Chapter 10 Test Bank - Static

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1. On a particular risky investment, investors require an excess return of 7 percent in addition to the risk-free rate of 4 percent. What is this excess return called?

A. Inflation premium

B. Required return

C. Real return

D. Average return

E. Risk premium

2. The variance is the average squared difference between which of the following?

A. Actual return and average return

B. Actual return and (average return/N - 1)

C. Actual return and the real return

D. Average return and the standard deviation

E. Actual return and the risk-free rate

3. Which one of the following is the positive square root of the variance?

A. Standard deviation

B. Mean

C. Risk-free rate

D. Average return

E. Real return

4. Which one of the following is defined as a bell-shaped frequency distribution that is defined by its average and its standard deviation?

A. Arithmetic average return

B. Variance

C. Standard deviation

D. Probability curve

E. Normal distribution

5. Which one of the following is defined as the average compound return earned per year over a multiyear period?

A. Geometric average return

B. Variance of returns

C. Standard deviation of returns

D. Arithmetic average return

E. Normal distribution of returns

6. Which one of the following best describes an arithmetic average return?

A. Total return divided by N - 1, where N equals the number of individual returns

B. Average compound return earned per year over a multiyear period

C. Total compound return divided by the number of individual returns

D. Return earned in an average year over a multiyear period

E. Positive square root of the average compound return

7. An efficient capital market is best defined as a market in which security prices reflect which one of the following?

A. Current inflation

B. A risk premium

C. All available information

D. The historical arithmetic rate of return

E. The historical geometric rate of return

8. Which one of the following is the hypothesis that securities markets are efficient?

A. Geometric market hypothesis

B. Standard deviation hypothesis

C. Efficient markets hypothesis

D. Capital market hypothesis

E. Financial markets hypothesis

9. Which one of the following combinations will always result in an increased dividend yield?

A. Increase in the stock price combined with a lower dividend amount

B. Increase in the stock price combined with a higher dividend amount

C. Decrease in the stock price combined with a lower dividend amount

D. Decrease in the stock price combined with a higher dividend amount

E. Increase in the stock price combined with a constant dividend amount

10. Which one of the following could cause the total return on an investment to be a negative rate?

A. Constant annual dividend amount

B. Increase in the annual dividend amount

C. Stock price that remains constant over the investment period

D. Stock price that declines over the investment period

E. Stock price that increases over the investment period

11. Which one of the following statements is correct concerning both the dollar return and the percentage return on a stock investment?

A. Without the size of an investment, the dollar return has less value than the percentage return.

B. The dollar return is more accurate than the percentage return because the dollar return includes dividend income while the percentage return does not.

C. The dollar return considers the time value of money while the percentage return does not.

D. Dollar returns are based on capital gains while percentage returns are based on the total rate of return.

E. Dollar returns must either be zero or a positive value while percentage returns can be negative, zero, or positive.

12. Which answer creates a false sentence? Percentage returns:

A. relay information about a security more easily than dollar returns do.

B. are not affected by the amount of the investment.

C. can be easily separated into dividend yields and capital gain yields.

D. are easy to understand.

E. are difficult to compute.

13. One year ago, you purchased 600 shares of a stock. This morning you sold those shares and realized a total return of 3.1 percent. Given this information, you know for sure the:

A. stock price increased by 3.1 percent over the last year.

B. stock increased in value over the past year.

C. stock paid a dividend.

D. dividend yield is greater than zero.

E. sum of the dividend yield and the capital gains yield is 3.1 percent.

14. The historical returns on large-company stocks, as reported by Ibbotson and Sinquefield and reported in your textbook, are based on the:

A. largest 20 percent of the stocks traded on the NYSE.

B. stock returns for the largest 10 percent of the publicly traded firms in the U.S.

C. returns of the 100 largest firms in the U.S.

D. returns of all the stocks listed on the NYSE.

E. stocks of the 500 companies included in the S&amp;P 500 index.

15. Over the period of 1926-2014, which one of the following investment classes had the highest volatility of returns?

A. Large-company stocks

B. U.S. Treasury bills

C. Small-company stocks

D. Long-term corporate bonds

E. Long-term government bonds

16. Over the period of 1926-2014:

A. long-term government bonds underperformed long-term corporate bonds.

B. small-company stocks underperformed large-company stocks.

C. inflation exceeded the rate of return on U.S. Treasury bills.

D. U.S. Treasury bills outperformed long-term government bonds.

E. large-company stocks outperformed all other investment categories.

17. Over the period of 1926-2014:

A. the risk premium on large-company stocks was greater than the risk premium on small- company stocks.

B. U.S. Treasury bills had a risk premium that was just slightly over 2 percent.

C. the risk premium on long-term government bonds was zero percent.

D. the risk premium on stocks exceeded the risk premium on bonds.

E. U. S. Treasury bills had a negative risk premium.

18. The rate of return on which one of the following has a risk premium of 0%?

A. Long-term government bonds

B. Long-term corporate bonds

C. Intermediate-term government bonds

D. U.S. Treasury bills

E. Large-company stocks

19. Which one of the following had a zero standard deviation of returns for the period of 1926-2014?

A. All of the listed security types had a standard deviation of returns in excess of zero percent.

B. U.S. Treasury bills

C. Long-term corporate bonds

D. Large-company stocks

E. Long-term government bonds

20. Which one of the following categories has the widest frequency distribution of returns for the period 1926-2014?

A. Small-company stocks

B. U.S. Treasury bills

C. Long-term government bonds

D. Inflation

E. Large-company stock

21. The period 1926-2014 illustrates that U.S. Treasury bills:

A. outperform inflation by approximately 1 percent every year.

B. have a zero standard deviation.

C. can either outperform or underperform inflation on an annual basis.

D. produce a rate of return roughly equivalent to the rate of return on long-term government bonds.

E. routinely have negative annual returns.

22. The historical record for the period 1926-2014shows that the annual nominal rate of return on:

A. risk-free securities has averaged around 5 percent.

B. the Consumer Price Index has been positive every year.

C. U.S. Treasury bills have had a positive rate of return for every year in the period.

D. U.S. Treasury bills is constant.

E. large company stocks has averaged around 9 percent.

23. What was the average annual risk premium on small-company stocks for the period 1926-2014?

A. 12.3 percent

B. 11.2 percent

C. 12.9 percent

D. 13.2 percent

E. 13.5 percent

24. Based on the period 1926-2014, what rate of return should you expect to earn over the long-term if you are unwilling to bear risk?

