Chapter 5.a, part ix

Remember the formula: FV = (PV)(1 + i)T

FV = future value

PV = present value

i = interest rate

T = time, usually the number of years

(1) Someone offers you (a) $50,000 today or (b) $80,000 in ten years. Assume the interest rate, i, is 4%.

1.a. This is like offering you (a) \_\_\_\_\_\_\_\_\_\_\_\_\_ in ten years or (b) $80,000 in ten years.

1.b. This is also like offering you (a) $50,000 today or (b) \_\_\_\_\_\_\_\_\_\_\_\_\_\_today.

1.c. To maximize your wealth you should choose (circle one)

(a) $50,000 today or

(b) $80,000 in ten years

1.d. If you have the opportunity invest $50,000 today in an investment that pays you $80,000 in ten years, and the going interest rate is 4%, should you make the investment?

1.d. If you have the opportunity invest $50,000 today in an investment that pays you $40,000 in five years plus $20,000 in ten years, and the going interest rate is 3%, should you make the investment?

2. You currently have a loan with a bank that requires one yearly payment right now, and each year after for four years. You have the opportunity to refinance your loan at a lower interest rate, which will reduce your yearly payments by $500. However, this requires you to pay $2,000 right now. If the interest rate you use to calculate Net Present Value is 6%, should you refinance the loan? Answer by calculating the Net Present Value (NPV) of the benefits and costs for all years.