Assume it's April 30, 2013. Apple stock (AAPL) is selling for $434.94 per share. Using the option prices provided below, provide analysis to answer the the following four questions:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Calls | Last Sale | Open Int | Puts | Last Sale | Open Int |
| 13 May 425.00 | 11.75 | 6472 | 13 May 425.00 | 1.82 | 5049 |
| 13 May 435.00 | 5.35 | 6518 | 13 May 435.00 | 5.5 | 2494 |
| 13 May 445.00 | 1.77 | 5991 | 13 May 445.00 | 11.9 | 317 |
| 13 Jun 425.00 | 21.25 | 5576 | 13 Jun 425.00 | 14.33 | 4747 |
| 13 Jun 435.00 | 16.25 | 2401 | 13 Jun 435.00 | 19.45 | 1231 |
| 13 Jun 445.00 | 11.79 | 2121 | 13 Jun 445.00 | 25.6 | 1247 |
| 13 Jul 425.00 | 24.8 | 1150 | 13 Jul 425.00 | 17.8 | 1943 |
| 13 Jul 435.00 | 20.1 | 1535 | 13 Jul 435.00 | 23.35 | 1331 |
| 13 Jul 445.00 | 15.65 | 998 | 13 Jul 445.00 | 29.55 | 828 |
| 13 Aug 425.00 | 29.15 | 296 | 13 Aug 425.00 | 23.85 | 178 |
| 13 Aug 435.00 | 24.3 | 149 | 13 Aug 435.00 | 30.3 | 175 |
| 13 Aug 445.00 | 20.31 | 317 | 13 Aug 445.00 | 36.27 | 183 |
| 13 Oct 425.00 | 33.75 | 1910 | 13 Oct 425.00 | 29.1 | 2517 |
| 13 Oct 435.00 | 29.59 | 932 | 13 Oct 435.00 | 34.59 | 1409 |
| 13 Oct 445.00 | 25.29 | 951 | 13 Oct 445.00 | 40.23 | 1198 |

QUESTION 1

Focus on the June 445 call. Suppose you bought this call at the price indicated.

How high must AAPL's price rise at expiration to break even on this option?

QUESTION 2

Now, look at the June 445 put. Provide a table showing the profit at expiration to a put buyer across a range of stock prices.

**QUESTION 3**

Assume you own 100 shares of AAPL stock (at $434.94 per share).

 Use the July 435 put to develop a protective put strategy.

 How will this strategy protect your position in AAPL if the stock price falls to $390?

 What if the price rises to $470?

 Calculate the net profit generated by the stock and the put at these prices and assuming they occur at the time of the option's expiration.

**QUESTION 4**

Create a strtegy by buying the July 445 call and the July 435 put.  
What's the maximum loss for this position and what range of stock prices will produce it? Where will you break even? Why would an investor establish a position like this?