A. Between 0 and 1 percent

B. Between 1 and 2 percent

C. Between 2 and 3 percent

D. Between 3 and 4 percent

E. Between 4 and 5 percent

25. Which one of the following statements is true regarding the period 1926-2014?

A. The returns on small-company stocks were less volatile than the returns on large-company stocks.

B. The risk-free rate of return remained constant over the time period.

C. U.S. Treasury bills had a positive average real rate of return.

D. Bonds had an average rate of return that exceeded the average return on stocks.

E. The inflation rate was just as volatile as the return on long-term bonds.

26. For the period 1926-2014, which one of the following had the smallest risk premium?

A. Large-company stocks

B. Small-company stocks

C. Long-term corporate bonds

D. U.S. Treasury bills

E. Long-term government bonds

27. Which one of the following statements is correct?

A. The risk-free rate of return has a risk premium of 1.0.

B. The reward for bearing risk is called the standard deviation.

C. Risks and expected return are inversely related.

D. The higher the expected rate of return, the wider the distribution of returns.

E. Risk premiums are inversely related to the standard deviation of returns.

28. Which one of the following is the most apt to have the largest risk premium in the future based on the historical record for 1926-2014?

A. U.S. Treasury bills

B. Large-company stocks

C. Long-term government debt

D. Small-company stocks

E. Long-term corporate debt

29. The average risk premium on long-term government bonds for the period 1926-2014 was equal to:

A. zero.

B. 1 percent.

C. the rate of return on the bonds plus the corporate bond rate.

D. the rate of return on the bonds minus the T-bill rate.

E. the rate of return on the bonds minus the inflation rate.

30. The lower the standard deviation of returns on a security, the \_\_\_\_\_ the expected rate of return and the \_\_\_\_\_ the risk.

A. lower; lower

B. lower; higher

C. higher; lower

D. higher; higher

31. The standard deviation measures the \_\_\_\_\_ of a security's returns over time.

A. average value

B. frequency

C. volatility

D. mean

E. arithmetic average

32. Which one of the following has the narrowest distribution of returns for the period 1926-2014?

A. Long-term corporate bonds

B. Long-term government bonds

C. Intermediate-term government bonds

D. Large-company stocks

E. Small-company stocks

33. What is the probability associated with a return that lies in the upper tail when the mean plus two standard deviations is graphed?

A. .05 percent

B. .5 percent

C. 1.0 percent

D. 2.5 percent

E. 5.0 percent

34. When, if ever, will the geometric average return exceed the arithmetic average return for a given set of returns?

A. When the set of returns includes only risk-free rates

B. When the set of returns has a wide frequency distribution

C. When the set of returns has a very narrow frequency distribution

D. When all of the rates of return in the set of returns are equal to each other

E. Never

35. Assume the securities markets are strong form efficient. Given this assumption, you should expect which one of the following to occur?

A. The risk premium on any security in that market will be zero.

B. The price of any one security in that market will remain constant at its current level.

C. Each security in the market will have an annual rate of return equal to the risk-free rate.

D. The price of each security in that market will frequently fluctuate.

E. The prices of each security will fall to zero because the net present value of the investments will be zero.

36. New Labs just announced that it has received a patent for a product that will eliminate all flu viruses. This news is totally unexpected and viewed as a major medical advancement. Which one of the following reactions to this announcement indicates the market for New Labs stock is efficient?

A. The price of New Labs stock remains unchanged.

B. The price of New Labs stock increases rapidly and then settles back to its pre-announcement level.

C. The price of New Labs stock increases rapidly to a higher price and then remains at that price.

D. All stocks quickly increase in value and then all but New Labs stock fall back to their original values.

E. The value of all stocks suddenly increase and then level off at their higher values.

37. If the financial markets are efficient then:

A. stock prices should remain constant.

B. stock prices should increase or decrease slowly as new events are analyzed and the information is absorbed by the markets.

C. an increase in the value of one security should be offset by a decrease in the value of another security.

D. stock prices will change only when an event actually occurs, not at the time the event is anticipated.

E. stock prices should respond only to unexpected news and events.

38. According to the efficient markets hypothesis, professional investors will earn:

A. excess profits over the long-term.

B. excess profits, but only on short-term investments.

C. a dollar return equal to the value paid for an investment.

D. a return that cannot be accurately predicted because investments are subject to the random movements of the markets.

E. a return that "beats the market."

39. Semistrong form market efficiency states that the value of a security is based on:

A. all public and private information.

B. historical information only.

C. all publicly available information.

D. all publicly available information plus any data that can be gathered from insider trading.

E. random information with no clear distinction as to the source of that information.

40. Dan is a chemist for ABC, a major drug manufacturer. Dan cannot earn excess profits on ABC stock based on the knowledge he has related to his experiments if the financial markets are:

A. weak form efficient.

B. strong form efficient.

C. semistrong form efficient.

D. efficient at any level.

E. aware that the trader is an insider.

41. If the financial markets are semistrong form efficient, then:

A. only the most talented analysts can determine the true value of a security.

B. only individuals with private information have a marketplace advantage.

C. technical analysis provides the best tool to use to gain a marketplace advantage.

D. no one individual has an advantage in the marketplace.

E. every security offers the same rate of return.

42. One year ago, you purchased 600 shares of stock for $14 a share. The stock pays $.41 a share in dividends each year. Today, you sold your shares for $15.30 a share. What is your total dollar return on this investment?

A. $1,222

B. $7,43

C. $815

D. $780

E. $1,026

43. One year ago, you purchased a 6 percent coupon bond with a face value of $1,000 when it was selling for 98.6 percent of par. Today, you sold this bond for 101.2 percent of par. What is your total dollar return on this investment?

A. $86

B. $60

C. $64

D. $74

E. $82

44. Cox Footwear pays a constant annual dividend. Last year, the dividend yield was 3.2 percent when the stock was selling for $35a share. What is the current price of the stock if the current dividend yield is 2.9 percent?

A. $18.92

B. $38.62

C. $25.20

D. $26.87

E. $27.40

45. The Bermuda Triangle Store pays a constant dividend. Last year, the dividend yield was 4.0 percent when the stock was selling for $16 a share. What must the stock price be today if the market currently requires a 4.3 percent dividend yield on this stock?

A. $14.88

B. $12.30

C. $15.59

D. $19.22

E. $12.48

46. The stock of Southern United is priced at $52 a share and has a dividend yield of 3.6 percent. The firm pays constant annual dividends. What is the amount of the next dividend per share?

A. $1.826

B. $1.729

C. $1.872

D. $1.878

E. $1.724

47. One year ago, you bought a stock for $29.15 a share. You received a dividend of $1.04 per share last month and sold the stock today for $28.80 a share. What is the capital gains yield on this investment?

A. 2.37 percent

B. 1.76 percent

C. -1.20 percent

D. -1.62 percent

E. .53 percent

48. Hercules Movers pays a constant annual dividend of $1.48 per share on its stock. Last year at this time, the market rate of return on this stock was 15.7 percent. Today, the market rate has fallen to 13.3 percent. What would your capital gains yield have been if you had purchased this stock one year ago and then sold the stock today?

