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13. **Calculating APR** [LO4] Find the APR, or stated rate, in each of the following cases:

Stated Rate (APR)	Number of Times Compounded	Effective Rate (EAR)
Semiannually	12.4%	
Monthly	11.7	
Weekly	9.5	
Infinite	7.9	

14. **Calculating EAR** [LO4] First National Bank charges 12.4 percent compounded monthly on its business loans. First United Bank charges 12.7 percent compounded semiannually. As a potential borrower, Page 185 which bank would you go to for a new loan?

15. **Calculating APR** [LO4] Tai Credit Corp. wants to earn an effective annual return on its consumer loans of 16.5 percent per year. The bank uses daily compounding on its loans. What interest rate is the bank required by law to report to potential borrowers? Explain why this rate is misleading to an uninformed borrower.

16. **Calculating Future Values** [LO1] What is the future value of \$2,400 in 17 years assuming an interest rate of 7.9 percent compounded semiannually?

17. **Calculating Future Values** [LO1] Fowler Credit Bank is offering 6.7 percent compounded daily on its savings accounts. If you deposit \$7,000 today, how much will you have in the account in 5 years? In 10 years? In 20 years?

18. **Calculating Present Values** [LO1] An investment will pay you \$65,000 in 10 years. If the appropriate discount rate is 7 percent compounded daily, what is the present value?

19. **EAR versus APR** [LO4] Big Dom's Pawn Shop charges an interest rate of 32 percent per month on loans to its customers. Like all lenders, Big Dom must report an APR to consumers. What rate should the shop report? What is the effective annual rate?

20. **Calculating Loan Payments** [LO2, 4] You want to buy a new sports coupe for \$79,500, and the finance office at the dealership has quoted you an APR of 5.8 percent for a 60-month loan to buy the car. What will your monthly payments be? What is the effective annual rate on this loan?

21. **Calculating Number of Periods** [LO3] One of your customers is delinquent on his accounts payable balance. You've mutually agreed to a repayment schedule of \$500 per month. You will charge 1.5 percent per month interest on the overdue balance. If the current balance is \$18,000, how long will it take for the account to be paid off?

22. **Calculating EAR** [LO4] Friendly's Quick Loans, Inc., offers you "three for four or 1 knock on your door." This means you get \$3 today and repay \$4 when you get your paycheck in one week (or else). What's the effective annual return Friendly's earns on this lending business? If you were brave enough to ask, what APR would Friendly's say you were paying?

23. **Valuing Perpetuities** [LO1] Live Forever Life Insurance Co. is selling a perpetuity contract that pays \$1,400 monthly. The contract currently sells for \$215,000. What is the monthly return on this investment vehicle? What is the APR? The effective annual return?

24. **Calculating Annuity Future Values** [LO1] You are planning to make monthly deposits of \$450 into a retirement account that pays 10 percent interest compounded monthly. If your first deposit will be made one month from now, how large will your retirement account be in 30 years?

25. **Calculating Annuity Future Values** [LO1] In the previous problem, suppose you make \$5,400 annual deposits into the same retirement account. How large will your account balance be in 30 years?

26. **Calculating Annuity Present Values** [LO1] Beginning three months from now, you want to be able to withdraw \$2,200 each quarter from your bank account to cover college expenses over the next four years. If the account pays .43 percent interest per quarter, how much do you need to have in your bank account today to meet your expense needs over the next four years?

27. **Discounted Cash Flow Analysis** [LO1] If the appropriate discount rate for the following cash flows is 9 percent compounded quarterly, what is the present value of the cash flows? Page 186



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