

1. The financial system consists of
  - a. all the securities, intermediaries, and markets that exist to match savers and borrowers.
  - b. all transactions occurring in the goods market during a financial year.
  - c. all markets that exist to match the buyers and suppliers of various factors of production.
  - d. all transactions involving the government.

*ANSWER:* a

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* The Financial System and the Economy

*OTHER:* Factual

2. Which of the following will be included in the financial system of a country?
  - a. Labor Unions
  - b. Banks
  - c. Factor markets
  - d. Markets for raw materials

*ANSWER:* b

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* The Financial System and the Economy

*OTHER:* Factual

3. In the financial system, savers transfer funds to borrowers in exchange for
  - a. cash.
  - b. gold.
  - c. financial securities.
  - d. derivative securities.

*ANSWER:* c

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* The Financial System and the Economy

*OTHER:* Factual

4. A contract whereby a borrower, who seeks to obtain money from someone, promises to compensate the lender in the future is known as
- a. a warrant.
  - b. an exchange rate.
  - c. a derivative security.
  - d. a financial security.

*ANSWER:* d

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* Financial Securities

*OTHER:* Factual

5. A contract that promises to pay a given amount of money to the owner of a security at specific dates in the future is known as
- a. a debt security.
  - b. an equity security.
  - c. stock.
  - d. an option.

*ANSWER:* a

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* Financial Securities

*OTHER:* Factual

6. A contract that makes the owner of a security a part owner of the company that issued the security is known as
- a. a debt security.
  - b. an equity security.
  - c. a bond.
  - d. an option.

*ANSWER:* b

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* Financial Securities

*OTHER:* Factual

7. Another name for an equity security is

- a. bond.
- b. debt.
- c. option.
- d. stock.

*ANSWER:* d

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* Financial Securities

*OTHER:* Factual

8. The amount of debt and equity outstanding in the United States is more than \_\_\_\_ times the nation's GDP.

- a. 2
- b. 3
- c. 4
- d. 5

*ANSWER:* d

*POINTS:* 1

*DIFFICULTY:* Moderate

*TOPICS:* Financial Securities

*OTHER:* Factual

9. The ratio of debt to equity in the United States is about

- a. 2.
- b. 2.5.
- c. 3.
- d. 3.5.

*ANSWER:* a

*POINTS:* 1

*DIFFICULTY:* Moderate

*TOPICS:* Financial Securities

*OTHER:* Factual

10. In the United States, the biggest issuers of securities are

- a. households.
- b. business firms.
- c. governments.
- d. financial intermediaries.

*ANSWER:* b

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* Financial Securities

*OTHER:* Factual

11. In the United States, the biggest issuers of debt securities are
- households.
  - business firms.
  - governments.
  - financial intermediaries.

*ANSWER:* d

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* Financial Securities

*OTHER:* Factual

12. In the United States, the biggest issuers of equity securities are
- households.
  - business firms.
  - governments.
  - financial intermediaries.

*ANSWER:* b

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* Financial Securities

*OTHER:* Factual

13. When a household borrows to buy a home, the resulting security is referred to as
- a discount bond.
  - a Treasury bill.
  - mortgage debt.
  - consumer credit.

*ANSWER:* c

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* Financial Securities

*OTHER:* Factual

14. When a household borrows using credit cards and by taking out loans for large purchases (such as automobiles), the resulting security is known as
- a. a discount bond.
  - b. a Treasury bill.
  - c. mortgage debt.
  - d. consumer credit.

*ANSWER:* d

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* Financial Securities

*OTHER:* Factual

15. The owner of a financial security is known as
- a. an investor.
  - b. a debtor.
  - c. a broker.
  - d. a securitor.

*ANSWER:* a

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* Financial Securities

*OTHER:* Factual

16. In the United States, the biggest investors in equity securities are
- a. households.
  - b. business firms.
  - c. governments.
  - d. financial intermediaries.

*ANSWER:* d

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* Financial Securities

*OTHER:* Factual

17. In the United States, the biggest investors in debt securities are
- households.
  - business firms.
  - governments.
  - financial intermediaries.

*ANSWER:* d

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* Financial Securities

*OTHER:* Factual

18. Maturity is
- the time until borrowed funds are repaid.
  - the total interest accumulated on a financial security.
  - a situation in which equity becomes worthless.
  - the principal amount invested in a financial security.

*ANSWER:* a

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* Financial Securities

*OTHER:* Factual

19. Principal is
- the amount of interest accumulated on a bond.
  - the amount of dividends paid each year on a stock.
  - the original amount invested in a security.
  - the time until a borrowed fund is repaid.

*ANSWER:* c

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* Financial Securities

*OTHER:* Factual

20. The periodic payments on debt securities are called
- interest payments.
  - dividends.
  - debt swaps.
  - subordinations.

*ANSWER:* a

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* Financial Securities

*OTHER:* Factual

21. The periodic payments on equity securities are called
- interest payments.
  - dividends.
  - equity shares.
  - stock repurchases.

*ANSWER:* b

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* Financial Securities

*OTHER:* Factual

22. Which of the following is true of debt securities?
- The periodic payment on a debt security is known as dividend.
  - A debt security specifies a particular maturity date.
  - The original amount invested in a referred to as interest.
  - The amount of payment on a debt security depends on the company's profits.

*ANSWER:* b

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* Financial Securities

*OTHER:* Factual

23. Which of the following is true of an equity?
- Equity securities can be bought and sold.
  - The periodic payment on an equity security is called the interest.
  - An equity promises to pay a fixed amount periodically.
  - An equity security has a specific date of maturity.

*ANSWER:* a

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* Financial Securities

*OTHER:* Factual

24. A treasury bond issued by the U.S. government
- does not have a maturity date.
  - makes periodic payments of specific amounts.
  - pays dividends to the bond holders.
  - is a short-term debt security.

*ANSWER:* b

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* Financial Securities

*OTHER:* Factual

25. Treasury bills issued by the U.S. government

- a. do not have a specific period of maturity.
- b. promises to pay dividends to its owners.
- c. are long term debt securities.
- d. are short term debt securities.