A. -15.29 percent

B. -22.03 percent

C. 8.16 percent

D. 16.47 percent

E. 18.05 percent

49. One year ago, Debra purchased 5,400 shares of KNF stock for $218,056. Today, she sold those shares for $19.49 a share. What is the capital gains yield on this investment if the dividend yield is 1.7 percent?

A. -28.01 percent

B. -48.82 percent

C. 3.07 percent

D. -51.73 percent

E. 4.53 percent

50. One year ago, Peyton purchased 7,200 shares of Broncos stock for $329,640. Today, he sold those shares for $58.92 a share. What is the total return on this investment if the dividend yield is 2.2 percent?

A. 33.98 percent

B. 30.89 percent

C. 24.50 percent

D. 20.10 percent

E. 28.40 percent

51. One year ago, LaTresa purchased 300 shares of Outland Co. stock for $7,092. The stock does not pay any regular dividends but it did pay a special dividend of $.43 a share last week. This morning, she sold her shares for $24.05 a share. What was the total percentage return on this investment?

A. 7.67 percent

B. 4.83 percent

C. 2.50 percent

D. 3.55 percent

E. 8.24 percent

52. Assume that last year, Isaac earned 13.6 percent on his investments while U.S. Treasury bills yielded 2.7 percent, and the inflation rate was 2.2 percent. What real rate of return did he earn on his investments last year?

A. 11.63 percent

B. 11.15 percent

C. 13.56 percent

D. 12.24 percent

E. 10.39 percent

53. Assume you earned 17.1 percent on your investments for a time period when the risk-free rate was 4.2 percent and the inflation rate was 4.6 percent. What was your real rate of return for the period?

A. -1.00 percent

B. 10.06 percent

C. 11.95 percent

D. -1.67 percent

E. 12.08 percent

54. Sarah earned a 3.3 percent real rate of return on her investments for the past year. During that time, the risk-free rate was 3.6 percent and the inflation rate was 3.1 percent. What was her nominal rate of return?

A. 5.30 percent

B. 6.06 percent

C. 6.50 percent

D. 6.67 percent

E. 6.91 percent

55. Assume that large-company stocks had an average rate of return of 12.1 percent over the past 88 years while T-bills returned an average of 3.5 percent and inflation averaged 3.0 percent. Given this, the real return on large-company stocks was:

A. 6.67 percent

B. 5.60 percent

C. 8.83 percent

D. 7.94 percent

E. 9.10 percent

56. Assume that over the past 88 years, U.S. Treasury bills had an average return of 3.5 percent as compared to 6.1 percent on long-term government bonds. During this same time period, assume inflation averaged 3.0 percent. What was the average nominal risk premium on the long-term government bonds?

A. 3.1 percent

B. .1 percent

C. 2.9 percent

D. 1.8 percent

E. 2.6 percent

57. Based on the past 88 years, the inflation rate averaged 3.0 percent and the U.S. Treasury bill yield was 3.5 percent, and the historical risk premium on small-company stocks was 13.2 percent. If these averages hold, what nominal rate of return should you expect to earn on small-company stocks over the next several years?

A. 15.5 percent

B. 16.7 percent

C. 19.7 percent

D. 13.5 percent

E. 13.7 percent

58. Assume large-company stocks returned 12.1 percent on average over the past 88 years. The risk premium on these stocks was 8.6 percent and the inflation rate was 3.0 percent. What was the average nominal risk-free rate of return for those 88 years?

A. 3.5 percent

B. 9.1 percent

C. 4.6 percent

D. .5 percent

E. 6.5 percent

59. Over the past five years, a stock returned 6.2 percent, -10.4 percent, -2.2 percent, 16.9 percent, and 5.8 percent, respectively. What is the variance of these returns?

A. .008351

B. .076290

C. .010439

D. .012547

E. .091306

60. Windsor stock has produced returns of 13.8 percent, 11.7 percent, 2.3 percent, -21.4 percent, and 8.9 percent over the past five years, respectively. What is the variance of these returns?

A. .020574

B. .031947

C. .035682

D. .019515

E. .020016

61. Five years ago, you purchased 800 shares of stock. The annual returns have been 6.4 percent, -28.7 percent, 2.1 percent, 14.4 percent, and 32.6 percent, respectively. What is the variance of these returns?

A. .049888

B. .030021

C. .030068

D. .050133

E. .050284

62. Over the past six years, a stock had annual returns of 18 percent, -6 percent, 2 percent, 27 percent, -11 percent, and 13 percent, respectively. What is the standard deviation of these returns?

A. 15.27 percent

B. 14.66 percent

C. 13.59 percent

D. 15.08 percent

E. 14.38 percent

63. A stock has produced returns of 19 percent, 6 percent, -21 percent, -2 percent, and 14 percent for the past five years, respectively. What is the standard deviation of these returns?

A. 14.65 percent

B. 8.87 percent

C. 9.23 percent

D. 15.71 percent

E. 16.64 percent

64. A stock has yielded returns of 9 percent, 16 percent, 18 percent, and -6 percent over the past four years, respectively. What is the standard deviation of these returns?

A. 15.52 percent

B. 15.86 percent

C. 11.05 percent

D. 9.38 percent

E. 10.87 percent

65. Kelly decided to accept the risk and purchased a high growth stock. Her returns for the past five years are 32 percent, 24 percent, -48 percent, 12 percent, and -9 percent, respectively. What is the standard deviation of these returns?

A. 23.20 percent

B. 35.46 percent

C. 17.88 percent

D. 32.03 percent

E. 28.39 percent

66. Over the past four years, the annual percentage returns on large-company stocks were 15, 7, 4, and 18 percent. For the same time period, U.S. Treasury bills produced the returns of 6, 3, 2, and 4 percent. Inflation averaged 2.8 percent over the four-year period. The average real rate of return on large-company stocks was \_\_\_ percent as compared to \_\_\_\_\_ percent for Treasury bills.

A. 6.47; .92

B. 6.47; 1.08

C. 7.98; .92

D. 7.98; 1.08

E. 7.98; 1.22

67. Over the past four years, a stock produced returns of 6 percent, 8 percent, 19 percent, and 2 percent, respectively. Based on these four years, what range of returns would you expect to see 95 percent of the time?

A. -.58 percent to 31.33 percent

B. -5.80 percent to 27.02 percent

C. -.23 percent to 24.39 percent

D. -.02 percent to 24.39 percent

E. -5.80 percent to 23.30 percent

68. Over the past four years, a stock produced returns of 13 percent, -9 percent, 8 percent, and 14 percent, respectively. Based on these four years, what range of returns would you expect to see 99 percent of the time?

