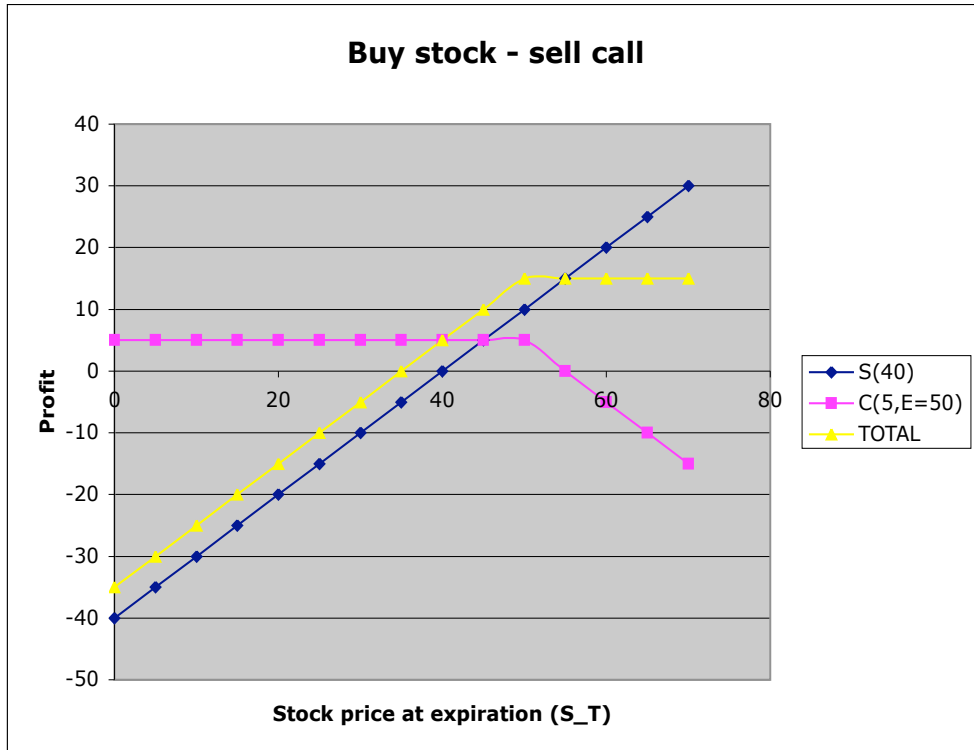


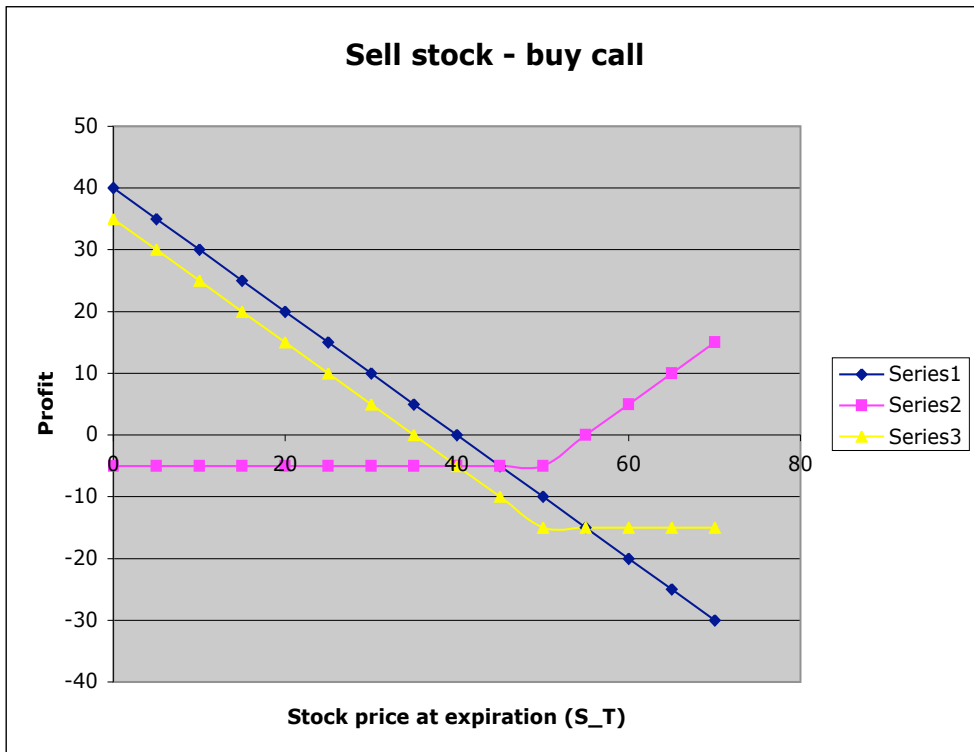
Trading strategies using options

A. Strategies involving an option and the underlying stock

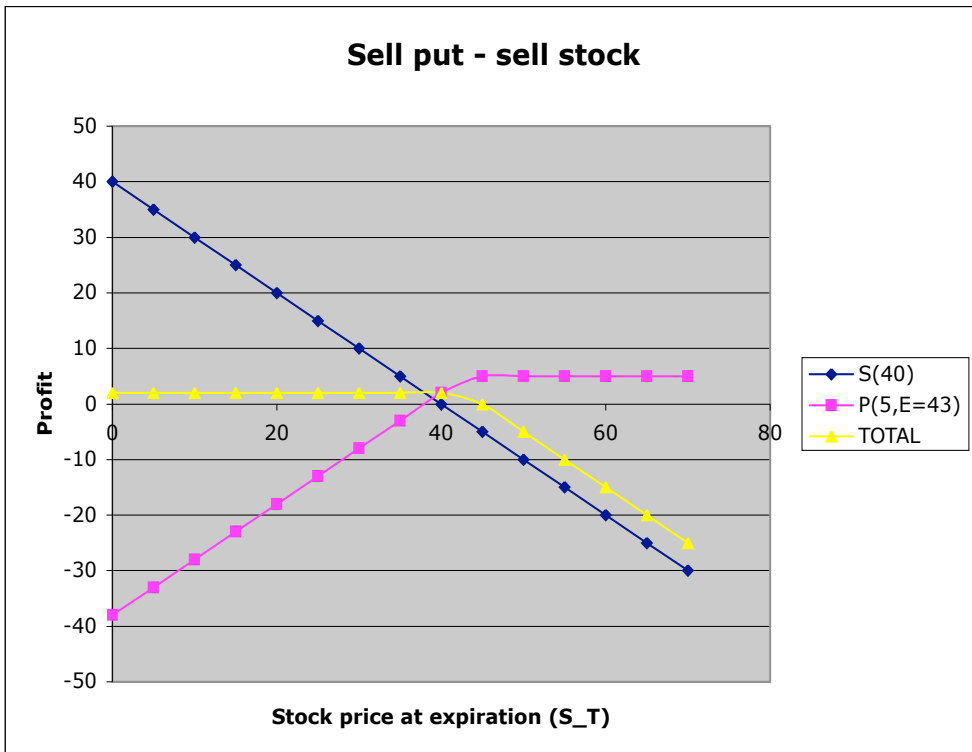
S_T	BUY S(40)	SELL C(5,E=50)	TOTAL
70	30	-15	15
65	25	-10	15
60	20	-5	15
55	15	0	15
50	10	5	15
45	5	5	10
40	0	5	5
35	-5	5	0
