#9, #15~#16, #20~#22, #24, and #28

9. **Nominal and Real Returns** An investment offers a 14 percent total return over the coming year. Alan Wingspan thinks the total real return on this investment will be only 10 percent. What does Alan believe the inflation rate will be over the next year?

15. **Interest Rate Risk** Laurel, Inc., and Hardy Corp. both have 7 percent coupon bonds outstanding, with semiannual interest payments, and both are priced at par value. The Laurel, Inc., bond has 2 years to maturity, whereas the Hardy Corp. bond has 15 years to maturity. If interest rates suddenly rise by 2 percent, what is the percentage change in the price of these bonds? If interest rates were to suddenly fall by 2 percent instead, what would the percentage change in the price of these bonds be then? Illustrate your answers by graphing bond prices versus YTM. What does this problem tell you about the interest rate risk of longer-term bonds?

16. **Interest Rate Risk** The Faulk Corp. has a 6 percent coupon bond outstanding. The Gonas Company has a 14 percent bond outstanding. Both bonds have 12 years to maturity, make semiannual payments, and have a YTM of 10 percent. If interest rates suddenly rise by 2 percent, what is the percentage change in the price of these bonds? What if interest rates suddenly fall by 2 percent instead? What does this problem tell you about the interest rate risk of lower coupon bonds?

20. **Accrued Interest** You purchase a bond with a coupon rate of 5.9 percent and a clean price of $1,053. If the next semiannual coupon payment is due in four months, what is the invoice price?

21. **Finding the Bond Maturity** Argos Corp. has 9 percent coupon bonds making annual payments with a YTM of 7.81 percent. The current yield on these bonds is 8.42 percent. How many years do these bonds have left until they mature?

22. **Using Bond Quotes** Suppose the following bond quote for IOU Corporation appears in the financial page of today's newspaper. Assume the bond has a face value of $1,000 and the current date is April 15, 2012. What is the yield to maturity of the bond? What is the current yield?

Company (Ticker)	Coupon	Maturity	Last Price	Last Yield	EST Vol (000s)
IOU (IOU)	7.240	Apr 15, 2021	105.312	??	1,827

24. **Interest on Zeroes** Tesla Corporation needs to raise funds to finance a plant expansion, and it has decided to issue 25-year zero coupon bonds to raise the money. The required return on the bonds will be 7 percent.
    - **a.** What will these bonds sell for at issuance?
    - **b.** Using the IRS amortization rule, what interest deduction can the company take on these bonds in the first year? In the last year?
    - **c.** Repeat part (b) using the straight-line method for the interest deduction.
    - **d.** Based on your answers in (b) and (c), which interest deduction method would Tesla Corporation prefer? Why?

28. **Valuing Bonds** The Morgan Corporation has two different bonds currently outstanding. Bond M has a face value of $30,000 and matures in 20 years. The bond makes no payments for the first six years, then pays $800 every six months over the subsequent eight years, and finally pays $1,000 every six months over the last six years. Bond N also has a face value of $30,000 and a maturity of 20 years; it makes no coupon payments over the life of the bond. If the required return on both these bonds is 8 percent compounded semiannually, what is the current price of Bond M? Of Bond N?