A. -25.48 percent to 38.48 percent

B. -22.39 percent to 26.41 percent

C. -32.39 percent to 48.56 percent

D. -18.46 percent to 22.41 percent

E. -18.46 percent to 24.39 percent

69. A security produced returns of 11 percent, 7 percent, 9 percent, 13 percent, and -14 percent over the past five years, respectively. Based on these five years, what is the probability that this stock will earn more than 16.16 percent in any one given year?

A. .5 percent

B. 1.0 percent

C. 2.5 percent

D. 5.0 percent

E. 16.0 percent

70. A security produced returns of 12 percent, -11 percent, -2 percent, 15 percent, and 9 percent over the past five years, respectively. Based on these five years, what is the probability that an investor in this stock will lose more than 17.06 percent in any one given year?

A. .50 percent

B. 1.00 percent

C. 1.25 percent

D. 2.50 percent

E. 5.00 percent

71. A bond has an average return of 11.2 percent and a standard deviation of 14.6 percent. What range of returns would you expect to see 68 percent of the time on this security?

A. -18 percent to 43.9 percent

B. -18 percent to 40.1 percent

C. -3.4 percent to 27.8 percent

D. -3.4 percent to 25.8 percent

E. -2.5 percent to 13.9 percent

72. You own a stock with an average return of 14.6 percent and a standard deviation of 21.2 percent. In any one given year, you have a 95 percent chance that you will not lose more than \_\_\_\_\_ percent nor earn more than \_\_\_\_ percent on this stock.

A. -25.2; 48.2

B. -27.8; 57.0

C. -42.4;57.0

D. -43.6; 49.4

E. -38.4; 42.6

73. Home Grown Tomatoes stock returned 11.6 percent, 3.2 percent, 8.1 percent, 14.2, and 9.8 percent over the past five years, respectively. What is the arithmetic average return for this period?

A. 9.38 percent

B. 10.62 percent

C. 8.10 percent

D. 11.93 percent

E. 10.10 percent

74. You purchased 400 shares of KNO stock five years ago and have earned annual returns of 8.3 percent, 9.6 percent, 18.25 percent, -7.7 percent, and 1.8 percent, respectively. What is your arithmetic average return?

A. 5.47 percent

B. 6.05 percent

C. 6.23 percent

D. 6.47 percent

E. 8.01 percent

75. A stock produced returns of 11 percent, 19 percent, and 2 percent over three of the past four years, respectively. The arithmetic average for the past four years is 9 percent. What is the standard deviation of the stock's returns for the four-year period?

A. 5.46 percent

B. 8.54 percent

C. 9.09 percent

D. 6.83 percent

E. 7.70 percent

76. A stock produced returns of 14 percent, 17percent, and -1 percent over three of the past four years, respectively. The arithmetic average for the past four years is 6 percent. What is the standard deviation of the stock's returns for the four-year period?

A. 11.63 percent

B. 15.94 percent

C. 9.70 percent

D. 6.25 percent

E. 11.23 percent

77. Your portfolio has provided you with returns of 11.4 percent, 6.2 percent, -.7 percent, and 14.6 percent over the past four years, respectively. What is the geometric average return for this period?

A. 7.25 percent

B. 7.72 percent

C. 7.57 percent

D. 7.63 percent

E. 7.55 percent

78. The common stock of Mountain Farms has yielded 14.2 percent, 11.7 percent, 3.4 percent, -2.8 percent, and 15.8 percent over the past five years, respectively. What is the geometric average return?

A. 7.91 percent

B. 8.03 percent

C. 8.22 percent

D. 8.27 percent

E. 7.64 percent

79. A stock has produced returns of 11.9 percent, 5.6 percent, 16.4 percent, and -4.2 percent over the past four years, respectively. What is the geometric average return?

A. 7.14 percent

B. 7.47 percent

C. 6.83 percent

D. 6.91 percent

E. 7.02 percent

80. Over the last four years, the common stock of Plymouth Shippers has had an arithmetic average return of 10.4 percent. Three of those four years produced returns of 16.1 percent, 15.6 percent, and 9.4 percent, respectively. What is the geometric average return for this four-year period?

A. 9.72 percent

B. 10.41 percent

C. 8.93 percent

D. 10.22 percent

E. 9.38 percent

81. Over the last four years, a stock has had an arithmetic average return of 12.8 percent. Three of those four years produced returns of 22.6 percent, 15.2 percent, and -24.1 percent, respectively. What is the geometric average return for this four-year period?

A. 10.18 percent

B. 8.39 percent

C. 11.67 percent

D. 12.40 percent

E. 12.67 percent

82. Suppose a stock had an initial price of $36 per share, paid a dividend of $.42 per share during the year, and had an ending share price of $34. What was the capital gains yield?

A. 6.72 percent

B. 7.12 percent

C. 3.78 percent

D. -5.56 percent

E. -4.94 percent

83. Suppose you bought a$1,000 face value bond with a 5 percent coupon one year ago for $1,020. The bond sells today for $986. If the inflation rate last year was 2.3 percent, what was your total real rate of return on this investment?

A. .02 percent

B. -.71 percent

C. .31 percent

D. .89 percent

E. -.48 percent

84. A stock has returns for five years of 14 percent, -16 percent, 12 percent, 23 percent, and 4 percent, respectively. The stock has an average return of \_\_\_\_\_\_ percent and a standard deviation of \_\_\_\_\_ percent.

A. 7.40; 13.54

B. 7.04; 14.63

C. 7.40; 14.72

D. 8.60; 14.63

E. 8.60; 16.36

85. You've observed the following returns on Blast It Corporation's stock over the past five years: 19 percent, -23 percent, 31 percent, 18 percent, and -7 percent, respectively. What was the variance of the returns over this period?

A. .03598

B. .04838

C. .03692

D. .04714

E. .03781

86. You purchased a zero coupon bond one year ago for $346.72. The market interest rate is now 5.75 percent. If the bond had 15 years to maturity when you originally purchased it, what is your total return to date if the face value of the bond is $1,000?

A. 30.42 percent

B. 22.18 percent

C. 16.34 percent

D. 12.65 percent

E. 24.90 percent

87. You bought a share of 7.5 percent preferred stock for $91.60 last year. The market price for your stock is now $89.10. What is your total return to date on this investment?

A. 5.51 percent

B. 4.73 percent

C. 5.86 percent

D. 6.10 percent

E. 5.46 percent

88. Assume that long-term corporate bonds had an average return of 6.4 percent and a standard deviation of 2.9 percent for a 50-year period. What range of returns would you expect to see on these bonds 68 percent of the time?