30	-10	5	-5
25	-15	5	-10
20	-20	5	-15
15	-25	5	-20
10	-30	5	-25
5	-35	5	-30
0	-40	5	-35



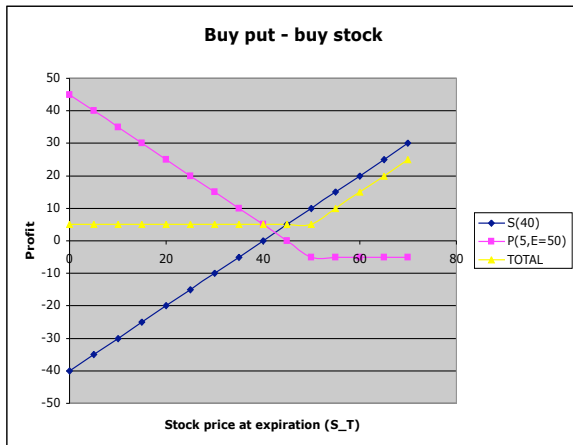
S_T	SELL S(40)	BUY C(5,E=50)	TOTAL
70	-30	15	-15
65	-25	10	-15
60	-20	5	-15
55	-15	0	-15
50	-10	-5	-15
45	-5	-5	-10
40	0	-5	-5
35	5	-5	0
30	10	-5	5
25	15	-5	10
20	20	-5	15
15	25	-5	20
10	30	-5	25
5	35	-5	30
0	40	-5	35