*ANSWER:* d

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* Financial Securities

*OTHER:* Factual

26. Which of the following is true of dividends?

- a. The amount of dividends paid to stock owners depends on the company's performance.
- b. The timing of dividend payments is the same across all companies.
- c. Dividends are tax-free payments from insurance companies.
- d. Dividends are tax-free social security payments.

*ANSWER:* a

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* Financial Securities

*OTHER:* Factual

27. Most commonly, companies issue a(n) \_\_\_\_\_ dividend.

- a. quarterly
- b. semiannual
- c. annual
- d. monthly

*ANSWER:* a

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* Financial Securities

*OTHER:* Factual

28. Interest payments are

- a. the periodic payments on equity securities.
- b. made by the borrower to the investor along with the principal.
- c. tax-free payments from insurance companies.
- d. taxable Social Security payments.

*ANSWER:* b

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* Financial Securities

*OTHER:* Factual



29. In the event that a firm goes bankrupt and is liquidated, who is paid off first, second, and third between workers, debt holders, and stockholders?
- (1) debt holders; (2) workers; (3) stockholders
  - (1) stockholders; (2) workers; (3) debt holders
  - (1) workers; (2) debt holders; (3) stockholders
  - (1) workers; (2) stockholders; (3) debt holders

*ANSWER:* c

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* Financial Securities

*OTHER:* Factual

30. Four friends- Phillips, Eliza, John, and Jacob are associated with Redhood Ltd. in different ways. Phillips is the CEO of Redhood Ltd., Melissa works as an accountant while John owns some shares of Redhood Ltd. and Jacob has some debt securities issued by the company. Who is likely to be paid last in case of a bankruptcy?
- John
  - Jacob
  - Phillips
  - Melissa

*ANSWER:* a

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* Financial Securities

*OTHER:* Conceptual

31. Andy keeps his savings in a money market mutual fund, Ben keeps his savings invested in U.S. savings bonds, Charlie keeps his in a bank, and Beth uses her savings to buy the stocks of a company. Given this information, who among the following individuals is using direct finance?
- Andy
  - Ben
  - Charlie
  - Beth

*ANSWER:* b

*POINTS:* 1

*DIFFICULTY:* Moderate

*TOPICS:* Matching Borrowers with Lenders

*OTHER:* Conceptual

32. Andy keeps his savings in a certificate of deposit at a bank, Ben keeps his savings invested in U.S. savings bonds, Beth keeps her savings in the form of liquid cash in her vault, and Charlie uses his to buy stock on the New York Stock Exchange. Given this information, who among the following individuals is using indirect finance?
- Andy
  - Ben
  - Charlie
  - Beth

*ANSWER:* a

*POINTS:* 1

*DIFFICULTY:* Moderate

*TOPICS:* Matching Borrowers with Lenders

*OTHER:* Conceptual

33. A company that transfers funds from savers to borrowers by receiving funds from savers and investing in securities issued by borrowers is known as a(n)
- broker.
  - financial intermediary.
  - stock exchange.
  - venture capitalist.

*ANSWER:* b

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* Matching Borrowers with Lenders

*OTHER:* Factual

34. When savers buy securities from borrowers without the assistance of any third-party, they are using
- direct finance.
  - indirect finance.
  - a secondary market.
  - a financial intermediary.

*ANSWER:* a

*POINTS:* 1

*DIFFICULTY:* Basic  
Moderate

*TOPICS:* Matching Borrowers with Lenders

*OTHER:* Conceptual

35. When savers invest through financial intermediaries, they are said to engage in
- direct finance.
  - indirect finance.
  - a secondary market.
  - a tertiary market.

*ANSWER:* b

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* Matching Borrowers with Lenders

*OTHER:* Factual

36. Mary used her savings to buy some stocks of a company in the secondary market while Jane sold some stocks she owned through a stock broker. George invested his savings in a bank while Tom bought treasury bills of the U.S. government. Who among the following is using direct finance?

- Mary
- Jane
- George
- Tom

*ANSWER:* c

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* Matching Borrowers with Lenders

*OTHER:* Conceptual

37. Mr. Smith bought stocks of several companies from the secondary market. He used

- micro finance.
- public finance.
- direct finance.
- indirect finance.

*ANSWER:* d

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* Matching Borrowers with Lenders

*OTHER:* Conceptual

38. A company that takes short term deposits and makes long term loans is a
- a financial intermediary.
  - a brokerage.
  - an investment bank.
  - a secondary market maker.

*ANSWER:* a

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* Matching Borrowers with Lenders

*OTHER:* Factual

39. A financial intermediary
- is a government-owned acceptor of deposits.
  - pools the funds of many people.
  - speculates in the stock market.
  - advances loans but does not accept deposits.

*ANSWER:* b

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* Matching Borrowers with Lenders

*OTHER:* Factual

40. When a country's financial system is young, it usually relies more on \_\_\_\_\_ finance.
- micro
  - direct
  - nonintermediary
  - indirect

*ANSWER:* d

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* Matching Borrowers with Lenders

*OTHER:* Factual

41. Which of the following is NOT a financial intermediary?
- A commercial bank.
  - A savings institution.
  - A government treasury.
  - A mutual fund.

*ANSWER:* c

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* Matching Borrowers with Lenders

*OTHER:* Factual

42. Commercial banks, savings institutions, and mutual funds are all
- financial intermediaries.
  - secondary market organizations.
  - owned by the government.
  - institutions that people use to engage in direct finance.

*ANSWER:* a

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* Matching Borrowers with Lenders

*OTHER:* Factual

43. Which of the following is NOT a financial intermediary?
- A credit union.
  - A life insurance company.
  - A mutual fund.
  - A labor union.

*ANSWER:* d

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* Matching Borrowers with Lenders

*OTHER:* Factual

44. Investors who wish to reduce their risk should
- buy stocks of small companies.
  - diversify.
  - buy stocks of large companies.
  - keep large amounts of cash.

