Name: _____   Date: _____

Section 7.3 Present Value

1. Evaluate. Round each answer to two decimal places.
   a) $1750(1.025)^{-11}$ **b)** $810(1.04)^{-6}$
   c) $5000(1.09)^{-15}$ **d)** $2225(1.14)^{-9}$

2. Calculate the present value of each amount.
   a) $8000 is required in 5 years. The money can be invested at 8% per year, compounded semi-annually.
   b) $995 is required in 8 years. The money can be invested at 10% per year, compounded quarterly.
   c) $1225 is required in 14 years. The money can be invested at 6% per year, compounded monthly.
   d) $3800 is required in 3 years. The money can be invested at 4% per year, compounded annually.

3. At the end of 5 years, after being charged interest at 3% per year, compounded monthly, Simon had to pay back $10 135.11 on a loan. How much did Simon borrow?

4. Sung Yi and Kwan want to give their newborn daughter $50 000 by her 25th birthday. They plan to invest money in an RESP with a growth rate of 5.5%, compounded quarterly. How much do they need to invest today? Round your answer to the nearest hundred dollars.

5. How much should Shari invest now in an investment that will pay 6% per year, compounded semi-annually, to have $6000 in 4 years?

6. Jeremy wants to pay off his $12 000 car loan early. It is due in 6 years. His banker will discount the loan at 4% per year, compounded monthly. How much would the banker be willing to accept today to pay off the loan?

7. Calculate the discounted payment of a $1000 debt due in 3 years discounted at an interest rate of 3.5% per year, compounded quarterly.

8. Alan has a $35 000 loan that is due in 5 years. His financial institution is willing to discount the loan at 4.4% per year, compounded semi-annually.
   a) How much will Alan need now to pay off the loan?
   b) How much is the discount?

9. Lucy wants to invest a gift of $4300 and some of her savings in a savings plan that offers 4.8% per year, compounded quarterly. She would like to have $20 000 after 20 years.
   a) How much does Lucy need to invest today to reach her goal?
   b) How much money does Lucy need to add from her savings?

10. Julianne is purchasing a used vehicle from a car dealer. The dealer offers her two payment options.
   Plan A: pay $3750 now
   Plan B: pay a $1500 down payment now and $2450 in one year
   If current interest rate is 4% per year, compounded semi-annually, which plan is the better deal? Explain.

11. Jessie lends her brother an amount of money that is to be paid back as follows: $800 in one year, $900 in two years, $1000 in three years, and $1100 in four years. If interest is 6% per year, compounded semi-annually, what is the total value of the loan now?