1. If a bond with face value of $1,000 and a coupon rate of 8 percent is selling at a price of $970, is the bond's yield to maturity more or less than 8 percent?

2. General Matter's outstanding bond issue has a coupon rate of 10 percent, and it sells at a yield to maturity of 9.25 percent. The firm wishes to issue additional bonds to the public at face value. What coupon rate must the new bonds offer in order to sell at face value?

3. One bond has a coupon rate of 8 percent, another bond with a coupon rate of 12 percent. Both bonds have 10-year maturities, $1000 face value and sell at a yield to maturity of 10 percent.

a) If their yields to maturity next year are still 10 percent, what is the rate of return on each bond?
b) Does the higher coupon bond give a higher rate of return?

4. A General Power bond carries a coupon rate of 8 percent, has 9 years until maturity, a face value of $1000 and sells at a yield to maturity of 7 percent.

a) What interest payments do bondholders receive each year?
b) At what price does the bond sell? (Assume annual interest payments.)
c) What will happen to the bond price if the yield to maturity falls to 6 percent?

5. Maxcorp bonds sell for $1,065.15. The bond life is 9 years, and the yield to maturity is 7 percent. What must be the coupon rate on the bonds? The face value of the bond is $1000.

6. A bond has 10 years until maturity, carries a coupon rate of 9%, and sells for $1,100. Interest is paid annually.

a) If the bond has a yield to maturity of 9% 1 year from now, what will its price be at that time?
b) What will be the rate of return on the bond?

7. Consider three bonds with 8 percent coupon rates, all selling at face value. The short-term bond has a maturity of 4 years, the intermediate-term bond has maturity 8 years, and the long-term bond has maturity 30 years.

a) What will happen to the price of each bond if their yields increase to 9 percent?
b) What will happen to the price of each bond if their yields decrease to 7 percent?
c) What do you conclude about the relationship between time to maturity and the sensitivity of bond prices to interest rates?

8. Several years ago, Castles in the Sand, Inc., issued bonds at face value at a yield to maturity of 7 percent. Now, with 8 years left until the maturity of the bonds, the company has run into hard times and the yield to maturity on the bonds has increased to 15 percent. What has happened to the price of the bond?