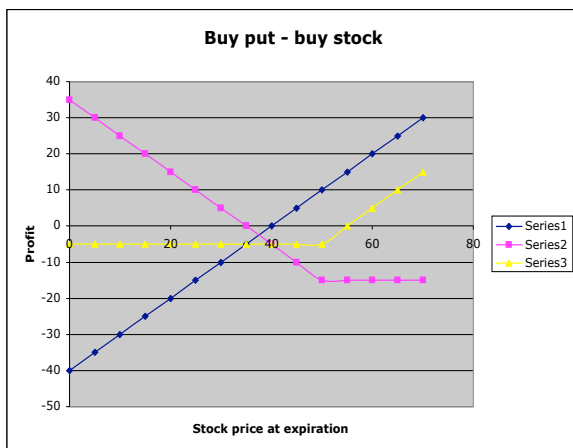
S_T	SELL S(40)	SELL P(5,E=43)	TOTAL
70	-30	5	-25
65	-25	5	-20
60	-20	5	-15
55	-15	5	-10
50	-10	5	-5
45	-5	5	0
40	0	2	2
35	5	-3	2
30	10	-8	2
25	15	-13	2
20	20	-18	2
15	25	-23	2
10	30	-28	2
5	35	-33	2
0	40	-38	2



S_T	BUY S(40)	BUY P(5,E=50)	TOTAL
70	30	-5	25
65	25	-5	20
60	20	-5	15
55	15	-5	10
50	10	-5	5
45	5	0	5
40	0	5	5
35	-5	10	5
30	-10	15	5
25	-15	20	5
20	-20	25	5
15	-25	30	5
10	-30	35	5
5	-35	40	5
0	-40	45	5

