

## 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?