A. 3.5 percent to 9.3 percent

B. 3.5 percent to 10.9 percent

C. 2.9 percent to 6.4 percent

D. .6 percent to 11.9 percent

E. .6 percent to 12.2 percent

89. Assume that large-company stocks had an average return of 12.1 percent and a standard deviation of 19.6 percent for a 40-year period. What range of returns would you expect to see on these stocks 95 percent of the time?

A. -30.3 percent to 53.2 percent

B. -30.3 percent to 73.9 percent

C. -30.3 percent to 64.1 percent

D. -27.1 percent to 53.2 percent

E. -27.1 percent to 51.3 percent

90. Alpha Industries stock had returns of 17 percent, -11 percent, 9 percent, and 2 percent for four of the last five years, respectively. The average return of the stock over this period was 8.7 percent. What is the standard deviation of the stock's returns?

A. 14.67 percent

B. 12.90 percent

C. 15.14 percent

D. 15.47 percent

E. 14.31 percent

91. A stock has had returns of 14 percent, -18 percent, 2 percent, 33 percent, 27 percent, and 6 percent over the last six years, respectively. What is the geometric return for this stock?

A. 10.82 percent

B. 9.32 percent

C. 10.31 percent

D. 9.47 percent

E. 8.88 percent

Chapter 10 Test Bank - Static Key

1. On a particular risky investment, investors require an excess return of 7 percent in addition to the risk-free rate of 4 percent. What is this excess return called?

A. Inflation premium

B. Required return

C. Real return

D. Average return

**E.** Risk premium

*Accessibility: Keyboard Navigation*

*Blooms: Remember*

*Difficulty: 1 Basic*

*Learning Objective: 10-01 Calculate the return on an investment.*

*Section: 10.3 Average Returns: The First Lesson*

*Topic: Risk premium*

2. The variance is the average squared difference between which of the following?

**A.** Actual return and average return

B. Actual return and (average return/N - 1)

C. Actual return and the real return

D. Average return and the standard deviation

E. Actual return and the risk-free rate

*Accessibility: Keyboard Navigation*

*Blooms: Remember*

*Difficulty: 1 Basic*

*Learning Objective: 10-03 Explain the historical risks on various important types of investments.*

*Section: 10.4 The Variability Of Returns: The Second Lesson*

*Topic: Standard deviation and variance*

3. Which one of the following is the positive square root of the variance?

**A.** Standard deviation

B. Mean

C. Risk-free rate

D. Average return

E. Real return

*Accessibility: Keyboard Navigation*

*Blooms: Remember*

*Difficulty: 1 Basic*

*Learning Objective: 10-03 Explain the historical risks on various important types of investments.*

*Section: 10.4 The Variability Of Returns: The Second Lesson*

*Topic: Standard deviation and variance*

4. Which one of the following is defined as a bell-shaped frequency distribution that is defined by its average and its standard deviation?

A. Arithmetic average return

B. Variance

C. Standard deviation

D. Probability curve

**E.** Normal distribution

*Accessibility: Keyboard Navigation*

*Blooms: Remember*

*Difficulty: 1 Basic*

*Learning Objective: 10-03 Explain the historical risks on various important types of investments.*

*Section: 10.4 The Variability Of Returns: The Second Lesson*

*Topic: Normal probability distribution*

5. Which one of the following is defined as the average compound return earned per year over a multiyear period?

**A.** Geometric average return

B. Variance of returns

C. Standard deviation of returns

D. Arithmetic average return

E. Normal distribution of returns

*Accessibility: Keyboard Navigation*

*Blooms: Remember*

*Difficulty: 1 Basic*

*Learning Objective: 10-01 Calculate the return on an investment.*

*Section: 10.5 More On Average Returns*

*Topic: Arithmetic, geometric, and dollar-weighted returns*

6. Which one of the following best describes an arithmetic average return?

A. Total return divided by N - 1, where N equals the number of individual returns

B. Average compound return earned per year over a multiyear period

C. Total compound return divided by the number of individual returns

**D.** Return earned in an average year over a multiyear period

E. Positive square root of the average compound return

*Accessibility: Keyboard Navigation*

*Blooms: Remember*

*Difficulty: 1 Basic*

*Learning Objective: 10-01 Calculate the return on an investment.*

*Section: 10.5 More On Average Returns*

*Topic: Arithmetic, geometric, and dollar-weighted returns*

7. An efficient capital market is best defined as a market in which security prices reflect which one of the following?

A. Current inflation

B. A risk premium

**C.** All available information

D. The historical arithmetic rate of return

E. The historical geometric rate of return

*Accessibility: Keyboard Navigation*

*Blooms: Remember*

*Difficulty: 1 Basic*

*Learning Objective: 10-04 Assess the implications of market efficiency.*

*Section: 10.6 Capital Market Efficiency*

*Topic: Market efficiency*

8. Which one of the following is the hypothesis that securities markets are efficient?

A. Geometric market hypothesis

B. Standard deviation hypothesis

**C.** Efficient markets hypothesis

D. Capital market hypothesis

E. Financial markets hypothesis

*Accessibility: Keyboard Navigation*

*Blooms: Remember*

*Difficulty: 1 Basic*

*Learning Objective: 10-04 Assess the implications of market efficiency.*

*Section: 10.6 Capital Market Efficiency*

*Topic: Efficient market hypothesis*

9. Which one of the following combinations will always result in an increased dividend yield?

A. Increase in the stock price combined with a lower dividend amount

B. Increase in the stock price combined with a higher dividend amount

C. Decrease in the stock price combined with a lower dividend amount

**D.** Decrease in the stock price combined with a higher dividend amount

E. Increase in the stock price combined with a constant dividend amount

*Accessibility: Keyboard Navigation*

*Blooms: Understand*

*Difficulty: 1 Basic*

*Learning Objective: 10-01 Calculate the return on an investment.*

*Section: 10.1 Returns*

*Topic: Stock dividends and yields*

10. Which one of the following could cause the total return on an investment to be a negative rate?

A. Constant annual dividend amount

B. Increase in the annual dividend amount

C. Stock price that remains constant over the investment period

**D.** Stock price that declines over the investment period

E. Stock price that increases over the investment period

*Accessibility: Keyboard Navigation*

*Blooms: Understand*

*Difficulty: 1 Basic*

*Learning Objective: 10-01 Calculate the return on an investment.*

*Section: 10.1 Returns*

*Topic: Stock returns and yields*

11. Which one of the following statements is correct concerning both the dollar return and the percentage return on a stock investment?

**A.** Without the size of an investment, the dollar return has less value than the percentage return.

B. The dollar return is more accurate than the percentage return because the dollar return includes dividend income while the percentage return does not.

