

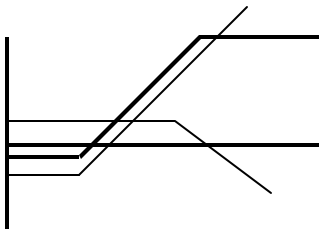
Answers to HW #5

1. U.S. exports of agricultural products would increase
 The current spread between May and July soybeans would narrow
 The price of may corn futures would rise
 Imports of BMW cars from Germany and Sony cameras from Japan would decrease
2. Price ≥ 2.45 \$0.30
 Price $\$2.35 < \text{corn price} < \2.45 P-\$2.15
 Price $\leq \$2.35$ P-\$2.15
3. Price $\geq \$5.20$ -\$0.08
 Price $\$4.75 < \text{price} < \5.20 -\$0.08
 Price $\leq \$4.75$ \$4.67 - P
4. Use formula for put-call parity
 - a. $S - C = Xe^{(-vT)} + D - P$
 - b. $-P - S = -C - (Xe^{(-vT)} + D)$
 - c. $P + S = C + Xe^{(-vT)} + D$

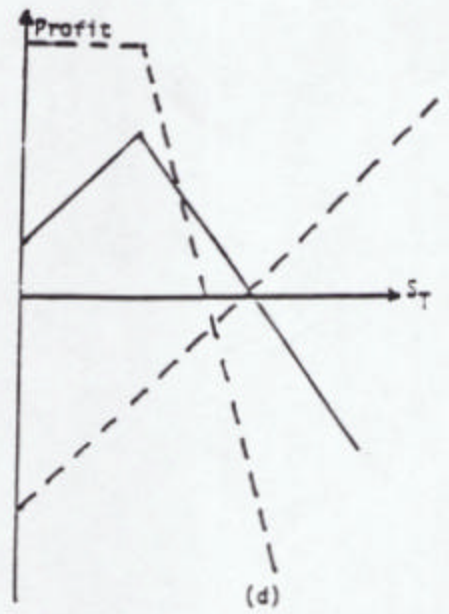
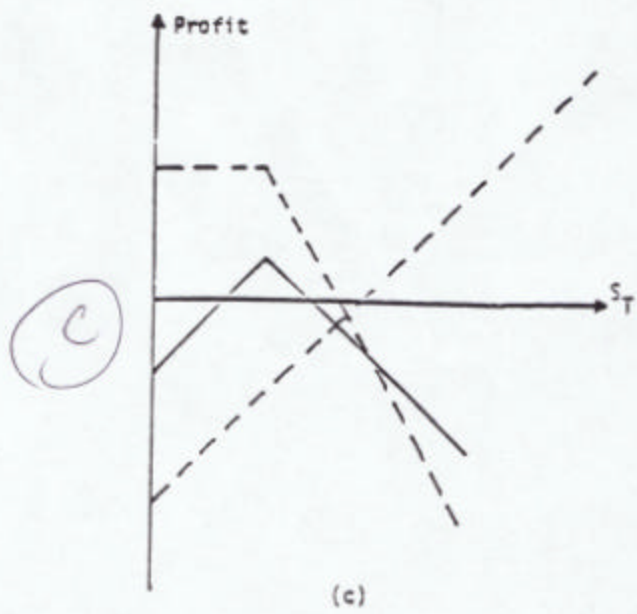
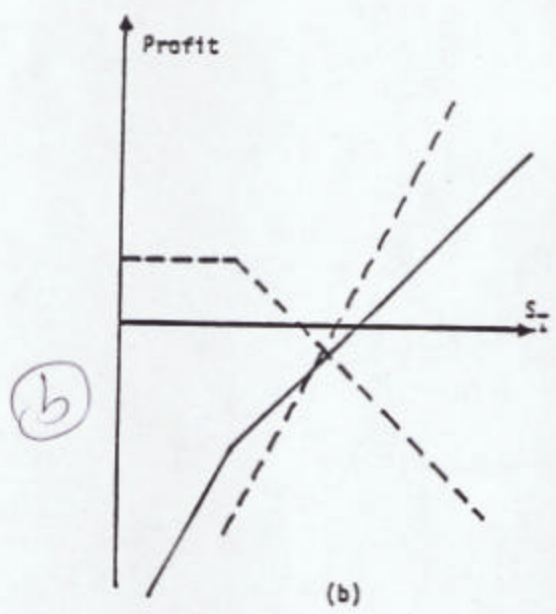
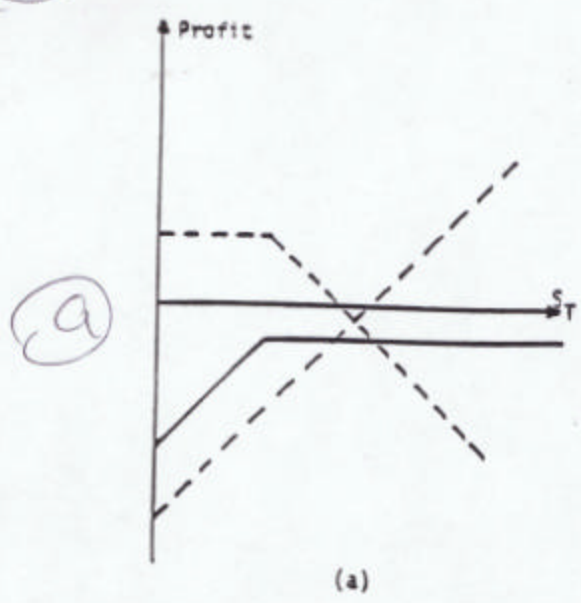
5.

Stock Price	1st Call Pay	2nd Call Pay	Short Calls	Total Payoff
$St < 15$	-4	-0.5	4	-0.5
$15 < St < 17.5$	$S - 15 - 4$	-0.5	4	$S - 15.5$
$17.5 < St < 20$	$S - 15 - 4$	-0.5	$2(17.5 - S - 2)$	$9 - S$
$St > 20$	$S - 15 - 5$	$S - 20 - 0.05$	$2(17.5 - S - 2)$	-0.05

6. An investor who enters into a bull spread is hoping that the stock price will rise.



7



Variation of investors profit/loss with terminal stock price, S_T in Problem 9.13.