*ANSWER:* b

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* Matching Borrowers with Lenders

*OTHER:* Factual

45. Owning a variety of securities means engaging in
- securitization.
  - sterilization.
  - diversification.
  - free-riding.

*ANSWER:* c

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* Matching Borrowers with Lenders

*OTHER:* Factual

46. Beth's financial adviser has asked her to invest in a number of securities rather than investing in one. This is an example of
- securitization.
  - free-riding.
  - sterilization.
  - diversification.

*ANSWER:* d

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* Matching Borrowers with Lenders

*OTHER:* Conceptual

47. A financial intermediary specializes in knowing about people who apply for loans. The intermediary knows how to evaluate credit histories and the probabilities that borrowers will repay. These facts are examples of which of the following functions of financial intermediaries?
- Gathering information
  - Helping savers diversify
  - Pooling funds
  - Taking short-term deposits in order to make long-term loans

*ANSWER:* a

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* Matching Borrowers with Lenders

*OTHER:* Factual

48. Joe E. Conomist purchased 100 shares of IBM corporation in 2011 for \$10,000. In 2014, Joe sold these shares to Sally Forth for \$15,000. How would this sale of stock in 2014 affect IBM corporation?
- IBM makes \$5,000 in profit.
  - IBM invests \$5,000 in capital equipment.
  - IBM suffers a loss of \$5,000.
  - IBM is unaffected.

*ANSWER:* d

*POINTS:* 1

*DIFFICULTY:* Moderate

*TOPICS:* Financial Markets

*OTHER:* Conceptual

49. The market for new securities is known as:

- a. the closed market.
- b. the primary market.
- c. the secondary market.
- d. the open market.

*ANSWER:* b

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* Financial Markets

*OTHER:* Factual

50. Suppose the quantity demanded for a security is

$$B_D = 150 - 0.1b,$$

and the quantity supplied of the security is

$$B_S = 50 + 0.1b,$$

where  $b$  is the price of the security in dollars. The equilibrium price of the security is

- a. \$50.
- b. \$125.
- c. \$250.
- d. \$500.

*ANSWER:* d

*POINTS:* 1

*DIFFICULTY:* Moderate

*TOPICS:* Financial Markets

*OTHER:* Conceptual

51. A financial market is

- a. a place or a mechanism by which borrowers, savers, and financial intermediaries trade.
- b. an electronic means of transacting.
- c. a place where people engage in indirect finance.
- d. a secondary market.

*ANSWER:* a

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* Financial Markets

*OTHER:* Factual

52. Which of the following is true of a financial market?
- a. Only new securities can be traded in a financial market.
  - b. Some financial markets are local.
  - c. All financial markets have a central physical location.
  - d. All financial markets are secondary markets.

*ANSWER:* b

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* Financial Markets

*OTHER:* Factual

53. The market in which a security is sold from one investor to another is known as
- a. the closed market.
  - b. the primary market.
  - c. the secondary market.
  - d. the open market.

*ANSWER:* c

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* Financial Markets

*OTHER:* Factual

54. GLTP Inc. transformed from a private company into a public company after offering its shares in a securities exchange for the first time. Such transactions take place in a
- a. tertiary market.
  - b. closed market.
  - c. secondary market.
  - d. primary market.

*ANSWER:* d

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* Financial Markets

*OTHER:* Conceptual



55. Phillips regularly invests in the securities of established companies. However, he does not invest in new securities issued by companies. His transactions take place in the
- closed market.
  - open market.
  - secondary market.
  - primary market.

*ANSWER:* c

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* Financial Markets

*OTHER:* Conceptual

56. The U.S. government borrows by auctioning its bonds in the
- primary market.
  - stock market.
  - secondary market.
  - derivative market.

*ANSWER:* a

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* Financial Markets

*OTHER:* Factual

57. Mobi's is a new company that manufactures premium apparel for men. It needs fund for expanding its production units and is planing to issue the first lot of shares. These shares will be traded in the \_\_\_\_\_.
- primary market
  - secondary market
  - tertiary market
  - closed market

*ANSWER:* a

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* Financial Markets

*OTHER:* Conceptual

58. Everything else remaining unchanged, an increase in the supply of security A and a decrease in the demand for security B will cause the price of security A to \_\_\_\_ and the price of security B to \_\_\_\_.
- a. fall; fall
  - b. fall; rise
  - c. rise; fall
  - d. rise; rise

*ANSWER:* a

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* Financial Markets

*OTHER:* Conceptual

59. Everything else remaining unchanged, an increase in the supply of security A and an increase in the demand for security B causes the price of security A to \_\_\_\_ and the price of security B to \_\_\_\_.
- a. fall; fall
  - b. fall; rise
  - c. rise; fall
  - d. rise; rise

*ANSWER:* b

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* Financial Markets

*OTHER:* Conceptual

60. Everything else remaining unchanged, a decrease in the supply of security A and a decrease in the demand for security B will cause the price of security A to \_\_\_\_ and the price of security B to \_\_\_\_.
- a. fall; fall
  - b. fall; rise
  - c. rise; fall
  - d. rise; rise

*ANSWER:* c

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* Financial Markets

*OTHER:* Conceptual

61. Everything else remaining unchanged, a decrease in the supply of security A and an increase in the demand for security B will cause the price of security A to \_\_\_\_ and the price of security B to \_\_\_\_.
- a. fall; fall
  - b. fall; rise
  - c. rise; fall
  - d. rise; rise

*ANSWER:* d

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* Financial Markets

*OTHER:* Conceptual

62. If the demand for a company's stock decreases, supply remaining unchanged,
- a. both its equilibrium price and quantity will rise.
  - b. both its equilibrium price and quantity will fall.
  - c. its equilibrium price will rise while its equilibrium quantity will fall.
  - d. its equilibrium price will fall while its equilibrium quantity will rise.

*ANSWER:* b

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* Financial Markets

*OTHER:* Conceptual

63. Suppose the quantity demanded for a security is

$$B_D = 150 - 0.1b,$$

and the quantity supplied of the security is

$$B_S = 50 + 0.1b,$$

where  $b$  is the price of the security in dollars. The equilibrium quantity of the security is

- a. 100.
- b. 125.
- c. 145.
- d. 500.