C. The dollar return considers the time value of money while the percentage return does not.

D. Dollar returns are based on capital gains while percentage returns are based on the total rate of return.

E. Dollar returns must either be zero or a positive value while percentage returns can be negative, zero, or positive.

*Accessibility: Keyboard Navigation*

*Blooms: Understand*

*Difficulty: 2 Intermediate*

*Learning Objective: 10-01 Calculate the return on an investment.*

*Section: 10.1 Returns*

*Topic: Dollar and percentage yields and returns*

12. Which answer creates a false sentence? Percentage returns:

A. relay information about a security more easily than dollar returns do.

B. are not affected by the amount of the investment.

C. can be easily separated into dividend yields and capital gain yields.

D. are easy to understand.

**E.** are difficult to compute.

*Accessibility: Keyboard Navigation*

*Blooms: Understand*

*Difficulty: 1 Basic*

*Learning Objective: 10-01 Calculate the return on an investment.*

*Section: 10.1 Returns*

*Topic: Dollar and percentage yields and returns*

13. One year ago, you purchased 600 shares of a stock. This morning you sold those shares and realized a total return of 3.1 percent. Given this information, you know for sure the:

A. stock price increased by 3.1 percent over the last year.

B. stock increased in value over the past year.

C. stock paid a dividend.

D. dividend yield is greater than zero.

**E.** sum of the dividend yield and the capital gains yield is 3.1 percent.

*Accessibility: Keyboard Navigation*

*Blooms: Understand*

*Difficulty: 1 Basic*

*Learning Objective: 10-01 Calculate the return on an investment.*

*Section: 10.1 Returns*

*Topic: Stock returns and yields*

14. The historical returns on large-company stocks, as reported by Ibbotson and Sinquefield and reported in your textbook, are based on the:

A. largest 20 percent of the stocks traded on the NYSE.

B. stock returns for the largest 10 percent of the publicly traded firms in the U.S.

C. returns of the 100 largest firms in the U.S.

D. returns of all the stocks listed on the NYSE.

**E.** stocks of the 500 companies included in the S&amp;P 500 index.

*Accessibility: Keyboard Navigation*

*Blooms: Remember*

*Difficulty: 1 Basic*

*Learning Objective: 10-02 Discuss the historical returns on various important types of investments.*

*Section: 10.2 The Historical Record*

*Topic: Historical performance*

15. Over the period of 1926-2014, which one of the following investment classes had the highest volatility of returns?

A. Large-company stocks

B. U.S. Treasury bills

**C.** Small-company stocks

D. Long-term corporate bonds

E. Long-term government bonds

*Accessibility: Keyboard Navigation*

*Blooms: Remember*

*Difficulty: 1 Basic*

*Learning Objective: 10-03 Explain the historical risks on various important types of investments.*

*Section: 10.4 The Variability Of Returns: The Second Lesson*

*Topic: Historical performance*

16. Over the period of 1926-2014:

**A.** long-term government bonds underperformed long-term corporate bonds.

B. small-company stocks underperformed large-company stocks.

C. inflation exceeded the rate of return on U.S. Treasury bills.

D. U.S. Treasury bills outperformed long-term government bonds.

E. large-company stocks outperformed all other investment categories.

*Accessibility: Keyboard Navigation*

*Blooms: Remember*

*Difficulty: 1 Basic*

*Learning Objective: 10-02 Discuss the historical returns on various important types of investments.*

*Section: 10.3 Average Returns: The First Lesson*

*Topic: Historical performance*

17. Over the period of 1926-2014:

A. the risk premium on large-company stocks was greater than the risk premium on small- company stocks.

B. U.S. Treasury bills had a risk premium that was just slightly over 2 percent.

C. the risk premium on long-term government bonds was zero percent.

**D.** the risk premium on stocks exceeded the risk premium on bonds.

E. U. S. Treasury bills had a negative risk premium.

*Accessibility: Keyboard Navigation*

*Blooms: Remember*

*Difficulty: 1 Basic*

*Learning Objective: 10-02 Discuss the historical returns on various important types of investments.*

*Section: 10.3 Average Returns: The First Lesson*

*Topic: Historical performance*

18. The rate of return on which one of the following has a risk premium of 0%?

A. Long-term government bonds

B. Long-term corporate bonds

C. Intermediate-term government bonds

**D.** U.S. Treasury bills

E. Large-company stocks

*Accessibility: Keyboard Navigation*

*Blooms: Remember*

*Difficulty: 1 Basic*

*Learning Objective: 10-02 Discuss the historical returns on various important types of investments.*

*Section: 10.3 Average Returns: The First Lesson*

*Topic: Risk premium*

19. Which one of the following had a zero standard deviation of returns for the period of 1926-2014?

**A.** All of the listed security types had a standard deviation of returns in excess of zero percent.

B. U.S. Treasury bills

C. Long-term corporate bonds

D. Large-company stocks

E. Long-term government bonds

*Accessibility: Keyboard Navigation*

*Blooms: Remember*

*Difficulty: 1 Basic*

*Learning Objective: 10-03 Explain the historical risks on various important types of investments.*

*Section: 10.4 The Variability Of Returns: The Second Lesson*

*Topic: Historical performance*

20. Which one of the following categories has the widest frequency distribution of returns for the period 1926-2014?

**A.** Small-company stocks

B. U.S. Treasury bills

C. Long-term government bonds

D. Inflation

E. Large-company stock

*Accessibility: Keyboard Navigation*

*Blooms: Remember*

*Difficulty: 1 Basic*

*Learning Objective: 10-03 Explain the historical risks on various important types of investments.*

*Section: 10.4 The Variability Of Returns: The Second Lesson*

*Topic: Historical performance*

21. The period 1926-2014 illustrates that U.S. Treasury bills:

A. outperform inflation by approximately 1 percent every year.

B. have a zero standard deviation.

**C.** can either outperform or underperform inflation on an annual basis.

D. produce a rate of return roughly equivalent to the rate of return on long-term government bonds.

E. routinely have negative annual returns.

*Accessibility: Keyboard Navigation*

*Blooms: Remember*

*Difficulty: 1 Basic*

*Learning Objective: 10-02 Discuss the historical returns on various important types of investments.*

*Section: 10.2 The Historical Record*

*Topic: Historical performance*

22. The historical record for the period 1926-2014shows that the annual nominal rate of return on:

A. risk-free securities has averaged around 5 percent.

B. the Consumer Price Index has been positive every year.

**C.** U.S. Treasury bills have had a positive rate of return for every year in the period.

D. U.S. Treasury bills is constant.

E. large company stocks has averaged around 9 percent.

*Accessibility: Keyboard Navigation*

*Blooms: Remember*

*Difficulty: 2 Intermediate*

*Learning Objective: 10-03 Explain the historical risks on various important types of investments.*

*Section: 10.3 Average Returns: The First Lesson*

*Topic: Historical performance*

23. What was the average annual risk premium on small-company stocks for the period 1926-2014?

A. 12.3 percent

B. 11.2 percent

C. 12.9 percent

**D.** 13.2 percent

E. 13.5 percent

*Accessibility: Keyboard Navigation*

*Blooms: Remember*

*Difficulty: 1 Basic*

*Learning Objective: 10-03 Explain the historical risks on various important types of investments.*

*Section: 10.3 Average Returns: The First Lesson*

*Topic: Historical performance*

24. Based on the period 1926-2014, what rate of return should you expect to earn over the long-term if you are unwilling to bear risk?

