MATH 680 502 / 279 501, Winter 2000

Problem Set 3

Due Thursday, March 2

1. Explain why an American option is always worth at least as much as its payoff.
2. Consider an American call option on a stock. The stock price is \$70, the time to maturity is eight months, the risk-free rate of interest is 10% per annum, the exercise price is \$65, and the volatility is 32%. Dividends of \$1 are expected after three months and six months. Show that it can never be optimal to exercise the option on either of the two dividend dates. Calculate the price of the option.

Problems from the book: 3 page 130; 6, 9, 14 page 161.