

Me293 – Project Management and Social Responsibility

Time Value of Money

Question 1

Celine deposits \$400 at the end of each month into an account that returns 4.5% annual interest (compounded monthly). At the end of three years she wants to take the money in the account and use it for a 20% down payment on a new home. What is the maximum price of a home that Celine will be able to buy?

Question 2

Freddy just remembered that he had deposited money in a savings account earning 7% annual interest at the Middletown bank 15 years ago, but he forgot exactly how much. Today he closed the account and the bank gave him a check for \$1172.59. How much was Freddy's initial deposit?

Question 3

The Simpsons are planning to purchase a new home. To do so, they will need to take out a 30-year home mortgage loan of \$160,000 through Middletown bank. Annual interest rates for 30-year mortgages at the Middletown bank are 5.75% compounded monthly.

- (a) Compute the Simpsons' monthly mortgage payment under this loan.
- (b) How much interest will the Simpsons pay over the life of the loan?

Question 4

Ken just bought a house. He made a \$25,000 down payment and financed the balance with a 20-year home mortgage loan with an interest rate of 5.5% compounded monthly. His monthly mortgage payment is \$950. What was the selling price of the house?