**Personal Finance Practice Problems**

**Time Value of Money**

All interest rates are APR

1. If you deposit $5,000 in the bank today, how much will you have in 10 years if the bank is paying 3% interest compounded annually?
2. If you charge $300 on your credit card, how much will you owe in one year if the credit card company charges interest of 14% compounded monthly?
3. How much money do you need to invest today to have $10,000 in five years if your investment earns 8% compounded monthly?
4. If you invest $2,000 today and your investment grows to $3,000 in two years, what was the rate of return on your investment with annual compounding?
5. If you invest $2,000 today and your investment shrinks to $1,000 in two years, what was the rate of return on your investment with annual compounding?
6. How much money do you need to give to a charity today to provide $10,000 per year forever to feed homeless people if the charity can invest your gift at an interest rate of 5%?
7. How much money do you need today to pay tuition of $30,000 per year for college for four years if the first tuition payment is due one year from today and your money is earning 3%?
8. How much money do you need today to pay tuition of $30,000 per year for college for four years if the first tuition payment is today and your money is earning 3%?