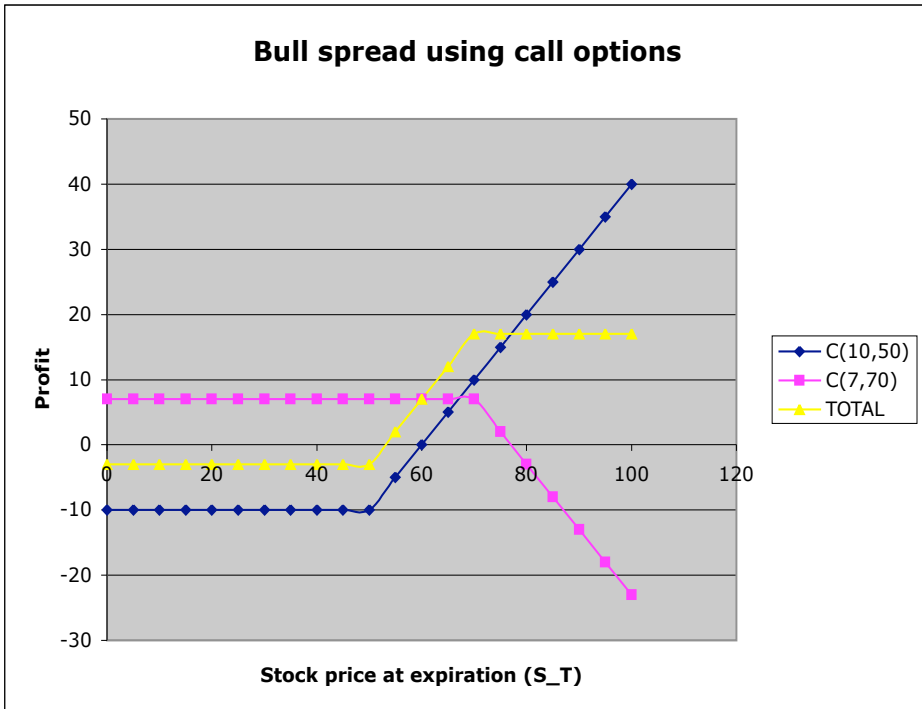


S_T	BUY S(40)	BUY P(15,E=50)	TOTAL
70	30	-15	15
65	25	-15	10
60	20	-15	5
55	15	-15	0
50	10	-15	-5
45	5	-10	-5
40	0	-5	-5
35	-5	0	-5
30	-10	5	-5
25	-15	10	-5
20	-20	15	-5
15	-25	20	-5
10	-30	25	-5
5	-35	30	-5
0	-40	35	-5



**B. Spreads: Take position on two or more calls or puts**

S_T	BUY C(10,50)	SELL C(7,70)	TOTAL
100	40	-23	17
95	35	-18	17
90	30	-13	17
85	25	-8	17
80	20	-3	17
75	15	2	17
70	10	7	17
65	5	7	12
60	0	7	7
55	-5	7	2
50	-10	7	-3
45	-10	7	-3
40	-10	7	-3
35	-10	7	-3
30	-10	7	-3
25	-10	7	-3
20	-10	7	-3
15	-10	7	-3
10	-10	7	-3
5	-10	7	-3
0	-10	7	-3



Bull spread:

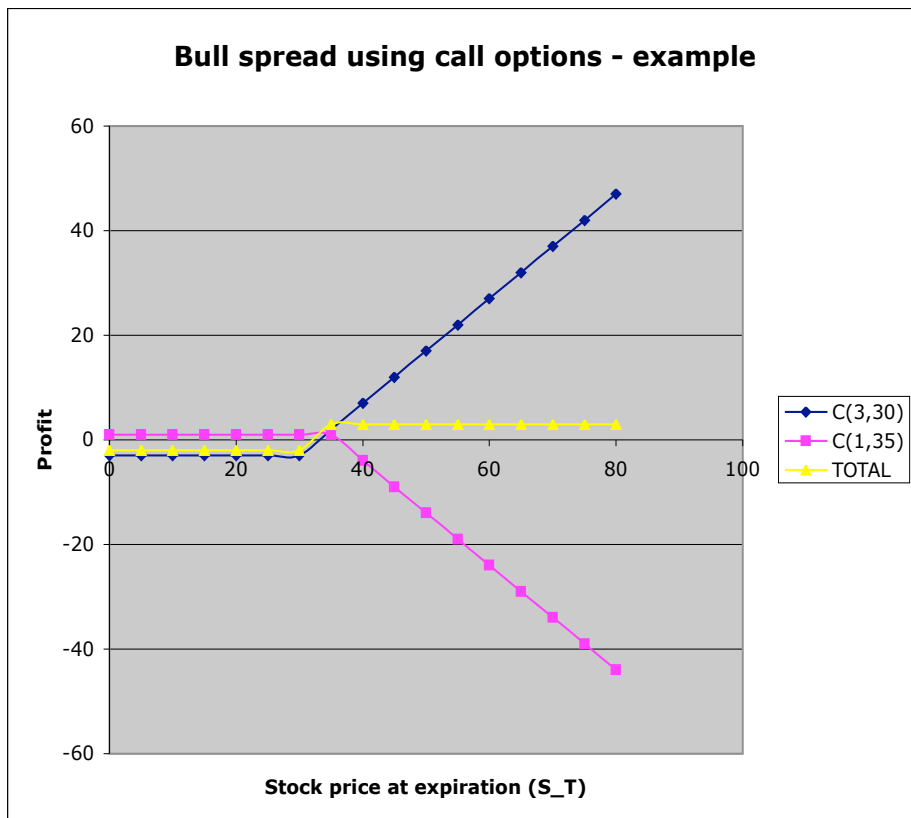
Buy one call with exercise price  $E_1$

Sell one call with exercise price  $E_2$

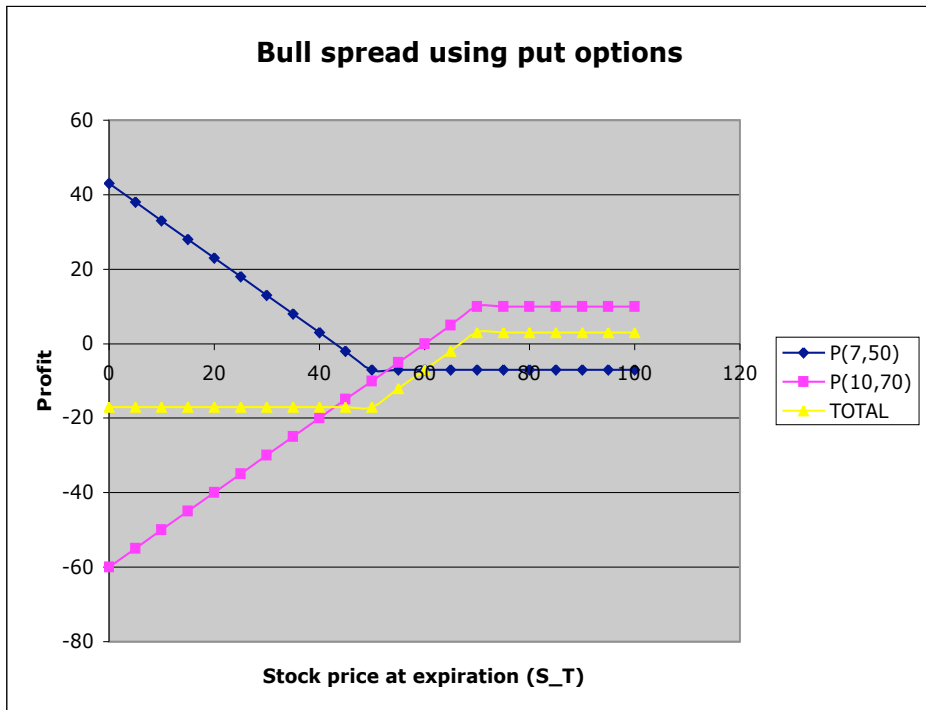
Note:  $E_1 < E_2$

Stock price at expiration	Payoff from long call with exercise price $E_1$	Payoff from short call with exercise price $E_2$	Total payoff
$S_T < E_1$			
$E_1 < S_T < E_2$			
$S_T > E_2$			

S_T	BUY C(3,30)	SELL C(1,35)	TOTAL
80	47	-44	3
75	42	-39	3
70	37	-34	3
65	32	-29	3
60	27	-24	3
55	22	-19	3
50	17	-14	3
45	12	-9	3
40	7	-4	3
35	2	1	3
30	-3	1	-2
25	-3	1	-2
20	-3	1	-2
15	-3	1	-2
10	-3	1	-2
5	-3	1	-2
0	-3	1	-2

