreads

STRATEGY: 1 X 2 Ratio Vertical Spread With Calls  
 EXAMPLE: Buy 1 \$50 Call @ 3 and  
 Sell 2 \$55 Calls @ 1 each

## 1 X 2 RATIO VERTICAL SPREAD WITH CALLS ( FRONT SPREAD )

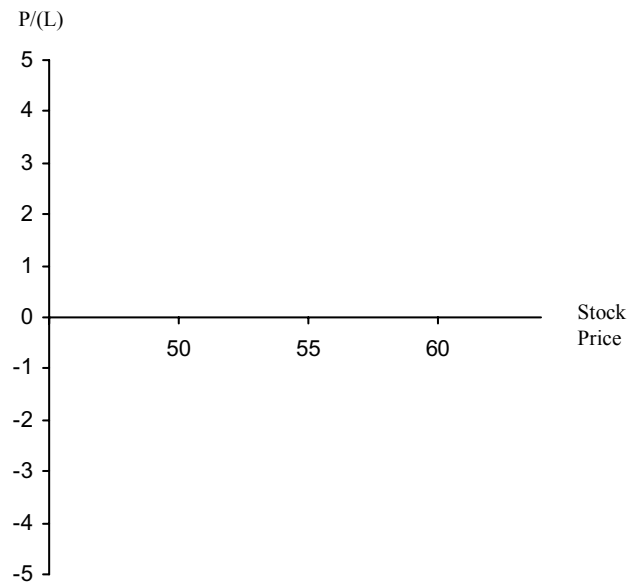
Stock Price at Expiration	Long Call P/(L)	Short Calls P/(L)	Total P/(L)
62			
60			
59			
58			
57			
56			
55			
54			
53			
52			
51			
50			
48			



STRATEGY: 1 X 2 Ratio Volatility Spread With Calls  
 EXAMPLE: Sell 1 \$50 Call @ 3 and  
 Buy 2 \$55 Calls @ 1 each

## 1 X 2 RATIO VOLATILITY SPREAD WITH CALLS ( BACK SPREAD )

Stock Price at Expiration	Short Call P/(L)	Long Calls P/(L)	Total P/(L)
62			
60			
59			
58			
57			
56			
55			
54			
53			
52			
51			
50			
48			



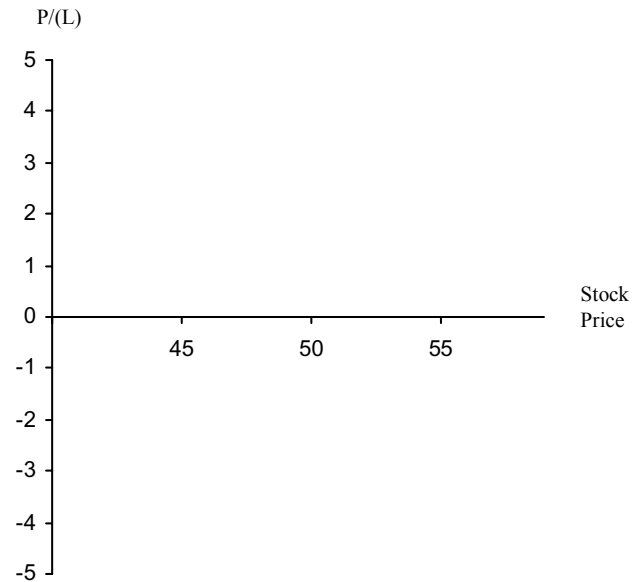


# Butterfly Strategies

STRATEGY: Call Butterfly  
 EXAMPLE: Buy 1 \$45 Call @ 6 and  
 Sell 2 \$50 Calls @ 3 ea. and  
 Buy 1 \$55 Call @ 1

Stock Price at Expiration	Long Call P/(L)	Short Calls P/(L)	Long Call P/(L)	Total P/(L)
56				
55				
54				
53				
52				
51				
50				
49				
48				
47				
46				
45				
44				

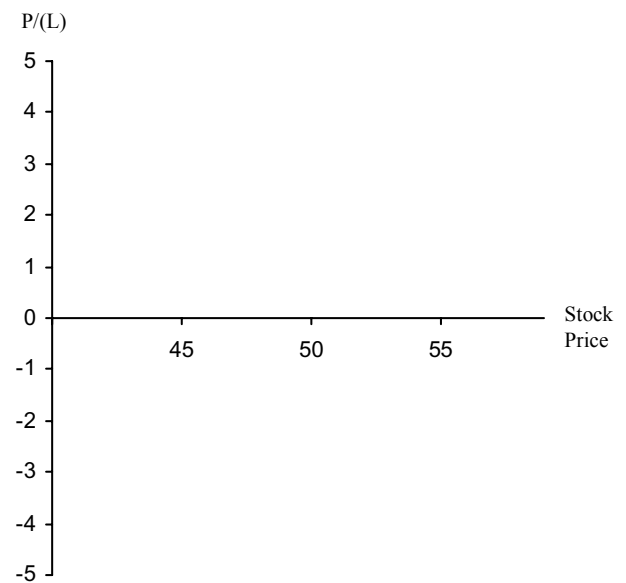
## LONG CALL BUTTERFLY



STRATEGY: Short Butterfly with Calls  
 EXAMPLE: Sell 1 \$45 Call @ 6 and  
 Buy 2 \$50 Calls @ 3 ea. and  
 Sell 1 \$55 Call @ 1

Stock Price at Expiration	Short Call P/(L)	Long Calls P/(L)	Short Call P/(L)	Total P/(L)
56				
55				
54				
53				
52				
51				
50				
49				
48				
47				
46				
45				
44				

## SHORT CALL BUTTERFLY



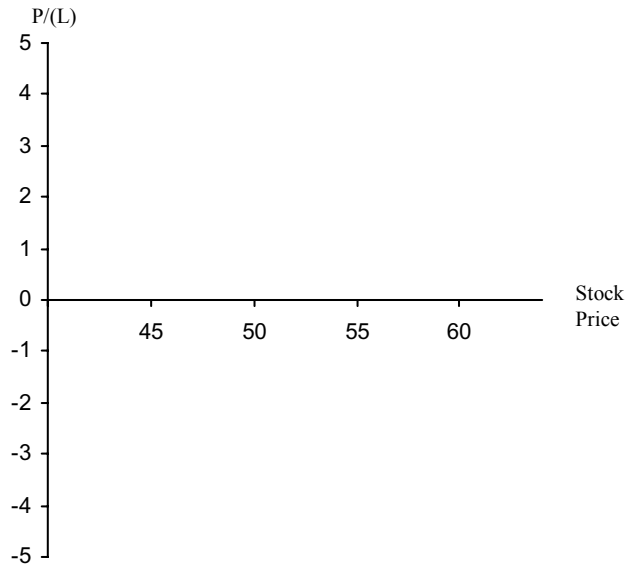
These strategies are presented for educational purposes only. Transaction costs may make these impractical for individual investors.

# Condor Strategies

STRATEGY: Long Condor with Calls  
 EXAMPLE: Buy 1 \$45 Call @ 6 and  
 Sell 1 \$50 Call @ 4 and  
 Sell 1 \$55 Call @ 2 and  
 Buy 1 \$60 Call @ 1

Stock Price at Expiration	Long 45 P/(L)	Short 50 P/(L)	Short 55 P/(L)	Long 60 P/(L)	Total P/(L)
62					
60					
58					
56					
55					
54					
52					
50					
48					
46					
45					
44					

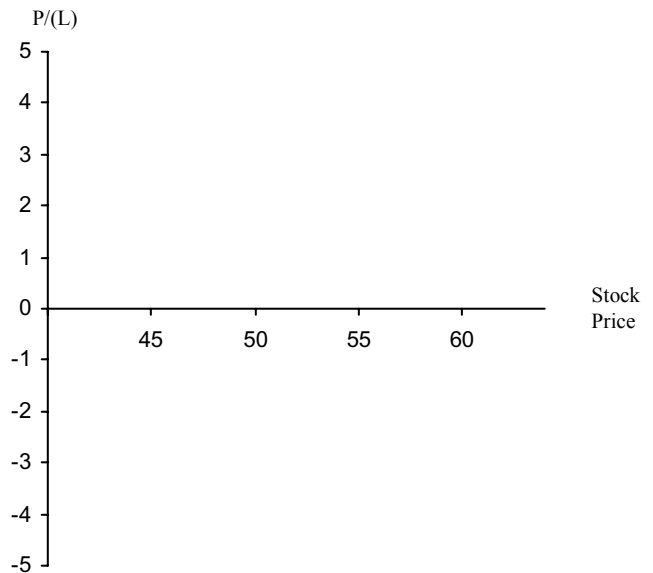
## LONG CALL CONDOR



STRATEGY: Short Condor with Calls  
 EXAMPLE: Sell 1 \$45 Call @ 6 and  
 Buy 1 \$50 Call @ 4 and  
 Buy 1 \$55 Call @ 2 and  
 Sell 1 \$60 Call @ 1

Stock Price at Expiration	Short 45 P/(L)	Long 50 P/(L)	Long 55 P/(L)	Short 60 P/(L)	Total P/(L)
62					
60					
58					
56					
55					
54					
52					
50					
48					
46					
45					
44					

## SHORT CALL CONDOR



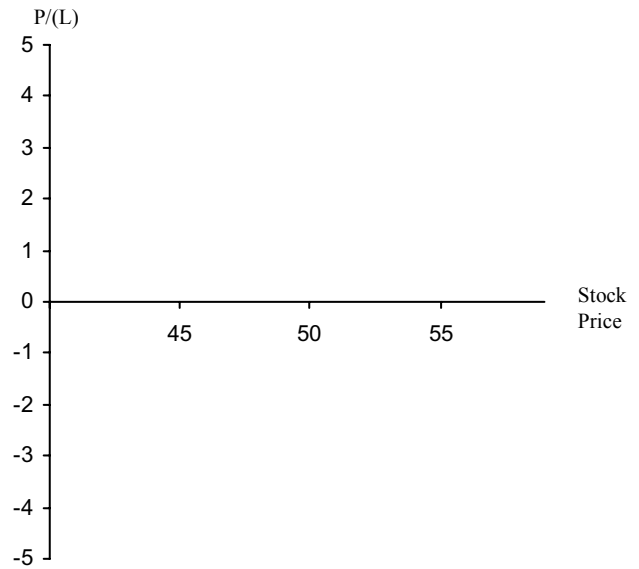
These strategies are presented for educational purposes only. Transaction costs may make these impractical for individual investors.

