Chapter 3 - Compound Interest

1. You borrow $450 to buy your books in September. If you make three monthly payments of $75 (assuming the first payment is in October), how large is your final payment in January? Assume money earns 3%(12).

2. Which loan is more attractive: one charging 4.25%(4) or one charging 4.2% (∞)?

3. Suppose your savings account is paying 2.5%(12). On September 1, 2010 you deposit $785 into your account. How much do you have to put towards the purchase of a car on July 1, 2014?

4. Find the NPV at 18%(12) and the IRR for an investment of $3,000 which produces returns of $2,200 in 6 months and $1,700 in 1 year.

5. If you are saving towards the purchase of a car and currently have $4,875, how long will it take before you have enough money to buy a $6,499 car if money is earning 8.75%(12)?

6. Which investment opportunity is more attractive: one paying 8.3%(2) or one paying 8.2%(12)?

7. If your investment is going to increase by 38% in two and a half years, what interest rate are you earning? Find the rate compounding semiannually and the rate compounding annually.

8. You purchase an investment for $2500 earning 4.5%(4) on May 10, 2010 that matures 6 and a half years later. On February 10, 2012 you sell the investment to a buyer that wants to earn 5%(12). Find the selling price and your rate of return.

9. Three children (ages 10, 11, and 15) are to receive equal shares of their aunt's estate of $100,000 when they reach age 21. If the money is invested at 3.5% compounding continuously, what amount will they each receive when the turn 21?