*ANSWER:* a

*POINTS:* 1

*DIFFICULTY:* Moderate

*TOPICS:* Financial Markets

*OTHER:* Conceptual

64. Suppose the quantity demanded for a security is

$$B_D = 150 - 0.1b,$$

and the quantity supplied of the security is

$$B_S = 50 + 0.1b,$$

where  $b$  is the price of the security in dollars. Suppose that the supply curve shifts to

$$B_S = 75 + 0.1b.$$

The equilibrium price of the security

- a. rises by \$50.
- b. rises by \$125.
- c. falls by \$125.
- d. falls by \$50.

*ANSWER:* c

*POINTS:* 1

*DIFFICULTY:* Moderate

*TOPICS:* Financial Markets

*OTHER:* Conceptual

65. The quantity demanded of a security is  $Q_D = 220 - 0.2b$  and the quantity supplied of it is  $Q_S = 100 + 0.2b$ . The equilibrium price of the security is \_\_\_\_\_.

- a. \$300
- b. \$280
- c. \$420
- d. \$500

*ANSWER:* a

*POINTS:* 1

*DIFFICULTY:* Moderate

*TOPICS:* Financial Markets

*OTHER:* Conceptual

66. Suppose the quantity demanded for a security is

$$B_D = 150 - 0.1b,$$

and the quantity supplied of the security is

$$B_S = 50 + 0.1b,$$

where  $b$  is the price of the security in dollars. Suppose that the supply curve shifts to

$$B_S = 75 + 0.1b.$$

The equilibrium quantity of the security

- a. rises by 12.5.
- b. rises by 2.5.
- c. falls by 2.5.
- d. falls by 12.5.

*ANSWER:* a

*POINTS:* 1

*DIFFICULTY:* Moderate

*TOPICS:* Financial Markets

*OTHER:* Conceptual

67. In the 1980s, the United States suffered one of its worst financial crises when \_\_\_\_ began to fail in large numbers.

- a. commercial banks
- b. stock brokers
- c. money market mutual funds
- d. savings and loan institutions

*ANSWER:* d

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* The Financial System

*OTHER:* Factual

68. In the Asian crisis, which began in 1997,

- a. investors began to pull their financial investments out of Asia with urgency.
- b. large banks from Asia began purchasing large American banks, threatening the health of the U.S. financial system.
- c. mutual funds in Asia began to fail in large numbers.
- d. savings-and-loan institutions in Asia began to fail in large numbers.

*ANSWER:* a

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* The Financial System

*OTHER:* Factual

69. One lesson learned from the financial crisis of 2008 was that
- a. government regulators need to respond slowly when financial practices threaten the economy.
  - b. unregulated financial firms need to be prevented from growing so large that their failure would severely damage the economy.
  - c. the ease of owning a home has no relationship to the efficiency of the financial system.
  - d. unregulated financial firms need to be prevented from growing so small that their success would have no or little effect on the economy.

*ANSWER:* b

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* The Financial System

*OTHER:* Factual

70. Suppose you are an investor facing a choice between three investments that are identical in every way except in terms of their rates of return and taxability. Which investment provides the highest after-tax return?

Investment A: interest rate 10 percent, tax rate 40 percent of interest income.

Investment B: interest rate 8 percent, tax rate 25 percent of interest income.

Investment C: interest rate 6.5 percent, tax rate 0 percent.

Investment D: interest rate 5 percent, tax rate 1 percent.

- a. Investment A
- b. Investment B
- c. Investment C
- d. Investment D

*ANSWER:* c

*POINTS:* 1

*DIFFICULTY:* Moderate

*TOPICS:* Application to Everyday Life: What Do Investors Care About?

*OTHER:* Conceptual

71. Consider the following four debt securities, which are identical in every characteristic except as noted:

W: A corporate bond rated AAA

X: A corporate bond rated BBB

Y: A corporate bond rated AAA with a shorter time to maturity than bonds W and X

Z: A corporate bond rated AAA with the same time to maturity as bond Y that trades in a more liquid market than bonds W, X, or Y

Which of the following is the most likely order of the interest rates (yields to maturity) of the bonds from highest to lowest?

a. X, W, Y, Z

b. W, X, Z, Y

c. X, Y, Z, W

d. X, Z, W, Y

*ANSWER:* a

*POINTS:* 1

*DIFFICULTY:* Challenging

*TOPICS:* Application to Everyday Life: What Do Investors Care About?

*OTHER:* Conceptual

72. An investor calculating the standard deviation of different investments is measuring the \_\_\_\_\_ of alternative investment portfolios.

a. expected return

b. risk

c. taxation

d. liquidity

*ANSWER:* b

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* Application to Everyday Life: What Do Investors Care About?

*OTHER:* Factual

73. Suppose you are an investor with a choice between three securities that are identical in every way except in terms of their rates of return and risk. Which investment provides the highest expected return?

Investment A: Total return = 10 percent with probability 50 percent  
Total return = 20 percent with probability 50 percent

Investment B: Total return = 12 percent with probability 50 percent  
Total return = 20 percent with probability 50 percent

Investment C: Total return = 5 percent with probability 60 percent  
Total return = 25 percent with probability 40 percent

Investment D: Total return = 5 percent with probability 60 percent  
Total return = 7 percent with probability 40 percent

- a. Investment A
- b. Investment B
- c. Investment C
- d. Investment D

*ANSWER:* d

*POINTS:* 1

*DIFFICULTY:* Moderate

*TOPICS:* Application to Everyday Life: What Do Investors Care About?

