Econ 337
Spring 2013

## Extra Credit

Minimum of 40 points or the \# of points you missed on HW \#1
10 points per question
For the following questions use the attached futures and options data. Assume historical expected basis of $-\$ 0.25$ per bushel and a commission of $\$ 0.01$ per bushel for both crops. Show the math and draw the graph.

1. A speculator buys a $\$ 5.00$ call option on Dec. 2013 corn futures. What does she pay for the option? At what price does she breakeven (where her return is equal to zero)? If the Dec. 2013 corn futures price falls to $\$ 6$, what is her return?

Return/Net Price

2. A hedger (producer) buys a $\$ 4.50$ put option on Dec. 2013 corn futures. What is her floor price with the option in place? If the Dec. 2013 corn futures price falls to $\$ 3.80$, what is her net price?

## Return/Net Price


3. Instead of buying that $\$ 4.50$ put option, the hedger does a short hedge. What is her floor price with the short hedge in place? If the Dec. 2013 corn futures price falls to $\$ 3.80$, what is her net price?

Return/Net Price

4. If the speculator in question 1 also sold a $\$ 7.00$ call option on Dec. 2013 corn futures, does that change her breakeven price? If so, what is the new breakeven price?

Return/Net Price


All prices and premiums are listed in dollars per bushel
Dec. 2013 Corn
Futures 5.35
Price

| Options | Strike Price | Premium | Options | Strike Price | Premium |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Put | 4.50 | 0.12 | Call | 4.50 | 0.97 |
| Put | 4.60 | 0.14 | Call | 4.60 | 0.89 |
| Put | 4.70 | 0.17 | Call | 4.70 | 0.82 |
| Put | 4.80 | 0.20 | Call | 4.80 | 0.75 |
| Put | 4.90 | 0.24 | Call | 4.90 | 0.69 |
| Put | 5.00 | 0.28 | Call | 5.00 | 0.63 |
| Put | 5.10 | 0.32 | Call | 5.10 | 0.57 |
| Put | 5.20 | 0.37 | Call | 5.20 | 0.52 |
| Put | 5.30 | 0.42 | Call | 5.30 | 0.48 |
| Put | 5.40 | 0.48 | Call | 5.40 | 0.43 |
| Put | 5.50 | 0.53 | Call | 5.50 | 0.39 |
| Put | 5.60 | 0.60 | Call | 5.60 | 0.35 |
| Put | 5.70 | 0.66 | Call | 5.70 | 0.32 |
| Put | 5.80 | 0.73 | Call | 5.80 | 0.29 |
| Put | 5.90 | 0.80 | Call | 5.90 | 0.26 |
| Put | 6.00 | 0.88 | Call | 6.00 | 0.23 |
| Put | 6.10 | 0.95 | Call | 6.10 | 0.21 |
| Put | 6.20 | 1.03 | Call | 6.20 | 0.19 |
| Put | 6.30 | 1.11 | Call | 6.30 | 0.17 |
| Put | 6.40 | 1.19 | Call | 6.40 | 0.15 |
| Put | 6.50 | 1.28 | Call | 6.50 | 0.14 |
| Put | 6.60 | 1.36 | Call | 6.60 | 0.12 |
| Put | 6.70 | 1.45 | Call | 6.70 | 0.11 |
| Put | 6.80 | 1.54 | Call | 6.80 | 0.10 |
| Put | 6.90 | 1.63 | Call | 6.90 | 0.09 |
| Put | 7.00 | 1.72 | Call | 7.00 | 0.08 |

