Name: _____   Date: _____

Section 8.4 The TVM Solver

1. What is the value of a $4500 investment after 8 years if interest is paid at 3.5% per year, compounded monthly?

2. Garret borrows $3000 at 4.4% per year, compounded monthly. How much does he need to repay at the end of 3 years?

3. If Laura invests $10 000 at 3.3% per year, compounded semi-annually, after many years would her investment grow to $18 000?

4. A loan worth $11 500 is due in 6 years. If the creditor sold the loan to another creditor, discounted at 8% per year, compounded semi-annually, how much should the new creditor pay?

5. Trevor invests $3000 in a term deposit that pays 6.6% per year, compounded semi-annually. How long will it take for his investment to triple in value?

6. What annual interest rate, compounded monthly, would be needed for a $1600 investment to grow to $2150 after 6 years?

7. Calculate the amount that needs to be invested at each of the interest rates to have a value of $8500 after 5 years.

   a) 3% per year, compounded monthly
   b) 4% per year, compounded semi-annually
   c) 5% per year, compounded annually

8. Determine which investment will reach $10 000 more quickly.
   • $6000 invested at 9% per year compounded semi-annually
   • $7500 invested at 5.5% compounded quarterly

9. Glen tells you that if he invests $25 000 on his 16th birthday at 6.2% per year, compounded semi-annually, he will have one million dollars by his 65th birthday. Do you agree? Explain.

10. Which rate will double an investment more quickly?
    • 8% per year, compounded semi-annually
    • 7.2% per year, compounded monthly