# Iron Strategies

STRATEGY: Iron Butterfly  
 EXAMPLE: Buy 1 \$45 Put @ 1 and  
 Sell 1 \$50 Put @ 3 and  
 Sell 1 \$50 Call @ 3 and  
 Buy 1 \$55 Call @ 1

## IRON BUTTERFLY

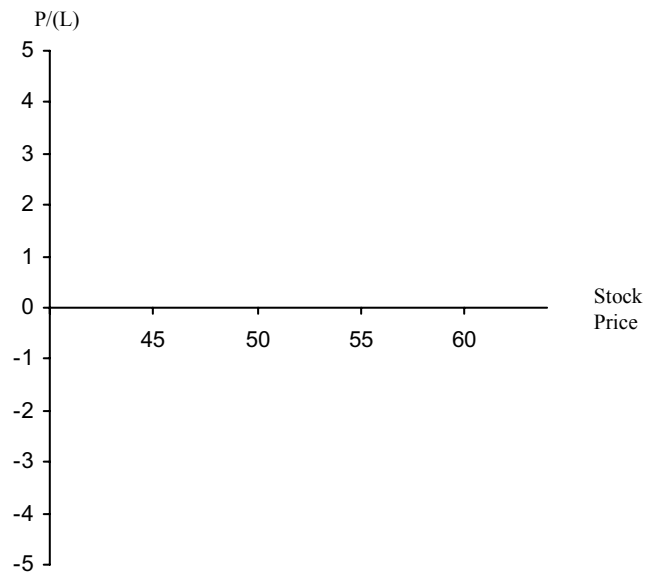
Stock Price at Expiration	Long Put P/(L)	Short Put P/(L)	Short Call P/(L)	Long Call P/(L)	Total P/(L)
56					
55					
54					
53					
52					
51					
50					
49					
48					
47					
46					
45					
44					



STRATEGY: Iron Condor  
 EXAMPLE: Buy 1 \$45 Put @ 1 and  
 Sell 1 \$50 Put @ 3 and  
 Sell 1 \$55 Call @ 3 and  
 Buy 1 \$60 Call @ 1

## IRON CONDOR

Stock Price at Expiration	Long Put P/(L)	Short Put P/(L)	Short Call P/(L)	Long Call P/(L)	Total P/(L)
62					
60					
58					
56					
55					
54					
52					
50					
48					
46					
45					
44					



These strategies are presented for educational purposes only. Transaction costs may make these impractical for individual investors.

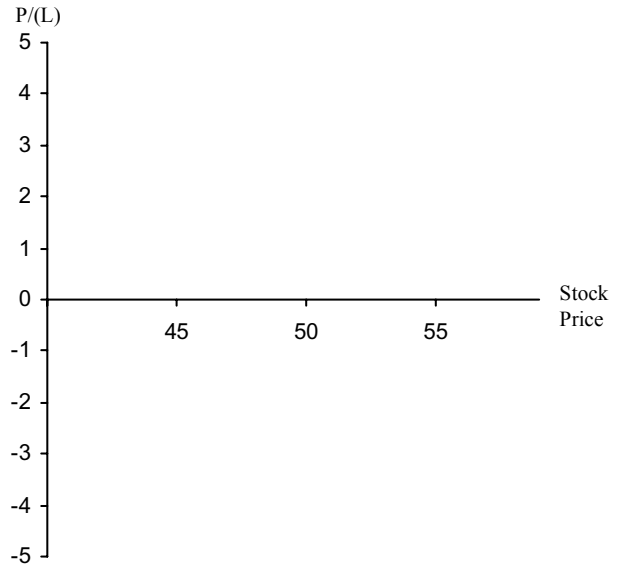
# Synthetic Positions

STRATEGY: Synthetic Long Stock

EXAMPLE: Buy 1 \$50 Call @ 2 and  
Sell 1 \$50 Put @ 2

Stock Price at Expiration	Long Call P/(L)	Short Put P/(L)	Total P/(L)
55			
54			
53			
52			
51			
50			
49			
48			
47			
46			
45			

**SYNTHETIC LONG STOCK**

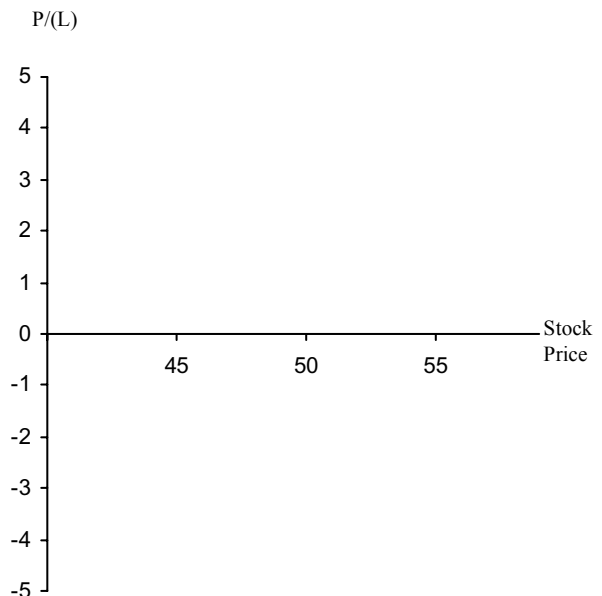


STRATEGY: Synthetic Short Stock

EXAMPLE: Sell 1 \$50 Call @ 2 and  
Buy 1 \$50 Put @ 2

Stock Price at Expiration	Short Call P/(L)	Long Put P/(L)	Total P/(L)
55			
54			
53			
52			
51			
50			
49			
48			
47			
46			
45			

**SYNTHETIC SHORT STOCK**

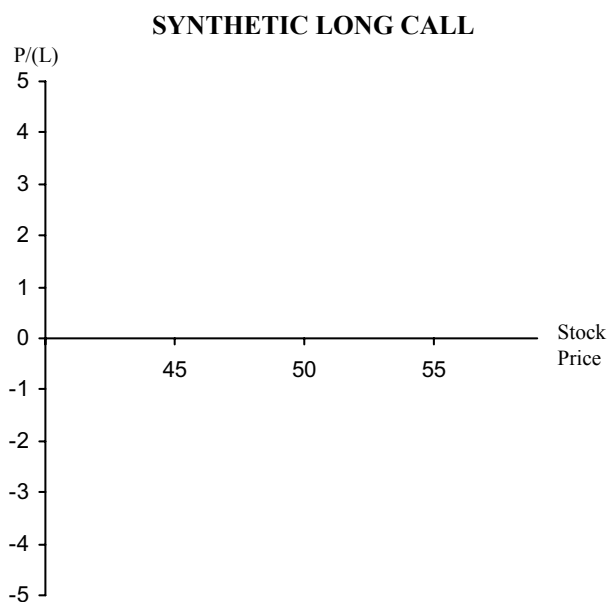


These strategies are presented for educational purposes only. Transaction costs may make these impractical for individual investors.

# Synthetic Positions

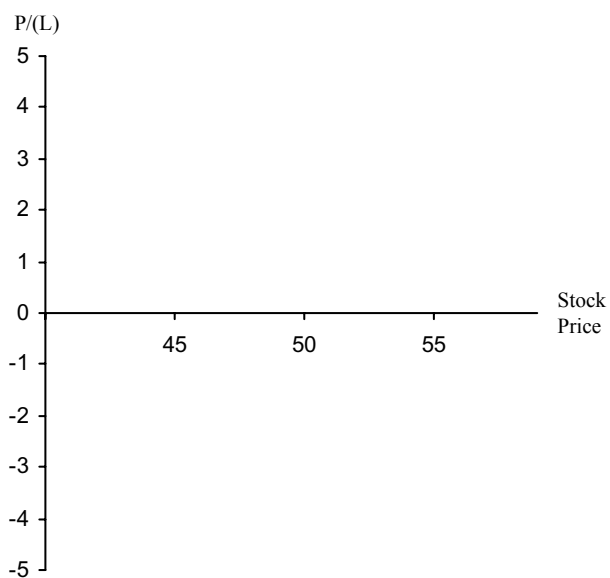
STRATEGY: Synthetic Long Call  
 EXAMPLE: Buy Stock @ 50 and  
 Buy 1 \$50 Put @ 2

Stock Price at Expiration	Long Stock P/(L)	Long Put P/(L)	Total P/(L)
55			
54			
53			
52			
51			
50			
49			
48			
47			
46			
45			



STRATEGY: Synthetic Short Call  
 EXAMPLE: Sell Stock Short @ 50 and  
 Sell 1 \$50 Put @ 2

Stock Price at Expiration	Short Stock P/(L)	Short Put P/(L)	Total P/(L)
55			
54			
53			
52			
51			
50			
49			
48			
47			
46			
45			

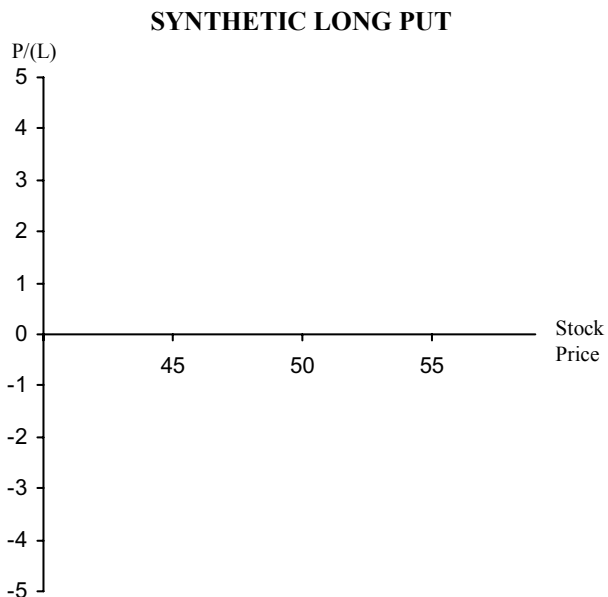


These strategies are presented for educational purposes only. Transaction costs may make these impractical for individual investors.

