

**Math 1313**  
**Homework 12**  
**Chapter 4 Identify**

For the following problems do not work them out. **Identify the type of problem each one is.**

1. The Turners have purchased a house for \$150,000. They made an initial down payment of \$30,000 and secured a mortgage with interest charged at the rate of 9% per year on the unpaid balance. What monthly payments will the Turners be required to make?
  - a. Future Value with compound interest
  - b. Present Value with compound interest
  - c. Future Value of an Annuity
  - d. Present Value of an Annuity
  - e. Sinking Fund
  - f. Amortization
  
2. A newborn child receives a \$20,000 gift towards college education from her grandparents. How much will the \$20,000 be worth in 17 years if it is invested at 7% compounded quarterly?
  - a. Future Value with compound interest
  - b. Present Value with compound interest
  - c. Future Value of an Annuity
  - d. Present Value of an Annuity
  - e. Sinking Fund
  - f. Amortization
  
3. Parents want to setup an account for their child studying abroad for next 2 years, where they can receive a monthly allowance of \$600. The account will be compounded 6.65% monthly. How much should they deposit so their child could have the allowance?
  - a. Future Value with compound interest
  - b. Present Value with compound interest
  - c. Future Value of an Annuity
  - d. Present Value of an Annuity
  - e. Sinking Fund
  - f. Amortization
  
4. Invest Sun is offering a rate that pays 6.15% compounded monthly. What monthly deposits should be made to have \$100,000 in 10 years?
  - a. Future Value with compound interest
  - b. Present Value with compound interest
  - c. Future Value of an Annuity
  - d. Present Value of an Annuity
  - e. Sinking Fund
  - f. Amortization

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5. Rental cost for offices spaces have been going up at 6.2% per year compounded annually for the past 5 years. If office space rent is now at a rate of \$32 per square foot per month, what were the rental rates 5 years ago?
  - a. Future Value with compound interest
  - b. Present Value with compound interest
  - c. Future Value of an Annuity
  - d. Present Value of an Annuity
  - e. Sinking Fund
  - f. Amortization
  
6. The manager of a money-market fund has invested \$4.2 million in certificates of deposit that pay interest at the rate of 5.4% per year compounded quarterly over a period of 5 years. How much will the investment be worth at the end of 5 years?
  - a. Future Value with compound interest
  - b. Present Value with compound interest
  - c. Future Value of an Annuity
  - d. Present Value of an Annuity
  - e. Sinking Fund
  - f. Amortization
  
7. Mai Lee has contributed \$200 at the end of each month into her company's employee retirement account for the past 10 years. Her employer has matched her contribution each month. If the account has earned interest at the rate of 8% per year compounded monthly over the 10 year period, determine how much Mai Lee now has in her retirement account.
  - a. Future Value with compound interest
  - b. Present Value with compound interest
  - c. Future Value of an Annuity
  - d. Present Value of an Annuity
  - e. Sinking Fund
  - f. Amortization
  
8. At the time of retirement a couple has \$250,000 in account that pays 8.4% compounded monthly. If the couple decides to withdraw from the account monthly for 10 years, how much should they withdraw every month if they don't want any money in the account after those 10 years?
  - a. Future Value with compound interest
  - b. Present Value with compound interest
  - c. Future Value of an Annuity
  - d. Present Value of an Annuity
  - e. Sinking Fund

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- f. Amortization
9. Parents have setup an account in order to have \$12,000 in 10 years for their child's college fund. How much should be deposited quarterly into the account paying 4.5% compounded semiannually?
- a. Future Value with compound interest
  - b. Present Value with compound interest
  - c. Future Value of an Annuity
  - d. Present Value of an Annuity
  - e. Sinking Fund
  - f. Amortization
10. A company establishes an account for upgrading office equipment with monthly payments of \$2,000 into an account paying 8.7% compounded monthly. How much will they have in the 5 years?
- a. Future Value with compound interest
  - b. Present Value with compound interest
  - c. Future Value of an Annuity
  - d. Present Value of an Annuity
  - e. Sinking Fund
  - f. Amortization