1. (Like 4.36 in the text) You are saving for the college education of your two children. One will begin college 15 years from today and the other will begin 18 years from today. Expenses for each child will be $25000 at the start of each year of college. For planning purposes, assume that they will each graduate in four years. Starting today, you will make equal annual deposits in a bank account earning a 6% rate of interest. The last deposit will be made when the younger child begins his or her senior year. How much is the required annual deposit? Confirm your answer with a spreadsheet showing the inflows and outflows from the account. (Hint: As usual, start with a time-line showing the timing of cash flows. Answer the problems using a spreadsheet. Tape an appropriate part of the spreadsheet to this page, but please, don’t just attach your whole spreadsheet. Put the needed answer, an extract from your table, and a brief explanation in the space provided.)
2. (Like 4.47 in the text). On September 1, 2002, Susana Cho bought a BMW for $50,000. She paid $10,000 down and financed the balance with a five-year loan at an interest rate of 6 percent, compounded monthly (this means .5 percent per month). The first monthly payment was made exactly one month after the purchase. In July 2004 she had a surplus of cash and she decided to pay off the loan on August 1. The bank charged her a prepayment penalty amounting to 2% of the principal balance. How much did she pay the bank on August 1. (Hint: As usual, start with a time-line showing the timing of cash flows. Answer the problems using a spreadsheet. Tape an appropriate part of the spreadsheet to this page, but please, don’t just attach your whole spreadsheet. Put the needed answer, an extract from your table, and a brief explanation in the space provided.)