Time Value of Money Homework Exercise

Use the Time Value of Money tables to answer the following questions. Show your work!

1. You just purchased a house for $130,000. Similar houses in your area are going up in value at a rate of 5% per year.

    a. How much will your house be worth at the end of 15 years?

    b. How much will it be worth at the end of 30 years?

2. Your elderly neighbor just told you that he purchased his first new car for $1,500 about 50 years ago. That has you wondering how much a new car will cost you when you are older. Car prices today average $20,000. It appears that car prices increase at a rate of 6% every year. How much will a new car cost 50 years from today?

3. You just won a prize!! The company that sponsored the prize will pay you $4,000, but you won't get this $4,000 until 3 years from today. Rather than waiting 3 years to collect this money, you are thinking of selling your rights to this prize to someone else so that you will receive some cash today. You can earn a return of 8% on your money. What is the lowest amount of money that you would sell your rights to this prize?

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4. What are the three main reasons that money has a time value?

5. Your church wants to build a new community education center, so they have set a goal of collecting $250,000 over the next 8 years to pay for the building. They can invest their money in account that earns 5% each year. They hope to collect contributions of $25,000/year over the next 8 years. Will the church be able to reach their goal? (Assume BGN payments)

6. Your grandparents started investing for your college tuition as soon as you were born. They invested $2,000/year every year since you were born. Their college investment account earned a return of 7% each year. How much money will be in your college education account after 18 years of contributions? (Assume BGN payments)

7. Use the TVM Calculator spreadsheet to double-check your answers. List the answers to each question that you get from using the spreadsheet:

    Question 1: _____

    Question 2: _____

    Question 3: _____

    Question 5: _____

    Question 6: _____