*OTHER:* Conceptual



74. Suppose you are an investor with a choice between three securities that are identical in every way except in terms of their rates of return and risk. Which security has the least risk? Note: You can answer this question intuitively, without calculating the standard deviation. However, if you want to calculate the standard deviation, the equation is:

$$\text{Standard deviation} = S = \left\{ p_1(X_1 - E)^2 + p_2(X_2 - E)^2 + \dots + p_N(X_N - E)^2 \right\}^{\frac{1}{2}}.$$

Investment A: total return = 10 percent with probability 50 percent  
total return = 20 percent with probability 50 percent

Investment B: total return = 12 percent with probability 50 percent  
total return = 20 percent with probability 50 percent

Investment C: total return = 5 percent with probability 60 percent  
total return = 25 percent with probability 40 percent

Investment D: total return = 5 percent with probability 60 percent  
total return = 7 percent with probability 40 percent

- Investment A
- Investment B
- Investment C
- Investment D

*ANSWER:* b

*POINTS:* 1

*DIFFICULTY:* Moderate

*TOPICS:* Application to Everyday Life: What Do Investors Care About?

*OTHER:* Conceptual

75. A nonmarketable security is one that
- is not widely advertised.
  - has a present value of zero.
  - cannot be resold in a secondary market.
  - has only a current yield and not a capital-gains yield.

*ANSWER:* c

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* Application to Everyday Life: What Do Investors Care About?

*OTHER:* Factual

76. Consider three investments, where expected return is the expected value of the total return and risk is measured by the standard deviation. The investments are identical in every way except for their expected return and risk:
- Investment A: expected return = 2 percent, risk = 5 percent
  - Investment B: expected return = 5 percent, risk = 4 percent
  - Investment C: expected return = 14 percent, risk = 20 percent
  - Investment D: expected return = 6 percent, risk = 12 percent

If a risk-averse investor can buy only one of the three investments and compares each investment with the other three, which investment option would he never choose?

- a. Investment A, because its expected return is lower than Investment B and its risk is higher.
- b. Investment B, because its expected return is so much lower than Investment C.
- c. Investment C, because its risk exceeds its expected return.
- d. Investment D, because the expected return to investment D is so much lower than Investment C.

*ANSWER:* a

*POINTS:* 1

*DIFFICULTY:* Moderate

*TOPICS:* Application to Everyday Life: What Do Investors Care About?

*OTHER:* Conceptual

77. Risk that cannot be eliminated by diversification is referred to as
- a. idiosyncratic risk.
  - b. market risk.
  - c. default risk.
  - d. interest-rate risk.

*ANSWER:* b

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* Application to Everyday Life: What Do Investors Care About?

*OTHER:* Factual

78. Which of the following statements is true?
- a. Over the last fifty years, the risk spread between Aaa bonds and Baa bonds always remained positive except in 1998.
  - b. The risk spread between Aaa bonds and Baa bonds became negative only in the mid-1960s.
  - c. For most of the last twenty years, the risk spread between Aaa bonds and Baa bonds remained negative.
  - d. Over the last fifty years, the risk spread between Aaa bonds and Baa bonds never became negative

*ANSWER:* d

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* Application to Everyday Life: What Do Investors Care About?

*OTHER:* Factual

79. The income an investor receives in some period divided by the value of the security at the beginning of that period is known as \_\_\_\_\_yield.
- a. capital-gains
  - b. expected
  - c. current
  - d. realized

*ANSWER:* c

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* Application to Everyday Life: What Do Investors Care About?

*OTHER:* Factual

80. The price of a stock at the beginning of a year is \$50. There is a 70 percent chance of its price rising to \$55 by the end of the year and a 30 percent chance of its price falling to \$45. The stock will pay an amount of \$2 at the end of the year. The current yield of the security is
- a. 4 percent
  - b. 5 percent
  - c. 70 percent
  - d. 30 percent

*ANSWER:* a

*POINTS:* 1

*DIFFICULTY:* Moderate

*KEYWORDS:* Applications to Everyday Life: What do investors care about?

*OTHER:* Conceptual

81. If a stock's price is \$20 at the beginning of a year and \$17 at the end of the year, and it pays a dividend of \$2 during the year, then the stock's current yield is \_\_\_\_percent.
- a. -15
  - b. -5
  - c. 5
  - d. 10

*ANSWER:* d

*POINTS:* 1

*DIFFICULTY:* Moderate

*TOPICS:* Application to Everyday Life: What Do Investors Care About?

*OTHER:* Conceptual

82. If the price of a share of Aqua Inc. increased from \$40 to \$44 over a year, the capital-gains yield per share was \_\_\_\_\_.
- a. 10 percent
  - b. 4 percent
  - c. 11 percent
  - d. 0.4 percent

*ANSWER:* a

*POINTS:* 1

*DIFFICULTY:* Moderate

*TOPICS:* Application to Everyday Life: What do investors care about?

*OTHER:* Conceptual

83. If a stock's price is \$20 at the beginning of a year and \$17 at the end of the year, and it pays a dividend of \$2 during the year, then the stock's capital-gains yield is \_\_\_\_percent.
- a. -15
  - b. -5
  - c. 5
  - d. 15

*ANSWER:* a

*POINTS:* 1

*DIFFICULTY:* Moderate

*TOPICS:* Application to Everyday Life: What Do Investors Care About?

*OTHER:* Conceptual

84. If a stock's price is \$20 at the beginning of a year and \$17 at the end of the year, and it pays a dividend of \$2 during the year, then the stock's return is \_\_\_\_percent.
- a. -15
  - b. -5
  - c. 5
  - d. 10

*ANSWER:* b

*POINTS:* 1

*DIFFICULTY:* Moderate

*TOPICS:* Application to Everyday Life: What Do Investors Care About?

*OTHER:* Conceptual

85. The dollar value of a company's stock rose from \$20 to \$21 during a year. If the stock paid a dividend of \$3, the return on the stock was
- a. 20 percent
  - b. 1 percent
  - c. 3 percent
  - d. 14 percent

*ANSWER:* a

*POINTS:* 1

*DIFFICULTY:* Moderate

*TOPICS:* Application to Everyday Life: What do investors care about?

*OTHER:* Conceptual

86. Risk is the amount of uncertainty relating to the \_\_\_\_\_ a security.
- a. maturity of
  - b. principal of
  - c. liquidity of
  - d. return on

*ANSWER:* d

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* Application to Everyday Life: What Do Investors Care About?

