1. You deposit $800 in a savings account that earns 4% simple interest per year. Your friend deposits $900 in a savings account that earns 3% simple interest per year.

   a. Write and graph two equations for the balance *B* in each account after *t* years.

   b. Are the account balances ever equal? Explain.

2. An account earns 3% interest compounded annually. The balance after 2 years is $4774.05. What is the principal?

3. A bank offers two types of checking accounts. How many transactions must you make each month for the cost of *Basic Checking* to be greater than the cost of *Advanced Checking*?

   Basic Checking
   - no monthly fee
   - $0.15 per transaction

   ASL **Anytown Savings and Loan**
   Anytown, USA

   Advanced Checking
   - $12 monthly fee
   - no fee per transaction

   ASL **Anytown Savings and Loan**
   Anytown, USA

4. You use a credit card to pay for a $186.90 purchase at a sporting goods store. The credit card company keeps 3% of the total. Find the amount of money the store receives from the credit card company for the transaction.

5. **Use the payroll statement.**

NAME **Karen Walker**	PAY ENDING	PAY DATE	DEPARTMENT	NET PAY
EARNINGS STATEMENT	06/30/12	06/30/12	J	1990.98

HOURS	RATE	AMOUNT		PAYROLL TAX WITHHELD			
168	15.60	2620.80	FEDERAL 189.37	SOC. SEC. 155.18	HEALTH INS. 117.94	MEDICARE 36.29	401K 131.04

YTD GROSS PAY	GROSS PAY		YEAR TO DATE			
15,724.80	2620.80	FEDERAL 1136.22	SOC. SEC. 931.08	HEALTH INS. 707.64	MEDICARE 217.74	401K 786.24

   a. How often does Karen get paid?

   b. What percent does Karen pay for federal income tax?

   c. How much will Karen put in her 401(k) for the entire year?

6. **USED CAR** The average sale price of a used car at a car dealership is $6580. A savings account earns 4% interest compounded annually. About how much should you deposit in the account to have enough to buy a car in 3 years?

7. **MORTGAGE** The principal on a home mortgage is $128,000, the monthly payment is $1097.50, and the term is 15 years. How much interest is paid on the loan?