Homework 3 Math 181

- 1. A stock S has price \$100 and the continuously compounded risk-free interest rate is r = 4% per year.
 - (a) Calculate the current value of a forward agreement to buy the stock in 1 year at each of the following three values for the strike price X: \$100, \$104 and \$108.
 - (b) Calculate the forward value of the stock in 1 year, i.e., the strike price X so that the forward agreement has value 0.
- 2. Consider a stock with current price \$40 and suppose that the interest rate is r = 4% per year. Find the upper and lower bounds for the following Euopean options:
 - (a) A put with strike price \$45 and expiration T = 3 months.
 - (b) A call with strike price \$35 and expiration T = 9 months..
- 3. For a stock S with current price \$100, consider a European call option with strike price X = \$110 and expiration date T = 6 months. Suppose that the interest rate is r = 4% per year and that the call price is c = \$10. Find the price p of the corresponding put.