# Synthetic Positions

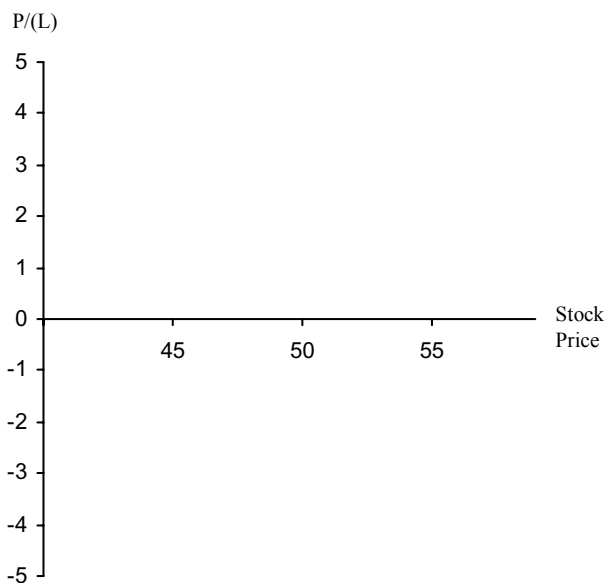
STRATEGY: Synthetic Long Put  
 EXAMPLE: Sell Stock Short @ 50 and  
 Buy 1 \$50 Call @ 2

Stock Price at Expiration	Short Stock P/(L)	Long Call P/(L)	Total P/(L)
55			
54			
53			
52			
51			
50			
49			
48			
47			
46			
45			



STRATEGY: Synthetic Short Put  
 EXAMPLE: Buy Stock @ 50 and  
 Sell 1 \$50 Call @ 2

Stock Price at Expiration	Long Stock P/(L)	Short Call P/(L)	Total P/(L)
55			
54			
53			
52			
51			
50			
49			
48			
47			
46			
45			



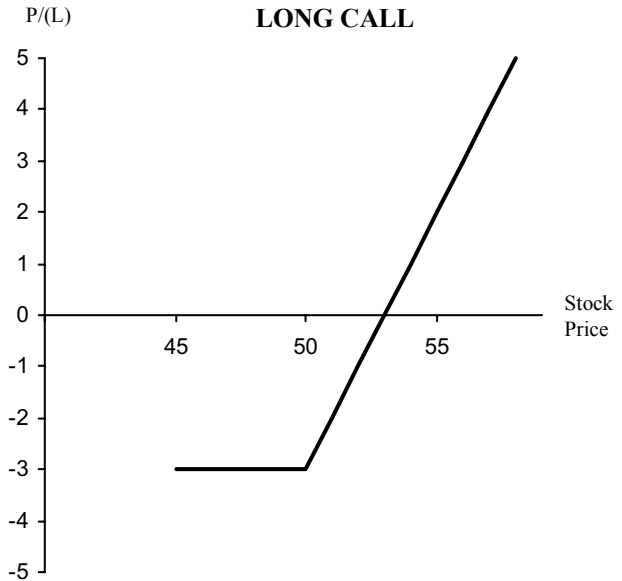
These strategies are presented for educational purposes only. Transaction costs may make these impractical for individual investors.

# ANSWERS: Call Strategies

STRATEGY: Long Call

EXAMPLE: Buy \$50 Call @ 3

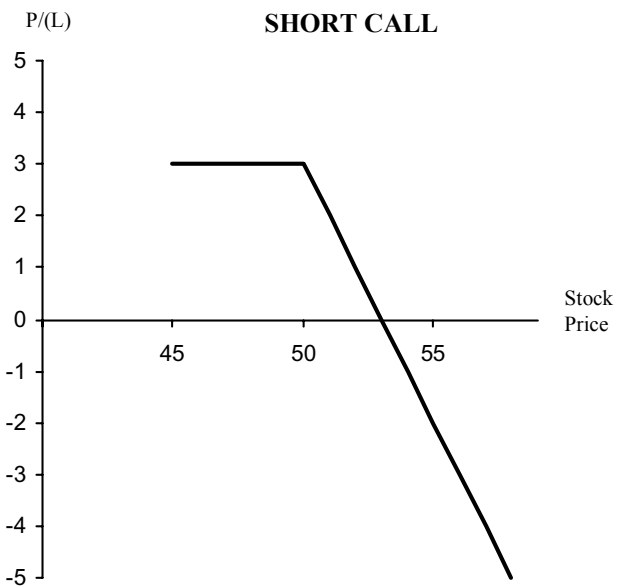
Stock Price at Expiration	Long Call P/(L)
58	5
57	4
56	3
55	2
54	1
53	0
52	(1)
51	(2)
50	(3)
49	(3)
48	(3)



STRATEGY: Short Call

EXAMPLE: Sell \$50 Call @ 3

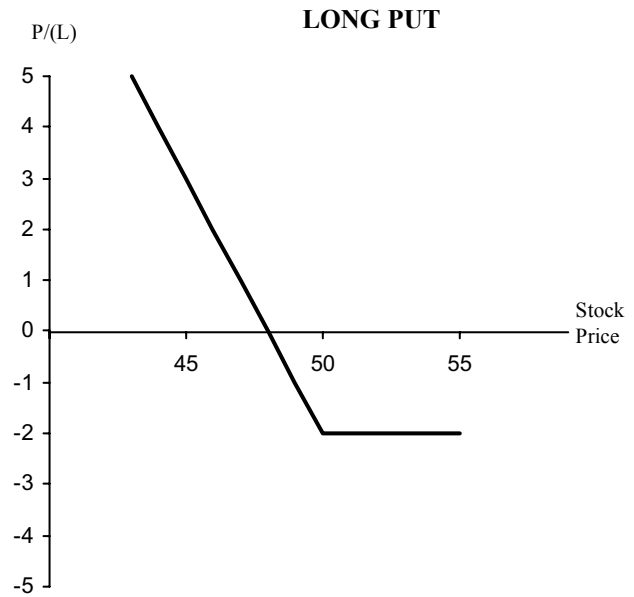
Stock Price at Expiration	Short Call P/(L)
58	(5)
57	(4)
56	(3)
55	(2)
54	(1)
53	0
52	1
51	2
50	3
49	3
48	3



# ANSWERS: Put Strategies

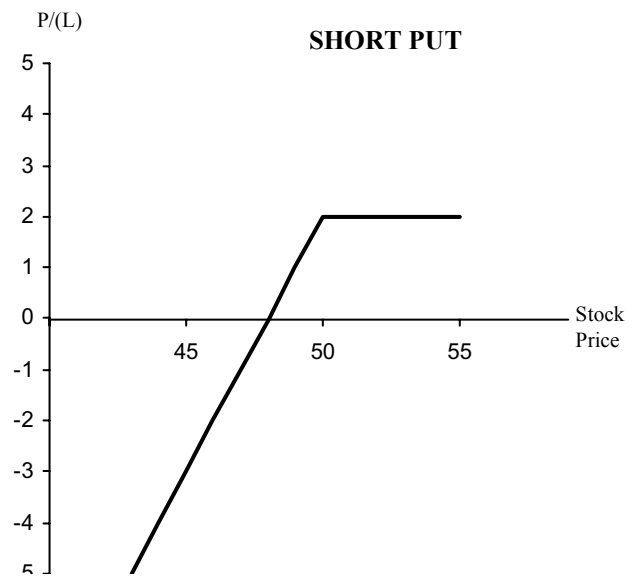
STRATEGY: Long Put  
 EXAMPLE: Buy \$50 Put @ 2

Stock Price at Expiration	Long Put P/(L)
53	(2)
52	(2)
51	(2)
50	(2)
49	(1)
48	0
47	1
46	2
45	3
44	4
43	5



STRATEGY: Short Put  
 EXAMPLE: Sell \$50 Put @ 2

Stock Price at Expiration	Short Put P/(L)
53	2
52	2
51	2
50	2
49	1
48	0
47	(1)
46	(2)
45	(3)
44	(4)
43	(5)



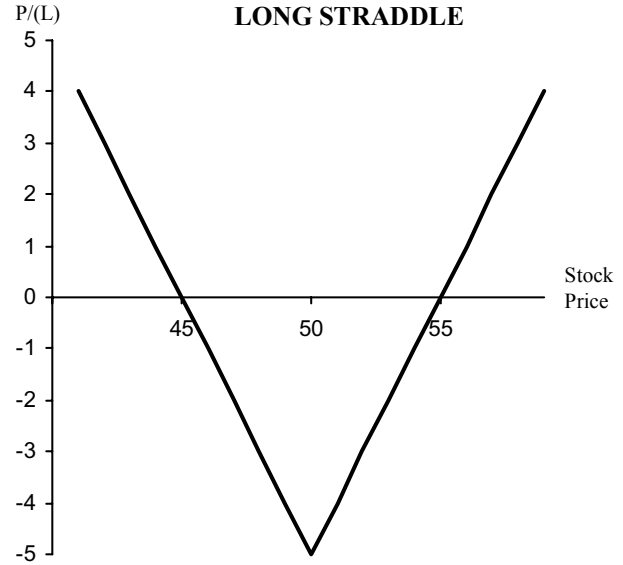


# ANSWERS: Straddles

STRATEGY: Long Straddle

EXAMPLE: Buy \$50 Call @ 3 and  
Buy \$50 Put @ 2

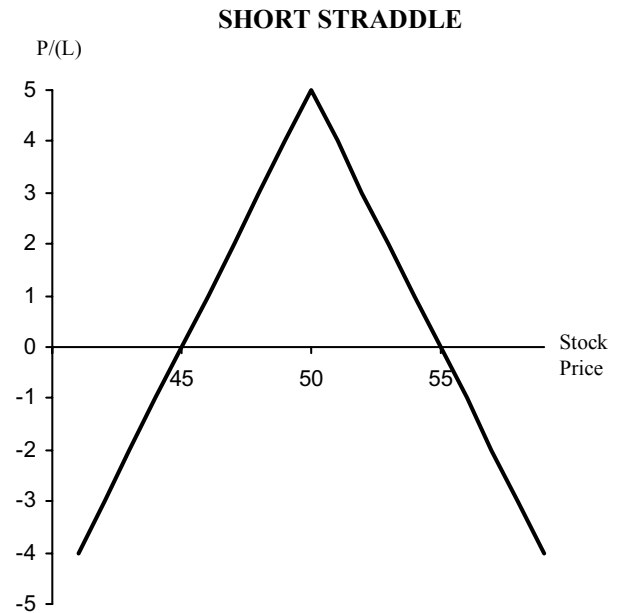
Stock Price at Expiration	Long Call P/(L)	Long Put P/(L)	Total P/(L)
59	6	(2)	4
57	4	(2)	2
55	2	(2)	0
53	0	(2)	(2)
51	(2)	(2)	(4)
50	(3)	(2)	(5)
49	(3)	(1)	(4)
47	(3)	1	(2)
45	(3)	3	0
43	(3)	5	2
41	(3)	7	4



STRATEGY: Short Straddle

EXAMPLE: Sell \$50 Call @ 3 and  
Sell \$50 Put @ 2

Stock Price at Expiration	Short Call P/(L)	Short Put P/(L)	Total P/(L)
59	(6)	2	(4)
57	(4)	2	(2)
55	(2)	2	0
53	0	2	2
51	2	2	4
50	3	2	5
49	3	1	4
47	3	(1)	2
45	3	(3)	0
43	3	(5)	(2)
41	3	(7)	(4)