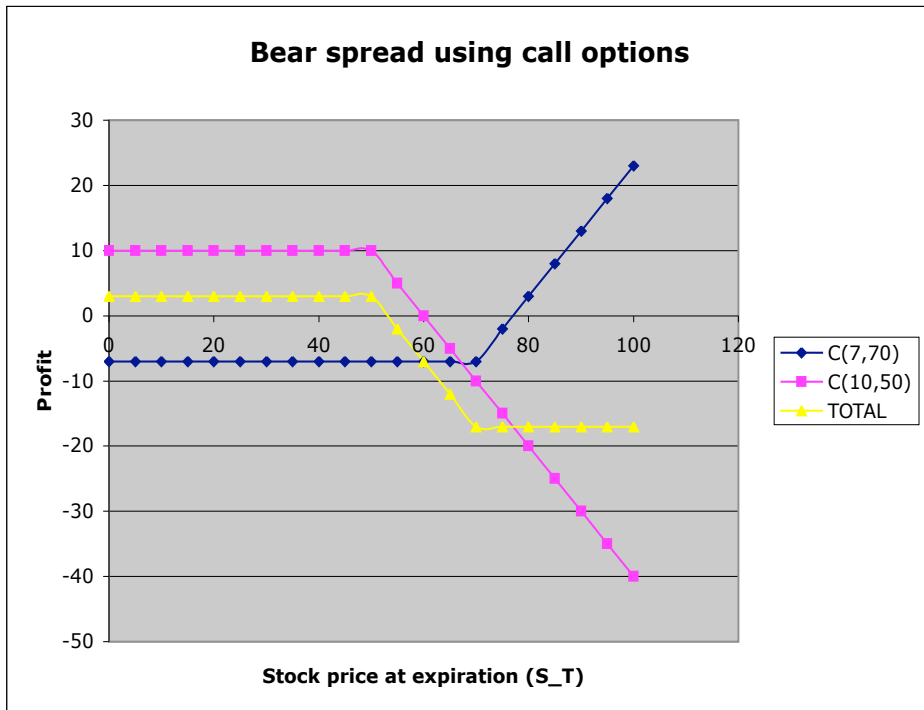


S_T	BUY P(7,50)	SELL P(10,70)	TOTAL
100	-7	10	3
95	-7	10	3
90	-7	10	3
85	-7	10	3
80	-7	10	3
75	-7	10	3
70	-7	10	3
65	-7	5	-2
60	-7	0	-7
55	-7	-5	-12
50	-7	-10	-17
45	-2	-15	-17
40	3	-20	-17
35	8	-25	-17
30	13	-30	-17
25	18	-35	-17
20	23	-40	-17
15	28	-45	-17
10	33	-50	-17
5	38	-55	-17
0	43	-60	-17