*OTHER:* Factual

87. The situation when the issuer of a security fails to make the payment promised is referred to as
- a. default.
  - b. deviation.
  - c. failure.
  - d. defect.

*ANSWER:* a

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* Application to Everyday Life: What Do Investors Care About?

*OTHER:* Factual

88. A stock's price is \$20 at the beginning of a year. There is a 25 percent chance that the price will be \$17 at the end of the year, and a 75 percent chance that the price will be \$25 at the end of the year. The stock will pay a dividend of \$3 during the year. The expected return on the stock is \_\_\_\_ percent.
- a. 10
  - b. 20
  - c. 30
  - d. 40

*ANSWER:* c

*POINTS:* 1

*DIFFICULTY:* Moderate

*TOPICS:* Application to Everyday Life: What Do Investors Care About?

*OTHER:* Conceptual

89. The probabilities of different returns on a stock over the year are:

<b>Probability</b>	<b>Return</b>
10%	-5%
15%	0%
20%	5%
30%	10%
25%	20%

The expected return on the stock is \_\_\_\_ percent.

- a. 8.5
- b. 9.0
- c. 9.5
- d. 10.0

*ANSWER:* a

*POINTS:* 1

*DIFFICULTY:* Moderate

*TOPICS:* Application to Everyday Life: What Do Investors Care About?

*OTHER:* Conceptual

90. You buy a bond for \$1,000 today that promises interest of \$50 in one year plus the return of your principal. However, the probability that the company will default and not pay you either interest nor repay your principal is 1 percent. The expected return on the bond is \_\_\_\_ percent.
- a. 3.95
  - b. 4.00
  - c. 4.95
  - d. 5.00

*ANSWER:* a

*POINTS:* 1

*DIFFICULTY:* Moderate

*TOPICS:* Application to Everyday Life: What Do Investors Care About?

*OTHER:* Conceptual

91. Upside risk is the risk that investors face due to
- a. an increase in the market price of a security.
  - b. an increase in the inflation rate.
  - c. an decrease in the earnings of the firm they invested in.
  - d. an increase in the exchange rate.

*ANSWER:* a

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* Application to Everyday Life: What do investors care about?

*OTHER:* Factual

92. A stock's price is \$20 at the beginning of a year. There is a 25 percent chance that the price will be \$17 at the end of the year, and a 75 percent chance that the price will be \$25 at the end of the year. The stock will pay a dividend of \$3 during the year. The standard deviation of the return on the stock is \_\_\_\_ percent (rounded to the nearest percentage point).
- a. 10
  - b. 12
  - c. 15
  - d. 17

*ANSWER:* d

*POINTS:* 1

*DIFFICULTY:* Moderate

*TOPICS:* Application to Everyday Life: What Do Investors Care About?

*OTHER:* Conceptual

93. A risk averse investor will choose an investment
- a. with the lowest standard deviation
  - b. with the highest standard deviation
  - c. with the highest return and highest risk
  - d. with the lowest capital-gains yield

*ANSWER:* a

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* Application to Everyday Life: What do investors care about?

*OTHER:* Factual

94. The probabilities of different returns on a stock over the year are:

<b>Probability</b>	<b>Return</b>
10%	-5%
15%	0%
20%	5%
30%	10%
25%	20%

The standard deviation of the return on the stock is about \_\_\_\_ percent.

- a. 5
- b. 8
- c. 11
- d. 14

*ANSWER:* b

*POINTS:* 1

*DIFFICULTY:* Moderate

*TOPICS:* Application to Everyday Life: What Do Investors Care About?

*OTHER:* Conceptual

95. The ease with which you can buy or sell a security in the secondary market when you want to without incurring significant costs is known as

- a. liquidity.
- b. risk.
- c. secondary marketization.
- d. secondary market penetration.

*ANSWER:* a

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* Application to Everyday Life: What Do Investors Care About?

*OTHER:* Factual

96. Which of the following risks is only faced by investors in debt securities?

- a. Default risk
- b. Upward risk
- c. Downward risk
- d. Risk due to inflation

*ANSWER:* a

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* Application to Everyday Life: What do investors care about?

*OTHER:* Factual



97. Which of the following securities is likely to be most liquid?

- a. Debt security issued by the government of a small town
- b. Stock in a small corporation
- c. Government savings bonds
- d. 3 month treasury bills

*ANSWER:* d

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* Application to Everyday Life: What Do Investors Care About?

*OTHER:* Factual

98. A U.S. government savings bond is an example of a

- a. marketable security.
- b. nonmarketable security.
- c. secondary security.
- d. primary security.

*ANSWER:* b

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* Application to Everyday Life: What Do Investors Care About?

*OTHER:* Factual

99. A \_\_\_\_\_ security can be sold to another investor.

- a. marketable
- b. idiosyncratic
- c. nonmarketable
- d. systematic

*ANSWER:* a

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* Application to Everyday Life: What Do Investors Care About?

*OTHER:* Factual

100. Risk that can be eliminated by diversification is

- a. idiosyncratic risk.
- b. market risk.
- c. default risk.
- d. interest-rate risk.

*ANSWER:* a

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* Application to Everyday Life: What Do Investors Care About?

*OTHER:* Factual

101. Risk that cannot be eliminated by diversification is

- a. unsystematic risk.
- b. systematic risk.
- c. default risk.
- d. interest-rate risk.

*ANSWER:* b

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* Application to Everyday Life: What Do Investors Care About?

*OTHER:* Factual

102. Risk that can be eliminated by diversification is

- a. unsystematic risk.
- b. systematic risk.
- c. default risk.
- d. interest-rate risk.

*ANSWER:* a

*POINTS:* 1

*DIFFICULTY:* Basic

*TOPICS:* Application to Everyday Life: What Do Investors Care About?

*OTHER:* Factual

103. A security has a price of \$3,000 and an amount to be repaid in a single payment of \$3,400. What is the amount of interest on the security?

