FINANCE

1. What is the effective interest rate on an account that pays 5% annual interest compounded
   (a) semi-annually
   (b) quarterly
   (c) monthly
   (d) daily
Round your answers to 4 decimal places.

2. You want to have $1,000,000 to retire on. You decide to make yearly deposits to a retirement
   account that pays 8% compounded annually. If you work 45 years,
   (a) how large are the yearly payments?
   (b) how much interest have you earned?

3. The grandparents of your child give you $5000 to deposit for the child's college education when he is
   born. You deposit this money in an account that pays 7% annual interest. How much is in the account
   when the child is 18 years old if
   (a) it is compounded annually?
   (b) it is compounded daily
   (c) it is compounded continuously?

4. You want to buy a car and find you can afford monthly car payments of $350. You find a loan that
   charges 9% compounded monthly on the remaining balance for 5 years. How much is the cash price of
   the car you can afford? How much can the car cost if you finance it at 1% annual interest?

5. You are saving for the down payment on a house. You need $10,000. You find an account that pays
   9% annual interest compounded monthly. If you deposit $500 per month in this account, how long until
   you reach your goal?

6. After a spending spree with your new credit card, you find you owe $2500. You cut up the card and
   start paying the account off. You make the minimum payment of $50 per month. The annual interest
   rate is 21% compounded monthly on the remaining balance. How long until the account is paid off?

7. A house costs $150,000. You make a $20,000 down payment and finance the remainder at 6.9%
   compounded monthly on the remaining balance for 30 years.
   a) How large are the monthly payments?
   b) How much interest is paid in all?
   c) What is your equity after 15 years?
   d) How much of the second payment was applied to the principal?