A. Between 0 and 1 percent

B. Between 1 and 2 percent

C. Between 2 and 3 percent

**D.** Between 3 and 4 percent

E. Between 4 and 5 percent

*Accessibility: Keyboard Navigation*

*Blooms: Remember*

*Difficulty: 1 Basic*

*Learning Objective: 10-02 Discuss the historical returns on various important types of investments.*

*Section: 10.3 Average Returns: The First Lesson*

*Topic: Historical performance*

25. Which one of the following statements is true regarding the period 1926-2014?

A. The returns on small-company stocks were less volatile than the returns on large-company stocks.

B. The risk-free rate of return remained constant over the time period.

**C.** U.S. Treasury bills had a positive average real rate of return.

D. Bonds had an average rate of return that exceeded the average return on stocks.

E. The inflation rate was just as volatile as the return on long-term bonds.

*Accessibility: Keyboard Navigation*

*Blooms: Understand*

*Difficulty: 1 Basic*

*Learning Objective: 10-02 Discuss the historical returns on various important types of investments.*

*Section: 10.4 The Variability Of Returns: The Second Lesson*

*Topic: Historical performance*

26. For the period 1926-2014, which one of the following had the smallest risk premium?

A. Large-company stocks

B. Small-company stocks

C. Long-term corporate bonds

**D.** U.S. Treasury bills

E. Long-term government bonds

*Accessibility: Keyboard Navigation*

*Blooms: Remember*

*Difficulty: 1 Basic*

*Learning Objective: 10-03 Explain the historical risks on various important types of investments.*

*Section: 10.3 Average Returns: The First Lesson*

*Topic: Historical performance*

27. Which one of the following statements is correct?

A. The risk-free rate of return has a risk premium of 1.0.

B. The reward for bearing risk is called the standard deviation.

C. Risks and expected return are inversely related.

**D.** The higher the expected rate of return, the wider the distribution of returns.

E. Risk premiums are inversely related to the standard deviation of returns.

*Accessibility: Keyboard Navigation*

*Blooms: Understand*

*Difficulty: 2 Intermediate*

*Learning Objective: 10-03 Explain the historical risks on various important types of investments.*

*Section: 10.4 The Variability Of Returns: The Second Lesson*

*Topic: Risk and return relationship*

28. Which one of the following is the most apt to have the largest risk premium in the future based on the historical record for 1926-2014?

A. U.S. Treasury bills

B. Large-company stocks

C. Long-term government debt

**D.** Small-company stocks

E. Long-term corporate debt

*Accessibility: Keyboard Navigation*

*Blooms: Remember*

*Difficulty: 1 Basic*

*Learning Objective: 10-02 Discuss the historical returns on various important types of investments.*

*Section: 10.3 Average Returns: The First Lesson*

*Topic: Historical performance*

29. The average risk premium on long-term government bonds for the period 1926-2014 was equal to:

A. zero.

B. 1 percent.

C. the rate of return on the bonds plus the corporate bond rate.

**D.** the rate of return on the bonds minus the T-bill rate.

E. the rate of return on the bonds minus the inflation rate.

*Accessibility: Keyboard Navigation*

*Blooms: Understand*

*Difficulty: 1 Basic*

*Learning Objective: 10-02 Discuss the historical returns on various important types of investments.*

*Section: 10.3 Average Returns: The First Lesson*

*Topic: Risk premium*

30. The lower the standard deviation of returns on a security, the \_\_\_\_\_ the expected rate of return and the \_\_\_\_\_ the risk.

**A.** lower; lower

B. lower; higher

C. higher; lower

D. higher; higher

*Accessibility: Keyboard Navigation*

*Blooms: Understand*

*Difficulty: 1 Basic*

*Learning Objective: 10-03 Explain the historical risks on various important types of investments.*

*Section: 10.4 The Variability Of Returns: The Second Lesson*

*Topic: Risk and return relationship*

31. The standard deviation measures the \_\_\_\_\_ of a security's returns over time.

A. average value

B. frequency

**C.** volatility

D. mean

E. arithmetic average

*Accessibility: Keyboard Navigation*

*Blooms: Remember*

*Difficulty: 1 Basic*

*Learning Objective: 10-03 Explain the historical risks on various important types of investments.*

*Section: 10.4 The Variability Of Returns: The Second Lesson*

*Topic: Standard deviation and variance*

32. Which one of the following has the narrowest distribution of returns for the period 1926-2014?

A. Long-term corporate bonds

B. Long-term government bonds

**C.** Intermediate-term government bonds

D. Large-company stocks

E. Small-company stocks

*Accessibility: Keyboard Navigation*

*Blooms: Remember*

*Difficulty: 1 Basic*

*Learning Objective: 10-03 Explain the historical risks on various important types of investments.*

*Section: 10.4 The Variability Of Returns: The Second Lesson*

*Topic: Historical performance*

33. What is the probability associated with a return that lies in the upper tail when the mean plus two standard deviations is graphed?

A. .05 percent

B. .5 percent

C. 1.0 percent

**D.** 2.5 percent

E. 5.0 percent

*Accessibility: Keyboard Navigation*

*Blooms: Understand*

*Difficulty: 1 Basic*

*Learning Objective: 10-03 Explain the historical risks on various important types of investments.*

*Section: 10.4 The Variability Of Returns: The Second Lesson*

*Topic: Normal probability distribution*

34. When, if ever, will the geometric average return exceed the arithmetic average return for a given set of returns?

A. When the set of returns includes only risk-free rates

B. When the set of returns has a wide frequency distribution

C. When the set of returns has a very narrow frequency distribution

D. When all of the rates of return in the set of returns are equal to each other

**E.** Never

*Accessibility: Keyboard Navigation*

*Blooms: Understand*

*Difficulty: 2 Intermediate*

*Learning Objective: 10-01 Calculate the return on an investment.*

*Section: 10.5 More On Average Returns*

*Topic: Arithmetic, geometric, and dollar-weighted returns*

35. Assume the securities markets are strong form efficient. Given this assumption, you should expect which one of the following to occur?