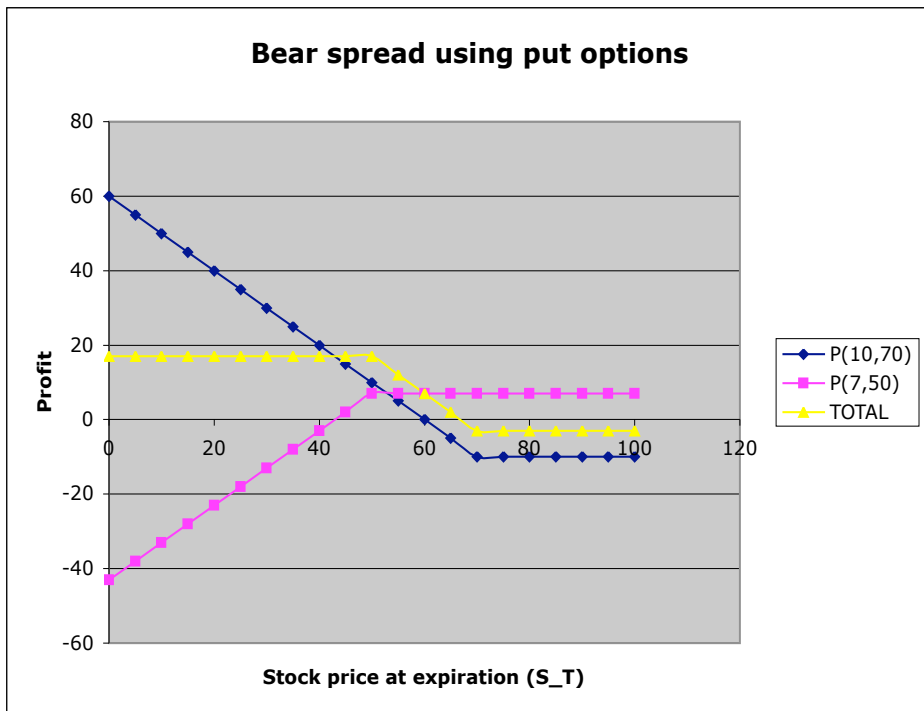




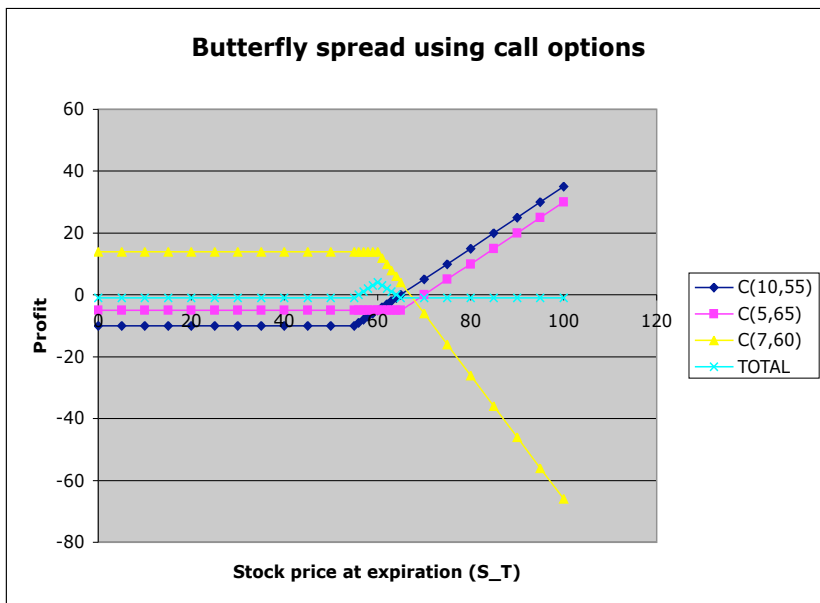
S_T	BUY C(7,70)	SELL C(10,50)	TOTAL
100	23	-40	-17
95	18	-35	-17
90	13	-30	-17
85	8	-25	-17
80	3	-20	-17
75	-2	-15	-17
70	-7	-10	-17
65	-7	-5	-12
60	-7	0	-7
55	-7	5	-2
50	-7	10	3
45	-7	10	3
40	-7	10	3
35	-7	10	3
30	-7	10	3
25	-7	10	3
20	-7	10	3
15	-7	10	3
10	-7	10	3
5	-7	10	3
0	-7	10	3



S_T	BUY P(10,70)	SELL P(7,50)	TOTAL
100	-10	7	-3
95	-10	7	-3
90	-10	7	-3
85	-10	7	-3
80	-10	7	-3
75	-10	7	-3
70	-10	7	-3
65	-5	7	2
60	0	7	7
55	5	7	12
50	10	7	17
45	15	2	17
40	20	-3	17
35	25	-8	17
30	30	-13	17
25	35	-18	17
20	40	-23	17
15	45	-28	17
10	50	-33	17
5	55	-38	17
0	60	-43	17



S_T	BUY(1) C(10,55)	BUY(1) C(5,65)	SELL(2) C(7,60)	TOTAL
100	35	30	-66	-1
95	30	25	-56	-1
90	25	20	-46	-1
85	20	15	-36	-1
80	15	10	-26	-1
75	10	5	-16	-1
70	5	0	-6	-1
65	0	-5	4	-1
64	-1	-5	6	0
63	-2	-5	8	1
62	-3	-5	10	2
61	-4	-5	12	3
60	-5	-5	14	4
59	-6	-5	14	3
58	-7	-5	14	2
57	-8	-5	14	1
56	-9	-5	14	0
55	-10	-5	14	-1
50	-10	-5	14	-1
45	-10	-5	14	-1
40	-10	-5	14	-1
35	-10	-5	14	-1
30	-10	-5	14	-1
25	-10	-5	14	-1
20	-10	-5	14	-1
15	-10	-5	14	-1
10	-10	-5	14	-1
5	-10	-5	14	-1
0	-10	-5	14	-1



Butterfly spread:

Buy one call with exercise price  $E_1$

Buy one call with exercise price  $E_3$

Sell two calls with exercise price  $E_2$  (halfway between  $E_1$  and  $E_3$ )

Stock price at expiration	Payoff from long call with exercise price $E_1$	Payoff from two short calls with exercise price $E_2$	Payoff from long call with exercise price $E_3$	Total payoff
$S_T < E_1$				
$E_1 < S_T < E_2$				
$E_2 < S_T < E_3$				
$S_T > E_3$				

### **C. Combinations: Take position in calls and puts**

1. Straddle: Buy a call and a put with the same exercise price and the same time to expiration.
2. Strip: Buy one call and two puts with the same exercise price and the same time to expiration.
3. Strap: Buy two calls and one put with the same exercise price and the same time to expiration.
4. Strangle: Buy a call and a put with the same time to expiration but different exercise prices.