**Review Problems Finance 135**

1. An investor short sells 100 shares of stock at $50. To protect against potential losses, the investor buys two calls ($2 premium each) with a strike price of $54. If the stock price goes up to $63, what are the investor’s net profits, if he exercises? (assume he closes his

short position at the $63 market price)

Stock Options Net

50-63 = -13 63-54-2 = 7 x 2 = 14 1 x 100 = $100

2. Pistol Whip Inc. (PWI) is selling at 95. The 90 calls (with 2 months to expiration) have a premium of $6. If PWI goes to 103, what is your profit assuming you bought and exercised a 90 call. Ignore transaction costs.

(103-90) – 6 = 7 x 100 = $700

3. An investor bought 400 shares of stock when its price was $40/share. The price of the stock is now up to $70/share and the investor decides to hedge his position by purchasing 4 puts, each with a premium of $2 and a strike price of $70. If the price of the stock drops to $55 per share, what would be the net dollar profit and percentage return if the investor exercises the options at a market price of $55?

Stock Options

55-40 = 15 x 400 = 6000 70-55=15-2=13x4= 52 x 100 = 5200

6000 + 5200 = 11,200/16,800 = 66%

4. You own 300 shares of XYZ, purchased at $32. The 35 calls have a premium of $3. Since you are not convinced that the stock will go up in the near future, you sell 6 calls. What is the net dollar return per share at the various market prices of $30, $35, $40, and $45.

***Stock Price 300 Stocks 6 Calls Net***

$30 -2 x 3 = -6 6 x 3 = 18 +12

$35 +3 x 3 = 9 6 x 3 = 18 +27

$40 +8 x 3 = 24 18 – (5x6) = -12 +12

$45 +13 x 3 = 39 18 – (10x6) = -42 - 3

5. Allen owns 100 shares of Acme Corp. He bought the stock several years ago for $15 per share and the stock currently is selling for $40. He currently earns a $1 per share dividend. The stock price is not expected to change very much over the next three months so Allen has decided to write a covered call on his holdings. A three month call at a $40 strike price is currently quoted at 2.5.

Question # 1: If Allen writes the call, how much will he collect?

$2.50 x 100 = $250; $100 dividend = $350

Question #2: If the call is exercised at a market price of $38, what will Allen’s total $ proceeds amount to, ignoring commissions?

$2300 Capital Gain + $250 Call Premiums + $100 in Dividends = $2650

Question #3: If the common stock is selling at $41 as the option approaches maturity and Allen decides to eliminate his obligation under the option, how can he do this and what will be the approximate cost. The approximate value of the call is $1(41-40). He can buy a call back, thereby canceling his obligation as a writer. This would cost $100.

6. Jerome Watkins has just sold short 2 contracts of May wheat on the CBT. The price per bushel is $3.01 and these are 5,000 bushel contracts. The initial deposit is $1,500 per contract with the maintenance deposit of $1,200. What is Jerome’s total initial margin?

2 contracts x $1500 = $3000 initial deposit

How low can the price of wheat fall before Jerome is issued a margin call?

.01/bushel x 5000 bushels = $50; therefore $300/50 = 6 or .06

.06 x 5000 = $300

7. Assume the initial margin on a Swiss franc futures contract is $1,000; if an individual purchases three contracts at $.62 per franc and a contract involves 50,000 Swiss francs, what dollar and percentage return on invested capital will the investor receive if the price per franc moves to $.66 per franc?

.66 - .62 = .04 x 3 contracts x 50,000 = $6,000

6000/3000 = 200%