1. Consider a one year bond with a coupon rate of 4 percent, and a maturity value of $10,000. What is the effective yield on this bond if the selling price today is:
   a. $9,500  
   b. $10,000  
   c. $10,200.

2. Consider a 5 year zero coupon bond with a maturity value of $10,000. What is the effective yield on this bond if the selling price today is:
   a. $9,000  
   b. $9,500.

Your answers to (1) and (2) should reveal that, as the price of a bond rises, its yield falls.

3. Why should you expect that AAA bonds will pay a lower yield than BB bonds?

4. If you thought that the price of wheat was going to fall dramatically in the near future, would this make you more likely to buy or sell a futures contract? put option? call option? Why?

5. Suppose one year bond rates are 6 percent this year, and it is expected that one year bond rates will be 7 percent next year, and 8 percent the year after that.
   a. What should 2 year bond rates be this year?
   b. What should 3 year bond rates be this year?
   c. Draw the yield curve for 1, 2 and 3 year bonds given this set of expectations.
   d. Suppose that there is new information that leads you to believe that bond rates will be 5 percent next year and 4 percent the year after that. Draw the new yield curve.

Your answers to 5a-d should demonstrate that if interest rates are expected to rise over time, the yield curve will slope upwards. If they are expected to fall over time, the yield curve will slope downwards. Thus, the slope of the yield curve reflects the financial market’s expectations regarding the movement of interest rates in the future.

6. Suppose that on April 17, 2003, a call option on ATT stock with a strike price of 15 and an expiration date of April 20, 2003 could be purchased for $6.90. If you purchased this call option, under what conditions would you make a profit if you held the option until the expiration date?

7. Suppose that on April 17, 2001, a put option on ATT stock with a strike price of 15 and an expiration date of April 20, 2003 could be purchased for $.05. If you purchased this put option, under what conditions would you make a profit if you held the option until the expiration date?

8. If a company’s stock has a large price-earnings ratio, does this indicate that financial markets believe the company has a high or low potential for earnings growth? Why?

9. If a company’s stock has a high beta, does this indicate that the stock will have above or below average fluctuations in price as the overall stock market rises and falls?

10. How does “diversification” reduce risk?
11. What determines the “fundamental value” of a stock?
12. What is a capital gain or loss?
13. Why might an investor prefer to receive capital gains on a stock instead of dividends?
14. When is it a good idea to “buy a put” on a stock? Why?
15. When is it a good idea to “buy a call” on a stock? Why?
16. When is it a good idea to sell futures of a commodity? Why?
17. What is the “efficient markets hypothesis”? If it is true and you read something in the newspaper that suggests a particular company will have very high profits in the future, can you take advantage of this information? Why or why not?
**Answers to 1-7**

1a. 9.5%; b. 4.0%; c. 2.0%
2a 2.1%; b. 1.0%

3. AAA bonds refer to bonds issued by companies with solid credit ratings and minimal chance of default. BB bonds are from companies with a relatively high risk of default. To attract potential buyers, companies with greater default risk must offer higher yields.

4. If the price of wheat was going to fall, you should be more likely to sell a futures contract, sell a call, and buy a put. If the price of wheat was expected to rise, you should do the reverse.

5a. 6.5%; b. 7.0%.

6. To make a profit on the call option, the price of ATT would have to rise above $21.90 by the expiration date.

7. To make a profit on the put option, the price of ATT would have to fall below $14.95 by the expiration date.

The answers for 8-17 are contained in the lecture notes and/or textbook.