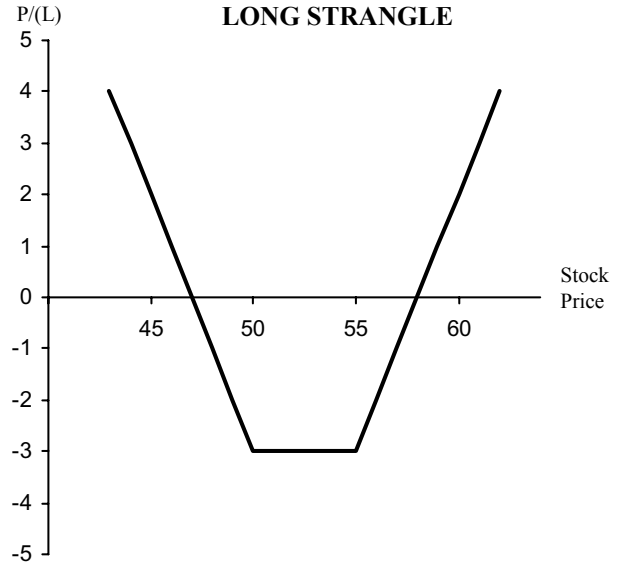


# ANSWERS: Strangles

STRATEGY: Long Strangle

EXAMPLE: Buy \$55 Call @ 1 1/2 and  
Buy \$50 Put @ 1 1/2

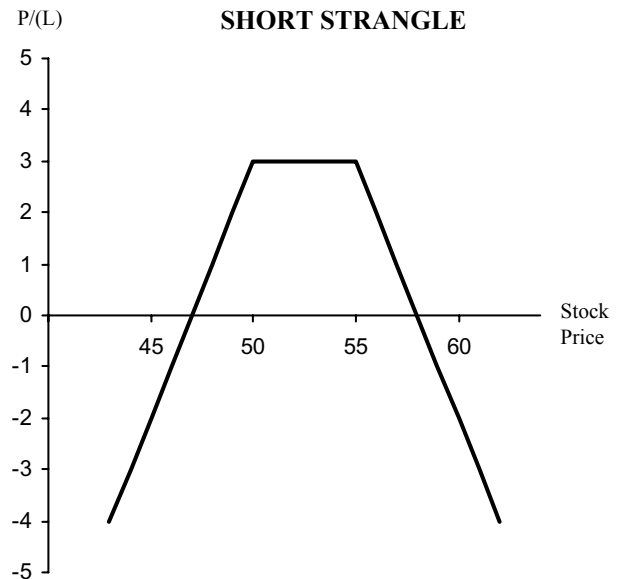
Stock Price at Expiration	Long Call P/(L)	Long Put P/(L)	Total P/(L)
61	4 1/2	(1 1/2)	3
59	2 1/2	(1 1/2)	1
57	1/2	(1 1/2)	(1)
55	(1 1/2)	(1 1/2)	(3)
53	(1 1/2)	(1 1/2)	(3)
51	(1 1/2)	(1 1/2)	(3)
50	(1 1/2)	(1 1/2)	(3)
49	(1 1/2)	( 1/2)	(2)
47	(1 1/2)	1 1/2	0
45	(1 1/2)	3 1/2	2
43	(1 1/2)	5 1/2	4



STRATEGY: Short Strangle

EXAMPLE: Sell \$55 Call @ 1 1/2 and  
Sell \$50 Put @ 1 1/2

Stock Price at Expiration	Short Call P/(L)	Short Put P/(L)	Total P/(L)
61	(4 1/2)	1 1/2	(3)
59	(2 1/2)	1 1/2	(1)
57	( 1/2)	1 1/2	1
55	1 1/2	1 1/2	3
53	1 1/2	1 1/2	3
51	1 1/2	1 1/2	3
50	1 1/2	1 1/2	3
49	1 1/2	1/2	2
47	1 1/2	(1 1/2)	0
45	1 1/2	(3 1/2)	(2)
43	1 1/2	(5 1/2)	(4)

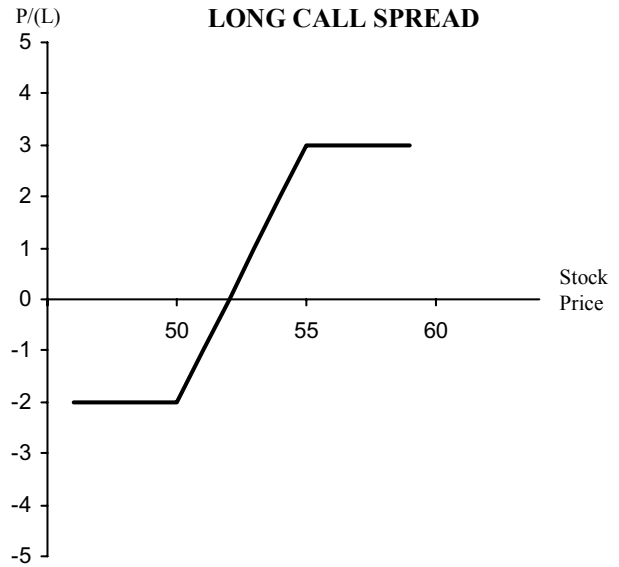


# ANSWERS: Call Spreads

STRATEGY: Long Call Spread

EXAMPLE: Buy \$50 Call @ 4 and  
Sell \$55 Call @ 2

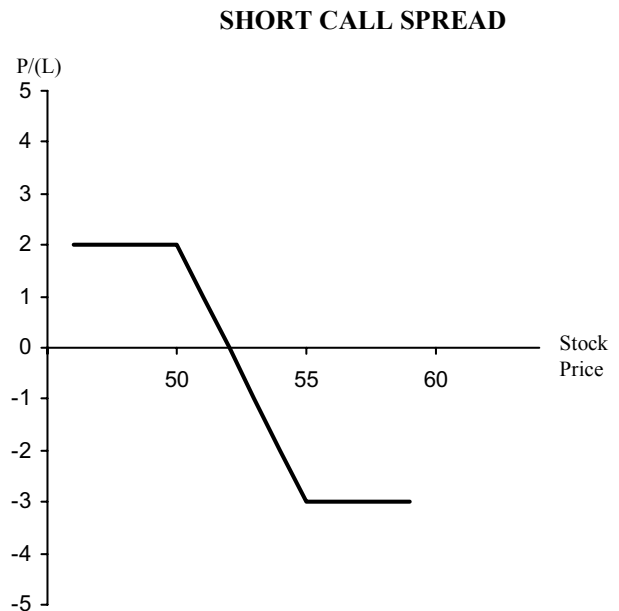
Stock Price at Expiration	Long Call P/(L)	Short Call P/(L)	Total P/(L)
58	4	(1)	3
57	3	0	3
56	2	1	3
55	1	2	3
54	0	2	2
53	(1)	2	1
52	(2)	2	0
51	(3)	2	(1)
50	(4)	2	(2)
49	(4)	2	(2)
48	(4)	2	(2)



STRATEGY: Short Call Spread

EXAMPLE: Sell \$50 Call @ 4 and  
Buy \$55 Call @ 2

Stock Price at Expiration	Short Call P/(L)	Long Call P/(L)	Total P/(L)
58	(4)	1	(3)
57	(3)	0	(3)
56	(2)	(1)	(3)
55	(1)	(2)	(3)
54	0	(2)	(2)
53	1	(2)	(1)
52	2	(2)	0
51	3	(2)	1
50	4	(2)	2
49	4	(2)	2
48	4	(2)	2

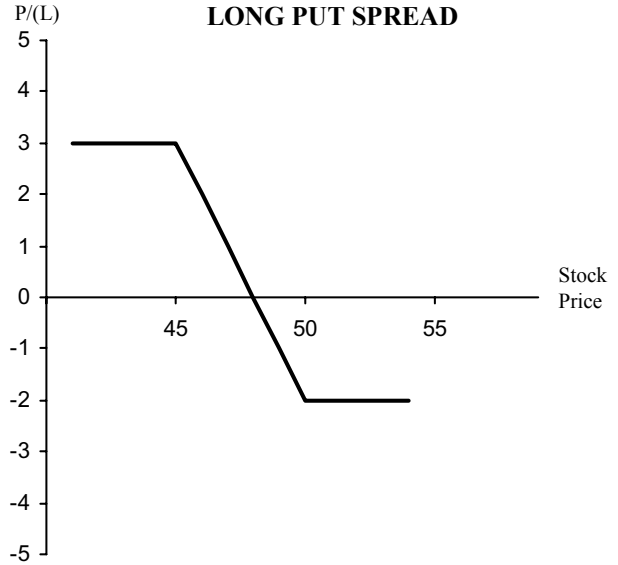


# ANSWERS: Put Spreads

STRATEGY: Long Put Spread

EXAMPLE: Buy \$50 Put @ 3 1/2 and  
Sell \$45 Put @ 1 1/2

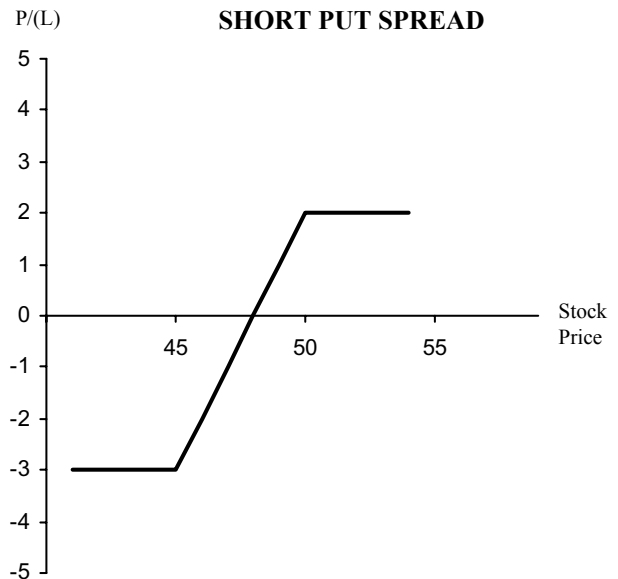
Stock Price at Expiration	Long Put P/(L)	Short Put P/(L)	Total P/(L)
53	(3 1/2)	1 1/2	(2)
52	(3 1/2)	1 1/2	(2)
51	(3 1/2)	1 1/2	(2)
50	(3 1/2)	1 1/2	(2)
49	(2 1/2)	1 1/2	(1)
48	(1 1/2)	1 1/2	0
47	( 1/2)	1 1/2	1
46	1/2	1 1/2	2
45	1 1/2	1 1/2	3
44	2 1/2	1/2	3
43	3 1/2	( 1/2)	3



STRATEGY: Short Put Spread

EXAMPLE: Sell \$50 Put @ 3 1/2 and  
Buy \$45 Put @ 1 1/2

Stock Price at Expiration	Short Put P/(L)	Long Put P/(L)	Total P/(L)
53	3 1/2	(1 1/2)	2
52	3 1/2	(1 1/2)	2
51	3 1/2	(1 1/2)	2
50	3 1/2	(1 1/2)	2
49	2 1/2	(1 1/2)	1
48	1 1/2	(1 1/2)	0
47	1/2	(1 1/2)	(1)
46	( 1/2)	(1 1/2)	(2)
45	(1 1/2)	(1 1/2)	(3)
44	(2 1/2)	( 1/2)	(3)
43	(3 1/2)	1/2	(3)

