**Present Value of an Annuity Worksheet**

1. Determine the present value of each ordinary annuity.
   a. Payments of $75 for 10 years at 9.6%/a compounded annually.
   b. Payments of $240 for 15 years at 7.25%/a compounded semi-annually.
   c. Payments of $8500 for 25 years at 6.3%/a compounded annually.
   d. Payments of $50 for 4 ½ years at 4.8%/a compounded quarterly.

2. Determine the interest earned by each annuity in question 1.

3. A contest offers a prize of $1000 every month for 1 year. The first payment will be made 1 month from now. If money can be invested at 8%/a compounded monthly, what cash payment received immediately is equivalent to the annuity?

4. Tamara is setting up an income fund for her retirement. She wishes to receive $1500 every month for the next 20 years, starting 1 month from now. The income fund pays 6.25%/a compounded monthly. How much must Tamara deposit now to pay for the annuity?

5. Isabella receives a disability settlement. She must choose one of these payment plans.
   - A single cash payment of $80,000 to be received immediately
   - Monthly disability payments of $1200 for 10 years
   Assume that money can be invested at 4.8%/a compounded monthly. Which settlement do you think Isabella should accept? Justify your answer.

6. Terence’s parents want to set up an annuity to help him with his college expenses. The annuity will allow Terence to withdraw $300 every month for 4 years. The first withdrawal will be 1 month from now. The annuity earns 3.5%/a compounded monthly.
   a. What principal should Terence’s parents invest now to pay for the annuity?
   b. In which of these scenarios will Terence’s parents deposit the least principal?
      i. Terence’s withdrawals are twice as great, $600.
      ii. The interest rate is twice as great, 7%.
      iii. The time period is twice as long, 8 years.