

Math Finance, Homework 1, Winter 2006
Due Friday, 1/13/06

1. For each of the following, use the Stock Options price quotes from Investor's Business Daily 1/9/06 to provide an analysis like Example 1 in the Course Notes.
 - (a) Consider the Microsoft c27⁵⁰ with an April expiration.
 - i. What are the profit/loss percentages if the stock price on the exercise date is \$30?
 - ii. What are the profit/loss percentages if the stock price on the exercise date is \$24?
 - (b) Consider the Microsoft p30 with a January expiration.
 - i. What are the profit/loss percentages if the stock price on the exercise date is \$32?
 - ii. What are the profit/loss percentages if the stock price on the exercise date is \$28?
2. Consider Cisco c20 and p20 from the Stock Options price quotes from Investor's Business Daily 1/9/06. Suppose that you believe that Cisco is going to be somewhere around \$22 per share on the January expiration date and you have about \$2,000 to invest in the market.
 - (a) If you purchase 100 shares of stock, how can you use one of the options to hedge against the risk associated with market volatility?
 - (b) If you don't purchase any shares of stock, how can you use one of the options so that you can speculate and take advantage of the opportunity if you are correct?
 - (c) Which of the two strategies has a better profit percentage if things go well, i.e., if the stock price is above \$20? Please explain.
 - (d) Which of the two strategies has a greater loss percentage if things go badly, i.e., if the stock price is below \$20? Please explain.