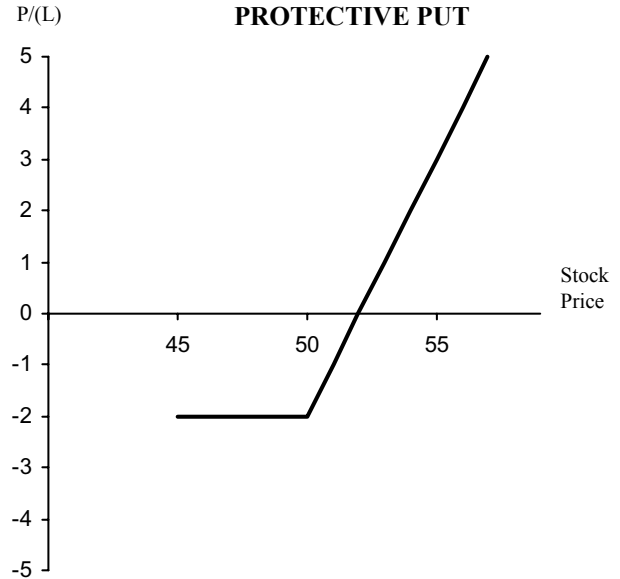


# ANSWERS: Stock and Option Strategies

STRATEGY: Protective Put

EXAMPLE: Buy Stock @ 50 and  
Buy \$50 Put @ 2

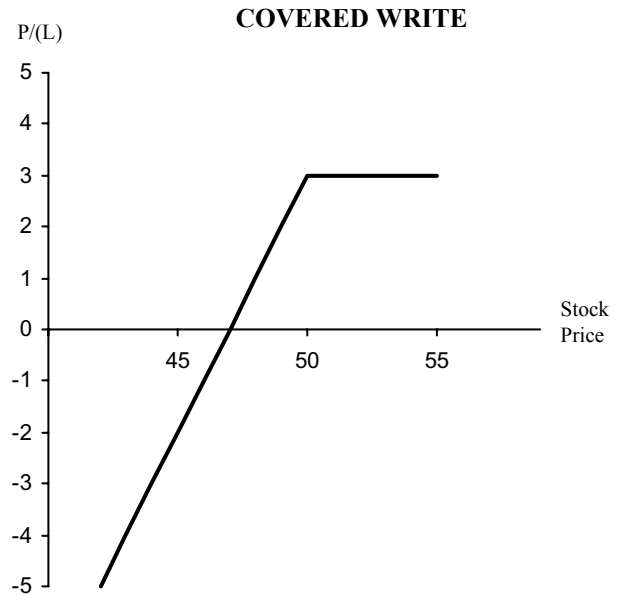
Stock Price at Expiration	Long Stock P/(L)	Long Put P/(L)	Total P/(L)
57	7	(2)	5
56	6	(2)	4
55	5	(2)	3
54	4	(2)	2
53	3	(2)	1
52	2	(2)	0
51	1	(2)	(1)
50	0	(2)	(2)
49	(1)	(1)	(2)
48	(2)	0	(2)
47	(3)	1	(2)



STRATEGY: Covered Write

EXAMPLE: Buy Stock @ 50 and  
Sell \$50 Call @ 3

Stock Price at Expiration	Long Stock P/(L)	Short Call P/(L)	Total P/(L)
52	2	1	3
51	1	2	3
50	0	3	3
49	(1)	3	2
48	(2)	3	1
47	(3)	3	0
46	(4)	3	(1)
45	(5)	3	(2)
44	(6)	3	(3)
43	(7)	3	(4)
42	(8)	3	(5)



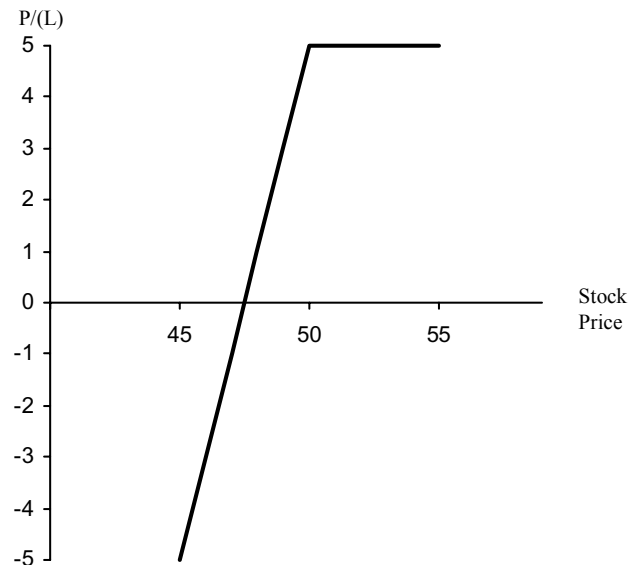
# ANSWERS: Stock and Option Strategies

STRATEGY: Long Stock + Short Straddle

EXAMPLE: Buy Stock @ 50 and  
Sell \$50 Call @ 3 and  
Sell \$50 Put @ 2

Stock Price at Expiration	Long Stock P/(L)	Short Call P/(L)	Short Put P/(L)	Total P/(L)
55	5	(2)	2	5
54	4	(1)	2	5
53	3	0	2	5
52	2	1	2	5
51	1	2	2	5
50	0	3	2	5
49	(1)	3	1	3
48	(2)	3	0	1
47	(3)	3	(1)	(1)
46	(4)	3	(2)	(3)
45	(5)	3	(3)	(5)

**LONG STOCK + SHORT STRADDLE**

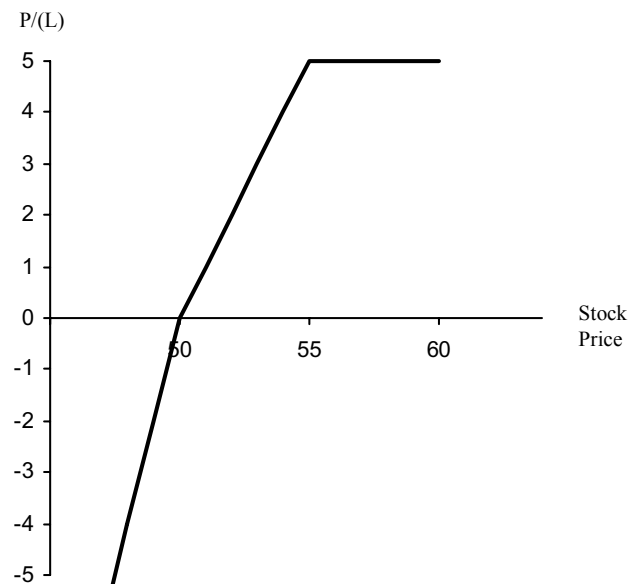


STRATEGY: Long Stock + Short Strangle

EXAMPLE: Buy Stock @ 52 and  
Sell 1 \$55 Call @ 1 and  
Sell 1 \$50 Put @ 1

Stock Price at Expiration	Long Stock P/(L)	Short Call P/(L)	Short Put P/(L)	Total P/(L)
56	4	0	1	5
55	3	1	1	5
54	2	1	1	4
53	1	1	1	3
52	0	1	1	2
51	(1)	1	1	1
50	(2)	1	1	0
49	(3)	1	0	(2)
48	(4)	1	(1)	(4)
47	(5)	1	(2)	(6)
46	(6)	1	(3)	(8)

**LONG STOCK + SHORT STRANGLE**



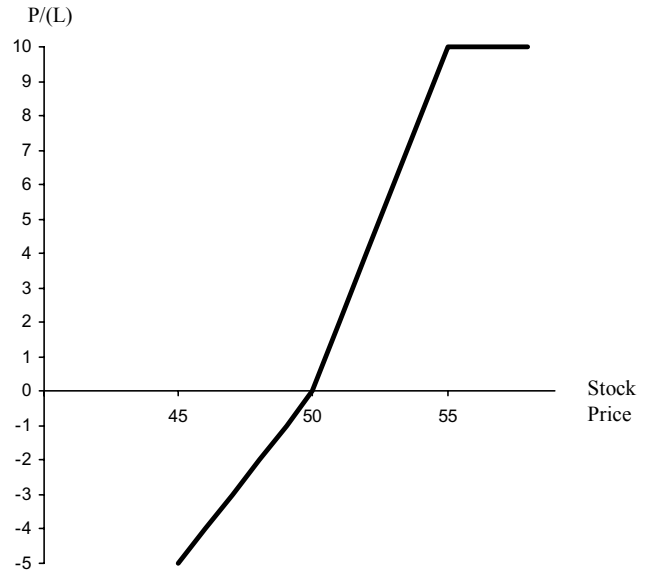
# ANSWERS: Stock and Option Strategies

STRATEGY: Long Stock + Ratio Call Spread

EXAMPLE: Buy Stock @ 50 and  
Buy 1 \$50 Call @ 3 and  
Sell 2 \$55 Calls @ 1 1/2 each

Stock Price at Expiration	Long Stock P/(L)	Long Call P/(L)	Short Calls P/(L)	Total P/(L)
56	6	3	1	10
55	5	2	3	10
54	4	1	3	8
53	3	0	3	6
52	2	(1)	3	4
51	1	(2)	3	2
50	0	(3)	3	0
49	(1)	(3)	3	(1)
48	(2)	(3)	3	(2)
47	(3)	(3)	3	(3)
46	(4)	(3)	3	(4)

## LONG STOCK + RATIO CALL SPREAD

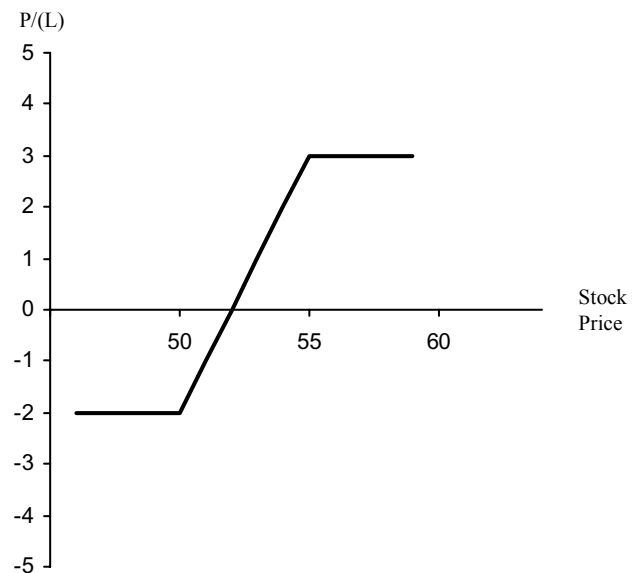


STRATEGY: Long Stock + Collar

EXAMPLE: Buy Stock @ 52 and  
Sell 1 \$55 Call @ 1 and  
Buy 1 \$50 Put @ 1

Stock Price at Expiration	Long Stock P/(L)	Short Call P/(L)	Long Put P/(L)	Total P/(L)
58	6	(2)	(1)	3
57	5	(1)	(1)	3
56	4	0	(1)	3
55	3	1	(1)	3
54	2	1	(1)	2
53	1	1	(1)	1
52	0	1	(1)	0
51	(1)	1	(1)	(1)
50	(2)	1	(1)	(2)
49	(3)	1	0	(2)
48	(4)	1	1	(2)