*ANSWER:* Interest = amount repaid minus price  
= \$3,400 – \$3,000  
= \$400

*POINTS:* 1

*TOPICS:* Financial Markets

104. Suppose the quantity demanded for a security is

$$B_D = 100 - 0.1b,$$

and the quantity supplied of the security is

$$B_S = 50 + 0.1b,$$

where  $b$  is the price of the security in dollars.

- a. Calculate the equilibrium price and quantity of the security.
- b. Suppose demand increases by 50, so that  $B_D = 150 - 0.1b$ . Now, calculate the new equilibrium price and quantity of the security.

- Set quantity demanded equal to quantity supplied to get  $100 - 0.1b = 50 + 0.1b$ , so  $50 = 0.2b$ ,
- a. so  $b = 250$ . Plug into either equation to find the equilibrium quantity. The equilibrium quantity is 75.

*ANSWER:*

- Now, set quantity demanded equal to quantity supplied to get  $150 - 0.1b = 50 + 0.1b$ , so
- b.  $100 = 0.2b$ , so  $b = 500$ . Plug into either equation to find the equilibrium quantity. The equilibrium quantity is 100.

*POINTS:* 1

*TOPICS:* Financial Markets

105. Consider three alternative bonds that you might invest in, each of which matures in one year. The following table shows the probability that you will receive each possible return. For example, if you buy bond A, the probability is 90 percent that your return will be 20 percent and the probability is 10 percent that your return will be -100 percent (in other words, you lose the entire amount invested).

<b>Bond</b>	<b>Probability</b>	<b>Return</b>
Bond A	90%	20%
	10%	-100%
Bond B	75%	40%
	25%	-40%
Bond C	60%	10%
	40%	-10%

a. Calculate the expected return for all three bonds in percentage terms.

The standard deviations of the returns on these bonds are: Bond A, 36.0 percent; Bond B, 34.6 percent; Bond C, 9.8 percent. If you are extremely risk averse, which of the three bonds would you buy? Why?

c. Would a risk-averse investor ever buy Bond A instead of one of the other bonds? Why or why not?

Explain and show all your work. In your calculations, you may round after three significant digits.

*ANSWER:* a.  $E(A) = (0.9 \times 0.2) + [0.1 \times (-1.0)] = 0.08 = 8\%$   
 $E(B) = (0.75 \times 0.4) + [0.25 \times (-0.4)] = 0.2 = 20\%$   
 $E(C) = (0.6 \times 0.1) + [0.4 \times (-0.1)] = 0.02 = 2\%$

b. You would buy bond C, which has the lowest risk, even though the expected return is very low.

c. You would never buy bond A because it is dominated by bond B; B has a higher expected return and a lower standard deviation.

*POINTS:* 1

*TOPICS:* Application to Everyday Life: What Do Investors Care About?

106. Suppose a discount bond costs \$5,000 today and pays off some amount  $b$  in one year. Suppose that  $b$  is uncertain according to the following table of probabilities:

$b$ :	\$5,000	\$5,500	\$6,000	\$6,500	\$7,000
Probability:	0.1	0.2	0.3	0.2	0.2

- a. Calculate the return (in percent) for each value of  $b$ . (Note: you may just calculate the total return and not worry about how this is split up between current yield and capital-gains yield.)
- b. Calculate the expected return.

- Suppose an investor has a choice between buying this security or purchasing a different security that also costs \$5,000 today, but pays off \$5,500 with certainty in one year. How is an investor's choice of which security to purchase related to her degree of risk aversion?
- c.

ANSWER: a. The returns are found by:  $\text{return} = [(b - \$5000)/\$5000] \times 100\%$

$b$	return
\$5000	0%
\$5500	10%
\$6000	20%
\$6500	30%
\$7000	40%

b.  $E = (0.1 \times 0\%) + (0.2 \times 10\%) + (0.3 \times 20\%) + (0.2 \times 30\%) + (0.2 \times 40\%) = 22\%$

- c. The trade-off is between a certain return of 10 percent versus a risky return of 22 percent. Which one the investor would choose depends on her degree of risk aversion; the more risk averse she is, the more likely she is to pick the safe asset instead of the risky one. As the degree of risk aversion declines, she is more likely to pick the risky asset.

POINTS: 1

TOPICS: Application to Everyday Life: What Do Investors Care About?

107. Suppose you are an investor with a choice between three investments in debt securities that are identical in every way except in terms of their interest rates and taxability.

Investment A:	Interest rate 10 percent, tax rate 40 percent of interest income
Investment B:	Interest rate 8 percent, tax rate 30 percent of interest income
Investment C:	Interest rate 6.5 percent, tax rate 0 percent

Which investment provides the highest after-tax return? Show your work.

ANSWER: After-tax return =  $(1 - t) \times \text{interest rate}$ .

A:  $(1 - 0.40) \times 10\% = 6.0\%$

B:  $(1 - 0.30) \times 8\% = 5.6\%$

C:  $(1 - 0) \times 6.5\% = 6.5\%$

Investment C has the highest after-tax return.

POINTS: 1

TOPICS: Application to Everyday Life: What Do Investors Care About?

108. Consider the following four debt securities, which are identical in every characteristic except as noted:

W: A corporate bond rated AAA

X: A corporate bond rate BBB

Y: A corporate bond rated AAA with a shorter time to maturity than bonds W and X

Z: A corporate bond rated AAA with the same time to maturity as bond Y that trades in a more liquid market than bonds W, X, or Y

List the bonds in the most likely order of the interest rates (yields to maturity) of the bonds from highest to lowest. Explain your work.

*ANSWER:* X, W, Y, Z

Reasoning: W is rated AAA, X is BBB, so X must have a higher interest rate than W to compensate for the additional default risk; so far: X, W. Y is rated AAA and has a shorter time to maturity than W and X, so it will have a lower interest rate than W because of shorter time to maturity and will have a lower interest rate than X because of less default risk and a shorter time to maturity; so far: X, W, Y. Z trades in a more liquid market than W, X, or Y and has equal or less risk than them, and an equal or less time to maturity, all of which give it the lowest interest rate. Final order: X, W, Y, Z.

*POINTS:* 1

*TOPICS:* Application to Everyday Life: What Do Investors Care About?

