

$$PV = PMT \frac{1 - (1 + i)^{-m}}{i}, F = PMT \cdot i \text{ and } I = F - PV$$

$$FA = PMT \frac{(1 + i)^m - 1}{i}, P = PMT \cdot i \text{ and } I = FA - P$$

To receive full credit for this 25 point quiz, you must show ALL work.

1. (5 points) In your own words, describe the difference between the FA formula and the PV formula. Be sure to explicitly describe when you use each.

2. (5 points) For the past ten years your uncle has been depositing \$1,000 at the end of each year in the savings account that pays 6.5% compounded annually. What was the value of the account just after the tenth deposit? How much interest had been earned?

3. (*5 points*) Best Buy offers a TV for \$300 down and \$15 per month for the next 24 months. If interest is charged at 9% compounded monthly, find the cash value of the TV. How much total interest will the customer pay with this offer?

4. (*5 points*) A family wants to start a savings account for college expenses 18 years from now, and will make their first deposit at the end of this month. What equal monthly deposits in an account paying 5.0% compounded monthly are needed in order to accumulate \$25,000 just after the last deposit 18 years from now? How much interest will the account have earned?

5. (*5 points*) Suppose you purchase a new computer for \$1,500. You may finance the purchase by a loan for one year at an annual interest rate of 15% compounded monthly. What would be your monthly payment if the loan is amortized? How much interest would you pay?