## LONG STOCK + COLLAR

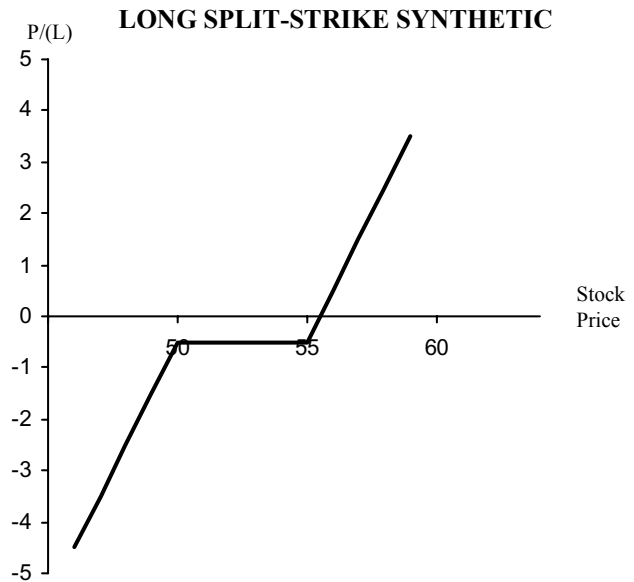


# ANSWERS: Synthetic Combinations

STRATEGY: Long Split-Strike Synthetic

EXAMPLE: Buy 1 \$55 Call @ 1 1/2 and  
Sell 1 \$50 Put @ 1

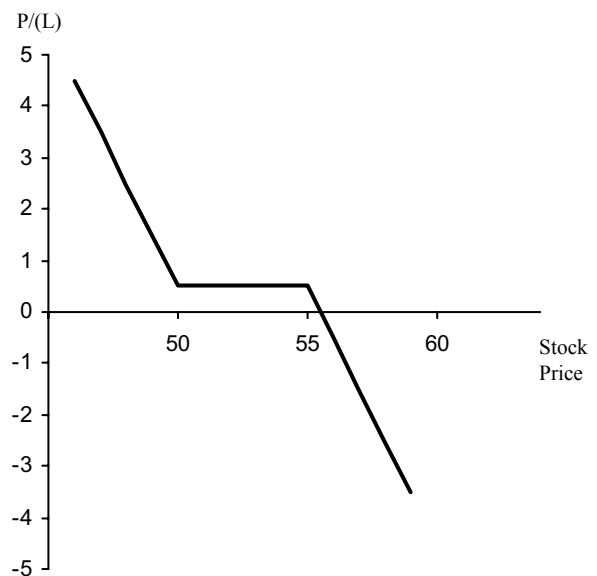
Stock Price at Expiration	Long Call P/(L)	Short Put P/(L)	Total P/(L)
59	2 1/2	1	3 1/2
58	1 1/2	1	2 1/2
57	1/2	1	1 1/2
56	( 1/2)	1	1/2
55	(1 1/2)	1	( 1/2)
53	(1 1/2)	1	( 1/2)
51	(1 1/2)	1	( 1/2)
50	(1 1/2)	1	( 1/2)
49	(1 1/2)	0	(1 1/2)
48	(1 1/2)	(1)	(2 1/2)
47	(1 1/2)	(2)	(3 1/2)



STRATEGY: Short Split-Strike Synthetic

EXAMPLE: Sell 1 \$55 Call @ 1 1/2 and  
Buy 1 \$50 Put @ 1

Stock Price at Expiration	Short Call P/(L)	Long Put P/(L)	Total P/(L)
59	(2 1/2)	(1)	(3 1/2)
58	(1 1/2)	(1)	(2 1/2)
57	( 1/2)	(1)	(1 1/2)
56	1/2	(1)	( 1/2)
55	1 1/2	(1)	1/2
53	1 1/2	(1)	1/2
51	1 1/2	(1)	1/2
50	1 1/2	(1)	1/2
49	1 1/2	0	1 1/2
48	1 1/2	1	2 1/2
47	1 1/2	2	3 1/2



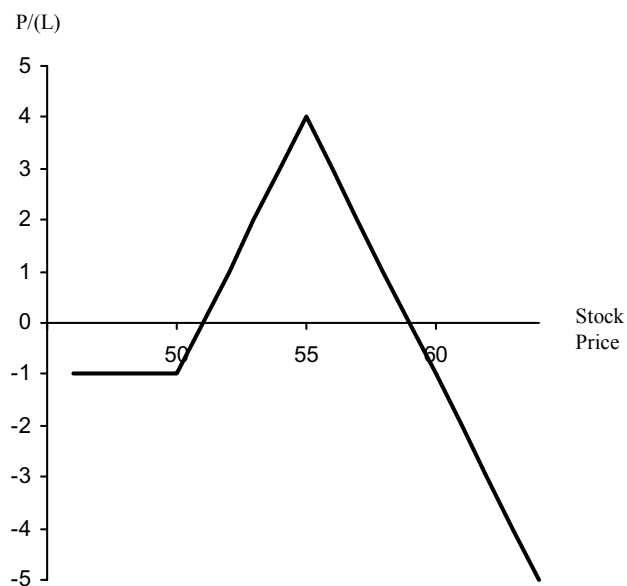


# ANSWERS: Ratio Spreads

STRATEGY: 1 X 2 Ratio Vertical Spread With Calls  
 EXAMPLE: Buy 1 \$50 Call @ 3 and  
 Sell 2 \$55 Calls @ 1 each

Stock Price at Expiration	Long Call P/(L)	Short Calls P/(L)	Total P/(L)
62	9	(12)	(3)
60	7	(8)	(1)
59	6	(6)	0
58	5	(4)	1
57	4	(2)	2
56	3	0	3
55	2	2	4
54	1	2	3
53	0	2	2
52	(1)	2	1
51	(2)	2	0
50	(3)	2	(1)
48	(3)	2	(1)

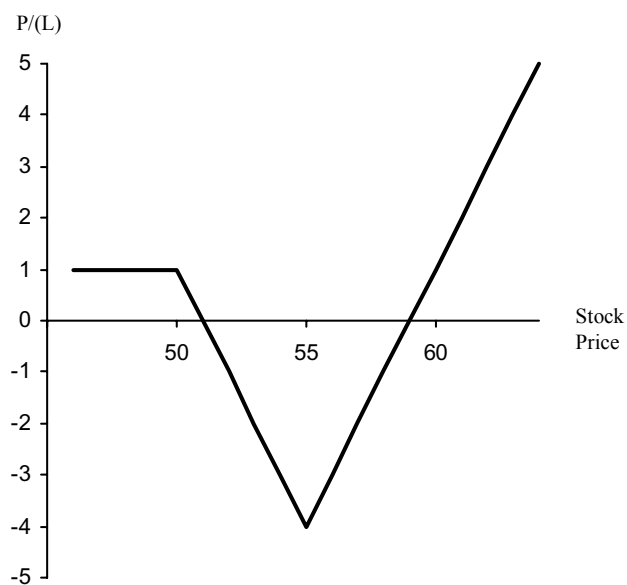
## 1 X 2 RATIO VERTICAL SPREAD WITH CALLS ( FRONT SPREAD )



STRATEGY: 1 X 2 Ratio Volatility Spread With Calls  
 EXAMPLE: Sell 1 \$50 Call @ 3 and  
 Buy 2 \$55 Calls @ 1 each

Stock Price at Expiration	Short Call P/(L)	Long Calls P/(L)	Total P/(L)
62	(9)	12	3
60	(7)	8	1
59	(6)	6	0
58	(5)	4	(1)
57	(4)	2	(2)
56	(3)	0	(3)
55	(2)	(2)	(4)
54	(1)	(2)	(3)
53	0	(2)	(2)
52	1	(2)	(1)
51	2	(2)	0
50	3	(2)	1
48	3	(2)	1

## 1 X 2 RATIO VOLATILITY SPREAD WITH CALLS ( BACK SPREAD )

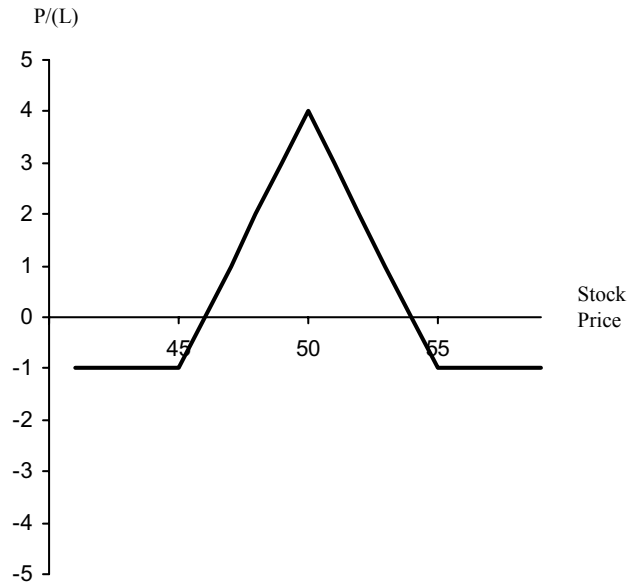


# ANSWERS: Butterfly Strategies

STRATEGY: Call Butterfly  
 EXAMPLE: Buy 1 \$45 Call @ 6 and  
 Sell 2 \$50 Calls @ 3 ea. and  
 Buy 1 \$55 Call @ 1

Stock Price at Expiration	Long Call P/(L)	Short Calls P/(L)	Long Call P/(L)	Total P/(L)
56	5	(6)	0	(1)
55	4	(4)	(1)	(1)
54	3	(2)	(1)	0
53	2	0	(1)	1
52	1	2	(1)	2
51	0	4	(1)	3
50	(1)	6	(1)	4
49	(2)	6	(1)	3
48	(3)	6	(1)	2
47	(4)	6	(1)	1
46	(5)	6	(1)	0
45	(6)	6	(1)	(1)
44	(6)	6	(1)	(1)