109. Suppose you are an investor with a choice between three securities that are identical in every way except in terms of their rates of return and risk.

Investment A: Total return = 10 percent with probability 50 percent  
Total return = 20 percent with probability 50 percent

Investment B: Total return = 12 percent with probability 40 percent  
Total return = 18 percent with probability 60 percent

Investment C: Total return = 5 percent with probability 60 percent  
Total return = 25 percent with probability 40 percent

- a. Which investment provides the highest expected return? Show your work by calculating the expected return of all three investments.
- b. Calculate the standard deviation of all three investments.
- c. What type of investor might prefer investment A? Who might prefer investment B?

*ANSWER:* a. A:  $(0.5 \times 10\%) + (0.5 \times 20\%) = 15.0\%$   
B:  $(0.4 \times 12\%) + (0.6 \times 18\%) = 15.6\%$   
C:  $(0.6 \times 5\%) + (0.4 \times 25\%) = 13.0\%$

Investment B has the higher expected return.

- b. A:  $\{[0.5 \times (0.1 - 0.15)^2] + [0.5 \times (0.2 - 0.15)^2]\}^{1/2} = 5.0\%$   
B:  $\{[0.4 \times (0.12 - 0.156)^2] + [0.6 \times (0.18 - 0.156)^2]\}^{1/2} = 2.9\%$   
C:  $\{[0.6 \times (0.05 - 0.13)^2] + [0.4 \times (0.25 - 0.13)^2]\}^{1/2} = 9.8\%$

No risk-averse investor would ever prefer investment A because it has a lower expected

- c. return and higher risk than investment B. Similarly, no risk-averse investor would ever prefer investment C. Given these choices, all risk-averse investors would choose investment B.

*POINTS:* 1

*TOPICS:* Application to Everyday Life: What Do Investors Care About?

110. Suppose you are an investor with a choice between three securities that are identical in every way except in terms of their rates of return and risk.

Investment A: Total return = 10 percent with probability 50 percent  
Total return = 20 percent with probability 50 percent

Investment B: Total return = 12 percent with probability 40 percent  
Total return = 14 percent with probability 60 percent

Investment C: Total return = 10 percent with probability 60 percent  
Total return = 30 percent with probability 40 percent

- a. Which investment provides the highest expected return? Show your work by calculating the expected return of all three investments.
- b. Calculate the standard deviation of all three investments.
- c. What type of investor might prefer investment A? Who might prefer investment B?

*ANSWER:* a. A:  $(0.5 \times 10\%) + (0.5 \times 20\%) = 15.0\%$   
B:  $(0.4 \times 12\%) + (0.6 \times 14\%) = 13.2\%$   
C:  $(0.6 \times 10\%) + (0.4 \times 30\%) = 18.0\%$

Investment C has the highest expected return.

- b. A:  $\{[0.5 \times (0.1 - 0.15)^2] + [0.5 \times (0.2 - 0.15)^2]\}^{1/2} = 5.0\%$   
B:  $\{[0.4 \times (0.12 - 0.132)^2] + [0.6 \times (0.14 - 0.132)^2]\}^{1/2} = 1.0\%$   
C:  $\{[0.6 \times (0.10 - 0.18)^2] + [0.4 \times (0.30 - 0.18)^2]\}^{1/2} = 9.8\%$

A fairly risk-averse investor would prefer investment B because it has the lowest risk, but also the lowest expected return. A moderately risk-averse investor would prefer investment

- c. A, because its risk and return are in the middle of A and C. An investor who is not very risk averse might prefer investment C, which has the highest expected return but also the highest risk.

*POINTS:* 1

*TOPICS:* Application to Everyday Life: What Do Investors Care About?



111. Suppose that the price of a stock is \$50 at the beginning of a year and \$53 at the end of the year, and it pays a dividend of \$2 during the year.

- a. What is the stock's current yield?
- b. What is the stock's capital-gains yield?
- c. What is the stock's return?

*ANSWER:* a. Current yield =  $\$2/\$50 = .04 = 4\%$ .

b. Capital-gains yield =  $(\$53 - \$50)/\$50 = .06 = 6\%$

c. Return = current yield + capital-gains yield =  $4\% + 6\% = 10\%$

*POINTS:* 1

*TOPICS:* Application to Everyday Life: What Do Investors Care About?

112. A stock's price is \$100 at the beginning of a year. There is a 25 percent chance that the price will be \$90 at the end of the year, and a 75 percent chance that the price will be \$130 at the end of the year. The stock will pay a dividend of \$10 during the year.

- a. Calculate the stock's expected return.
- b. Calculate the standard deviation of the stock's return.

*ANSWER:* a. Expected return =  $[0.25 \times (\$90 + \$10 - \$100)/\$100] + [0.75 \times (\$130 + \$10 - \$100)/\$100]$   
 $= (0.25 \times 0) + (0.75 \times 0.4) = 0.3 = 30\%$

b. Standard deviation =  $\{[0.25 \times (0 - 0.3)^2] + [0.75 \times (0.4 - 0.3)^2]\}^{1/2} = 17.3\%$

*POINTS:* 1

*TOPICS:* Application to Everyday Life: What Do Investors Care About?

113. The probabilities of different returns on a stock over the year are:

Probability	Return
10%	-5%
15%	0%
20%	5%
30%	10%
25%	20%

- a. Calculate the stock's expected return.
- b. Calculate the stock's standard deviation.

*ANSWER:* a. Expected return =  $(0.10 \times -5\%) + (0.15 \times 0\%) + (0.20 \times 5\%) + (0.30 \times 10\%) + (0.25 \times 20\%) = 8.5\%$

b. Standard deviation =  $\{[0.10 \times (-0.05 - 0.085)^2] + [0.15 \times (0.00 - 0.085)^2] + [0.20 \times (0.05 - 0.085)^2] + [0.30 \times (0.10 - 0.085)^2] + [0.25 \times (0.20 - 0.085)^2]\} = 8.1\%$

*POINTS:* 1

*TOPICS:* Application to Everyday Life: What Do Investors Care About?

