Note: use this sheet as the cover page for your assignment. The points assigned to each question are given in parentheses to the left of the question. Show your work!

1. Say you invest $1,000 in a 3-year CD (certificate of deposit) that pays 4.9% simple interest per year. How much should the CD be worth after 3 years?

2. What should you pay today for a bond that yields 9 percent and pays you $10,000 ten years from now?

3. You own a logging company and are considering buying a new skidder. The skidder costs $125,000. You are going to finance the purchase with $25,000 of your own money and a $100,000 loan from the local bank. The annual interest rate on the loan is 8%.
   
   a. What is the equivalent monthly interest rate?
   
   b. The loan repayment period is 10 years, and you will make 120 monthly payments. How much will the payments be?

4. An investor projects that it will cost $29,500 per year to maintain the grounds and to pay property taxes for a cemetery that she is planning to create. The cemetery will have 1,750 plots. She plans to cover the maintenance and property tax costs by investing a one-time payment that will be added to the cost of purchasing a plot. She plans to invest these payments in a secure investment that will earn at least 4% over inflation. How much should she plan to charge per plot for perpetual care?

5. Assume that it costs $350/ac to successfully regenerate a black cherry stand, that the annual costs include $4/ac in property taxes plus $1/ac for management, and that the stand can produce 11 mbf/ac, valued at $1,300/mbf, and 13 cords of pulpwood, valued at $15/cord, on an 80-year rotation.
   
   a. What is the present value at the beginning of the rotation, at a 4% discount rate, of the costs and revenues from one 80-year rotation of this stand?
   
   b. What is the present value at the beginning of the rotation, at a 5% discount rate, of the costs and revenues from one 80-year rotation of this stand?

6. A woman has won a lottery. The lottery gives her a choice of taking a lump sum payment now of $250,000 (after taxes) or taking 10 annual payments of $35,000 (after taxes), with the first payment occurring immediately. She chooses to take the lump sum payment now. What can you infer from this about the woman’s personal rate of time preference (discount rate)?