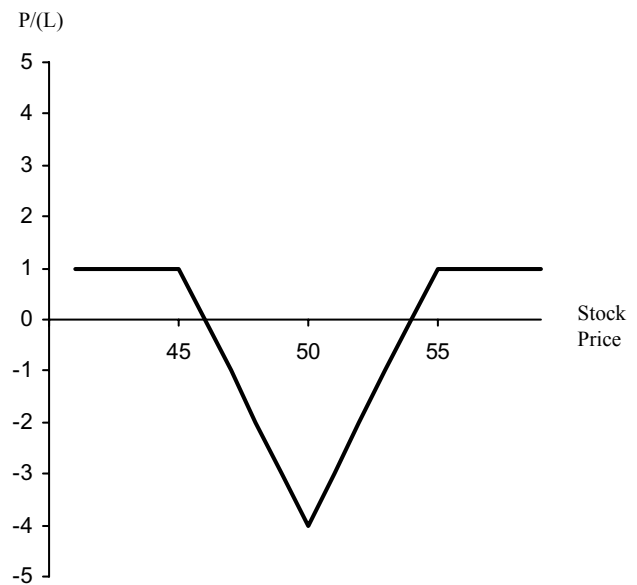
**LONG CALL BUTTERFLY**



STRATEGY: Short Butterfly with Calls  
 EXAMPLE: Sell 1 \$45 Call @ 6 and  
 Buy 2 \$50 Calls @ 3 ea. and  
 Sell 1 \$55 Call @ 1

Stock Price at Expiration	Short Call P/(L)	Long Calls P/(L)	Short Call P/(L)	Total P/(L)
56	(5)	6	0	1
55	(4)	4	1	1
54	(3)	2	1	0
53	(2)	0	1	(1)
52	(1)	(2)	1	(2)
51	0	(4)	1	(3)
50	1	(6)	1	(4)
49	2	(6)	1	(3)
48	3	(6)	1	(2)
47	4	(6)	1	(1)
46	5	(6)	1	0
45	6	(6)	1	1
44	6	(6)	1	1

**SHORT CALL BUTTERFLY**



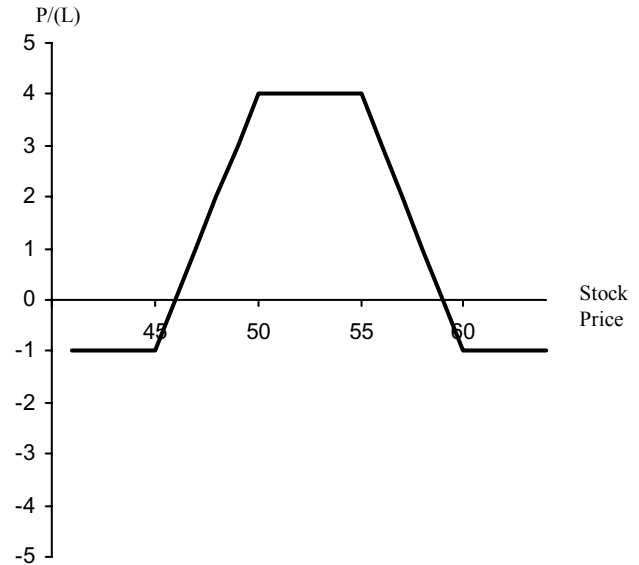
These strategies are presented for educational purposes only. Transaction costs may make these impractical for individual investors.

# ANSWERS: Condor Strategies

STRATEGY: Long Condor with Calls  
 EXAMPLE: Buy 1 \$45 Call @ 6 and  
 Sell 1 \$50 Call @ 4 and  
 Sell 1 \$55 Call @ 2 and  
 Buy 1 \$60 Call @ 1

Stock Price at Expiration	Long 45 P/(L)	Short 50 P/(L)	Short 55 P/(L)	Long 60 P/(L)	Total P/(L)
62	11	(8)	(5)	1	(1)
60	9	(6)	(3)	(1)	(1)
58	7	(4)	(1)	(1)	1
56	5	(2)	1	(1)	3
55	4	(1)	2	(1)	4
54	3	0	2	(1)	4
52	1	2	2	(1)	4
50	(1)	4	2	(1)	4
48	(3)	4	2	(1)	2
46	(5)	4	2	(1)	0
45	(6)	4	2	(1)	(1)
44	(6)	4	2	(1)	(1)

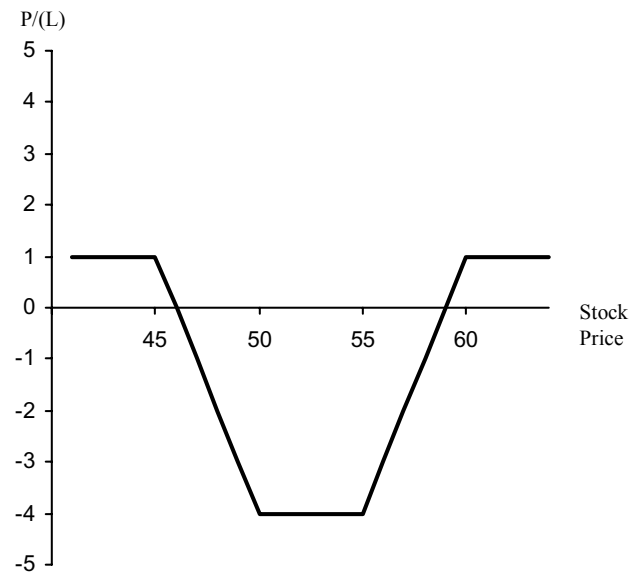
**LONG CALL CONDOR**



STRATEGY: Short Condor with Calls  
 EXAMPLE: Sell 1 \$45 Call @ 6 and  
 Buy 1 \$50 Call @ 4 and  
 Buy 1 \$55 Call @ 2 and  
 Sell 1 \$60 Call @ 1

Stock Price at Expiration	Short 45 P/(L)	Long 50 P/(L)	Long 55 P/(L)	Short 60 P/(L)	Total P/(L)
62	(11)	8	5	(1)	1
60	(9)	6	3	1	1
58	(7)	4	1	1	(1)
56	(5)	2	(1)	1	(3)
55	(4)	1	(2)	1	(4)
54	(3)	0	(2)	1	(4)
52	(1)	(2)	(2)	1	(4)
50	1	(4)	(2)	1	(4)
48	3	(4)	(2)	1	(2)
46	5	(4)	(2)	1	0
45	6	(4)	(2)	1	1
44	6	(4)	(2)	1	1

**SHORT CALL CONDOR**



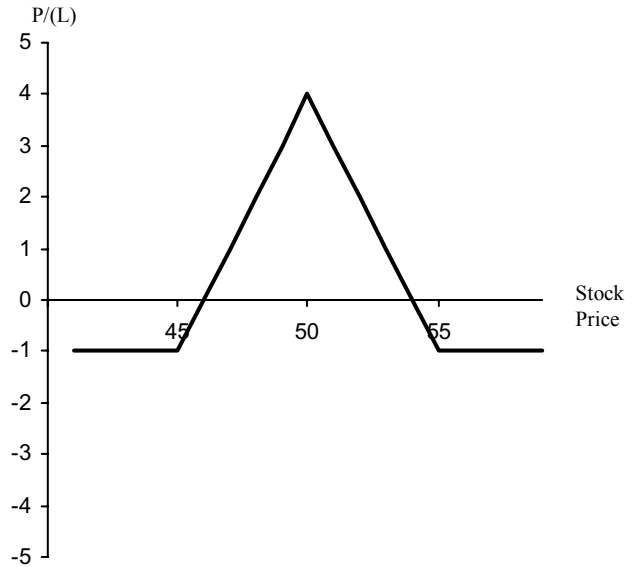
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# ANSWERS: Iron Strategies

STRATEGY: Iron Butterfly  
 EXAMPLE: Buy 1 \$45 Put @ 1 and  
 Sell 1 \$50 Put @ 3 and  
 Sell 1 \$50 Call @ 3 and  
 Buy 1 \$55 Call @ 1

Stock Price at Expiration	Long Put P/(L)	Short Put P/(L)	Short Call P/(L)	Long Call P/(L)	Total P/(L)
56	(1)	3	(3)	0	(1)
55	(1)	3	(2)	(1)	(1)
54	(1)	3	(1)	(1)	0
53	(1)	3	0	(1)	1
52	(1)	3	1	(1)	2
51	(1)	3	2	(1)	3
50	(1)	3	3	(1)	4
49	(1)	2	3	(1)	3
48	(1)	1	3	(1)	2
47	(1)	0	3	(1)	1
46	(1)	(1)	3	(1)	0
45	(1)	(2)	3	(1)	(1)
44	0	(3)	3	(1)	(1)

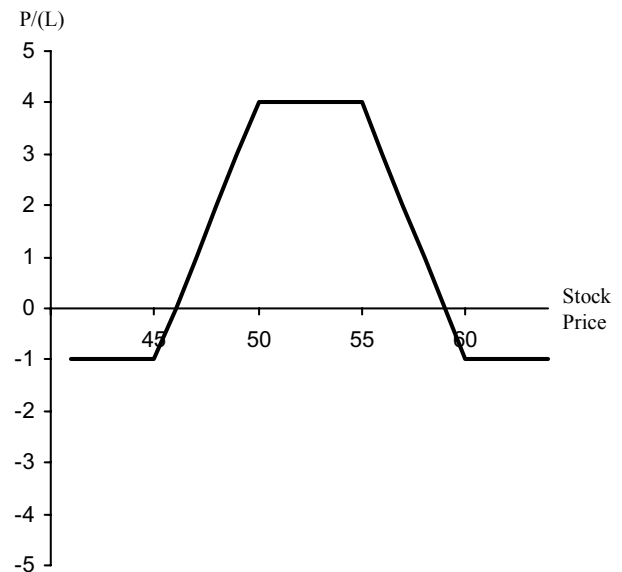
**IRON BUTTERFLY**



STRATEGY: Iron Condor  
 EXAMPLE: Buy 1 \$45 Put @ 1 and  
 Sell 1 \$50 Put @ 3 and  
 Sell 1 \$55 Call @ 3 and  
 Buy 1 \$60 Call @ 1

Stock Price at Expiration	Long Put P/(L)	Short Put P/(L)	Short Call P/(L)	Long Call P/(L)	Total P/(L)
62	(1)	3	(4)	0	(1)
60	(1)	3	(2)	(1)	(1)
58	(1)	3	0	(1)	1
56	(1)	3	2	(1)	3
55	(1)	3	3	(1)	4
54	(1)	3	3	(1)	4
52	(1)	3	3	(1)	4
50	(1)	3	3	(1)	4
48	(1)	1	3	(1)	2
46	(1)	(1)	3	(1)	0
45	(1)	(2)	3	(1)	(1)
44	0	(3)	3	(1)	(1)

**IRON CONDOR**



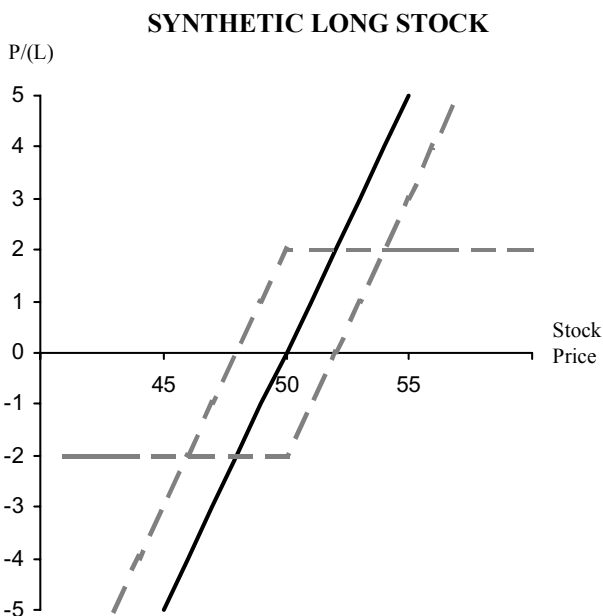
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# ANSWERS: Synthetic Positions

STRATEGY: Synthetic Long Stock

EXAMPLE: Buy 1 \$50 Call @ 2 and  
Sell 1 \$50 Put @ 2

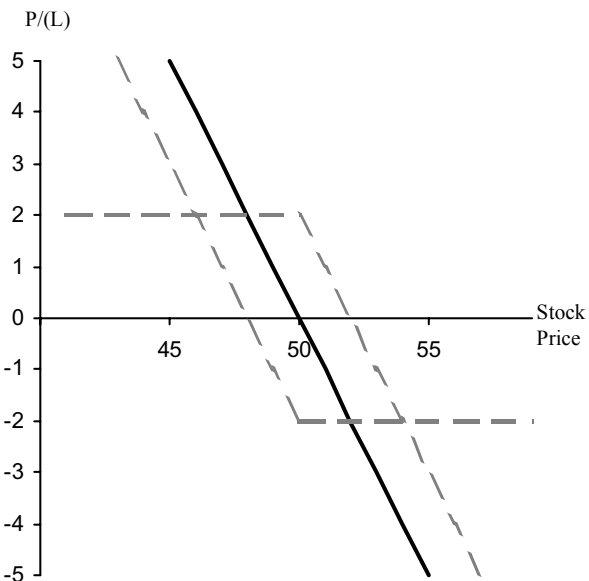
Stock Price at Expiration	Long Call P/(L)	Short Put P/(L)	Total P/(L)
55	3	2	5
54	2	2	4
53	1	2	3
52	0	2	2
51	(1)	2	1
50	(2)	2	0
49	(2)	1	(1)
48	(2)	0	(2)
47	(2)	(1)	(3)
46	(2)	(2)	(4)
45	(2)	(3)	(5)



STRATEGY: Synthetic Short Stock

EXAMPLE: Sell 1 \$50 Call @ 2 and  
Buy 1 \$50 Put @ 2

Stock Price at Expiration	Short Call P/(L)	Long Put P/(L)	Total P/(L)
55	(3)	(2)	(5)
54	(2)	(2)	(4)
53	(1)	(2)	(3)
52	0	(2)	(2)
51	1	(2)	(1)
50	2	(2)	0
49	2	(1)	1
48	2	0	2
47	2	1	3
46	2	2	4
45	2	3	5



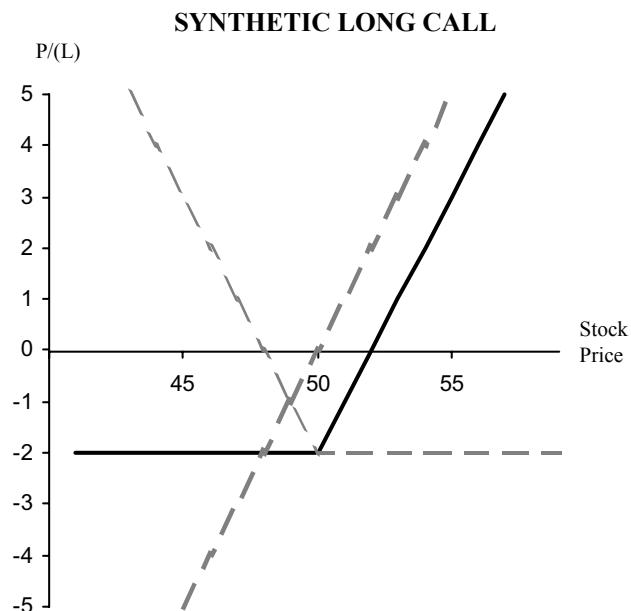
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# ANSWERS: Synthetic Positions

STRATEGY: Synthetic Long Call

EXAMPLE: Buy Stock @ 50 and  
Buy 1 \$50 Put @ 2

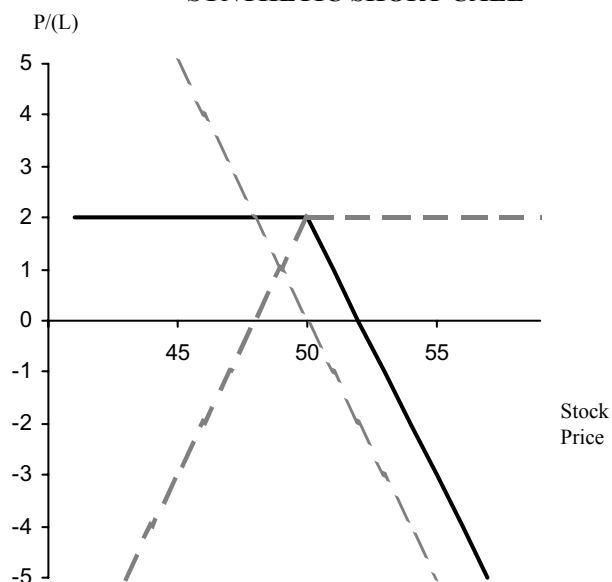
Stock Price at Expiration	Long Stock P/(L)	Long Put P/(L)	Total P/(L)
55	5	(2)	3
54	4	(2)	2
53	3	(2)	1
52	2	(2)	0
51	1	(2)	(1)
50	0	(2)	(2)
49	(1)	(1)	(2)
48	(2)	0	(2)
47	(3)	1	(2)
46	(4)	2	(2)
45	(5)	3	(2)



STRATEGY: Synthetic Short Call

EXAMPLE: Sell Stock Short @ 50 and  
Sell 1 \$50 Put @ 2

Stock Price at Expiration	Short Stock P/(L)	Short Put P/(L)	Total P/(L)
55	(5)	2	(3)
54	(4)	2	(2)
53	(3)	2	(1)
52	(2)	2	0
51	(1)	2	1
50	0	2	2
49	1	1	2
48	2	0	2
47	3	(1)	2
46	4	(2)	2
45	5	(3)	2



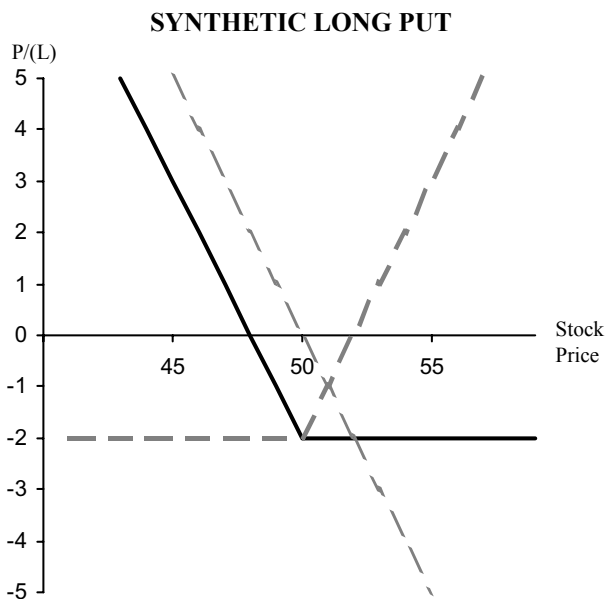
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# ANSWERS: Synthetic Positions

STRATEGY: Synthetic Long Put

EXAMPLE: Sell Stock Short @ 50 and  
Buy 1 \$50 Call @ 2

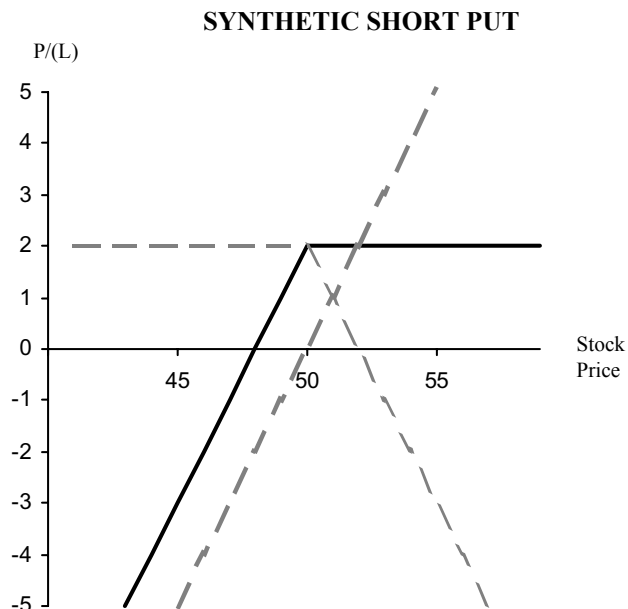
Stock Price at Expiration	Short Stock P/(L)	Long Call P/(L)	Total P/(L)
55	(5)	3	(2)
54	(4)	2	(2)
53	(3)	1	(2)
52	(2)	0	(2)
51	(1)	(1)	(2)
50	0	(2)	(2)
49	1	(2)	(1)
48	2	(2)	0
47	3	(2)	1
46	4	(2)	2
45	5	(2)	3



STRATEGY: Synthetic Short Put

EXAMPLE: Buy Stock @ 50 and  
Sell 1 \$50 Call @ 2

Stock Price at Expiration	Long Stock P/(L)	Short Call P/(L)	Total P/(L)
55	5	(3)	2
54	4	(2)	2
53	3	(1)	2
52	2	0	2
51	1	1	2
50	0	2	2
49	(1)	2	1
48	(2)	2	0
47	(3)	2	(1)
46	(4)	2	(2)
45	(5)	2	(3)



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