A. The risk premium on any security in that market will be zero.

B. The price of any one security in that market will remain constant at its current level.

C. Each security in the market will have an annual rate of return equal to the risk-free rate.

**D.** The price of each security in that market will frequently fluctuate.

E. The prices of each security will fall to zero because the net present value of the investments will be zero.

*Accessibility: Keyboard Navigation*

*Blooms: Understand*

*Difficulty: 2 Intermediate*

*Learning Objective: 10-04 Assess the implications of market efficiency.*

*Section: 10.6 Capital Market Efficiency*

*Topic: Market efficiency - implications*

36. New Labs just announced that it has received a patent for a product that will eliminate all flu viruses. This news is totally unexpected and viewed as a major medical advancement. Which one of the following reactions to this announcement indicates the market for New Labs stock is efficient?

A. The price of New Labs stock remains unchanged.

B. The price of New Labs stock increases rapidly and then settles back to its pre-announcement level.

**C.** The price of New Labs stock increases rapidly to a higher price and then remains at that price.

D. All stocks quickly increase in value and then all but New Labs stock fall back to their original values.

E. The value of all stocks suddenly increase and then level off at their higher values.

*Accessibility: Keyboard Navigation*

*Blooms: Understand*

*Difficulty: 1 Basic*

*Learning Objective: 10-04 Assess the implications of market efficiency.*

*Section: 10.6 Capital Market Efficiency*

*Topic: Market efficiency - implications*

37. If the financial markets are efficient then:

A. stock prices should remain constant.

B. stock prices should increase or decrease slowly as new events are analyzed and the information is absorbed by the markets.

C. an increase in the value of one security should be offset by a decrease in the value of another security.

D. stock prices will change only when an event actually occurs, not at the time the event is anticipated.

**E.** stock prices should respond only to unexpected news and events.

*Accessibility: Keyboard Navigation*

*Blooms: Understand*

*Difficulty: 1 Basic*

*Learning Objective: 10-04 Assess the implications of market efficiency.*

*Section: 10.6 Capital Market Efficiency*

*Topic: Market efficiency - implications*

38. According to the efficient markets hypothesis, professional investors will earn:

A. excess profits over the long-term.

B. excess profits, but only on short-term investments.

**C.** a dollar return equal to the value paid for an investment.

D. a return that cannot be accurately predicted because investments are subject to the random movements of the markets.

E. a return that "beats the market."

*Accessibility: Keyboard Navigation*

*Blooms: Understand*

*Difficulty: 1 Basic*

*Learning Objective: 10-04 Assess the implications of market efficiency.*

*Section: 10.6 Capital Market Efficiency*

*Topic: Efficient market hypothesis*

39. Semistrong form market efficiency states that the value of a security is based on:

A. all public and private information.

B. historical information only.

**C.** all publicly available information.

D. all publicly available information plus any data that can be gathered from insider trading.

E. random information with no clear distinction as to the source of that information.

*Accessibility: Keyboard Navigation*

*Blooms: Understand*

*Difficulty: 1 Basic*

*Learning Objective: 10-04 Assess the implications of market efficiency.*

*Section: 10.6 Capital Market Efficiency*

*Topic: Market efficiency - foundations and types*

40. Dan is a chemist for ABC, a major drug manufacturer. Dan cannot earn excess profits on ABC stock based on the knowledge he has related to his experiments if the financial markets are:

A. weak form efficient.

**B.** strong form efficient.

C. semistrong form efficient.

D. efficient at any level.

E. aware that the trader is an insider.

*Accessibility: Keyboard Navigation*

*Blooms: Understand*

*Difficulty: 1 Basic*

*Learning Objective: 10-04 Assess the implications of market efficiency.*

*Section: 10.6 Capital Market Efficiency*

*Topic: Market efficiency - foundations and types*

41. If the financial markets are semistrong form efficient, then:

A. only the most talented analysts can determine the true value of a security.

**B.** only individuals with private information have a marketplace advantage.

C. technical analysis provides the best tool to use to gain a marketplace advantage.

D. no one individual has an advantage in the marketplace.

E. every security offers the same rate of return.

*Accessibility: Keyboard Navigation*

*Blooms: Understand*

*Difficulty: 1 Basic*

*Learning Objective: 10-04 Assess the implications of market efficiency.*

*Section: 10.6 Capital Market Efficiency*

*Topic: Market efficiency - foundations and types*

42. One year ago, you purchased 600 shares of stock for $14 a share. The stock pays $.41 a share in dividends each year. Today, you sold your shares for $15.30 a share. What is your total dollar return on this investment?

A. $1,222

B. $7,43

C. $815

D. $780

**E.** $1,026

Total dollar return = 600 x($15.30 -14 + .41) = $1,026

*AACSB: Analytical Thinking*

*Accessibility: Keyboard Navigation*

*Blooms: Analyze*

*Difficulty: 1 Basic*

*Learning Objective: 10-01 Calculate the return on an investment.*

*Section: 10.1 Returns*

*Topic: Dollar and percentage yields and returns*

43. One year ago, you purchased a 6 percent coupon bond with a face value of $1,000 when it was selling for 98.6 percent of par. Today, you sold this bond for 101.2 percent of par. What is your total dollar return on this investment?

**A.** $86

B. $60

C. $64

D. $74

E. $82

Total dollar return = (1.012 x$1,000) - (.986 x$1,000) + (.06 x$1,000) = $86

*AACSB: Analytical Thinking*

*Accessibility: Keyboard Navigation*

*Blooms: Analyze*

*Difficulty: 1 Basic*

*Learning Objective: 10-01 Calculate the return on an investment.*

*Section: 10.1 Returns*

*Topic: Dollar and percentage yields and returns*

44. Cox Footwear pays a constant annual dividend. Last year, the dividend yield was 3.2 percent when the stock was selling for $35a share. What is the current price of the stock if the current dividend yield is 2.9 percent?

A. $18.92

**B.** $38.62

C. $25.20

D. $26.87

E. $27.40

D = .032 x$35 = $1.12 P0 = $1.12/.029 = $38.62

*AACSB: Analytical Thinking*

*Accessibility: Keyboard Navigation*

*Blooms: Analyze*

*Difficulty: 1 Basic*

*Learning Objective: 10-01 Calculate the return on an investment.*

*Section: 10.1 Returns*

*Topic: Dollar and percentage yields and returns*

45. The Bermuda Triangle Store pays a constant dividend. Last year, the dividend yield was 4.0 percent when the stock was selling for $16 a share. What must the stock price be today if the market currently requires a 4.3 percent dividend yield on this stock?

**A.** $14.88

B. $12.30

C. $15.59

D. $19.22

E. $12.48

D = .040 x$16 = $.64 P0 = $.64/.043 = $14.88

*AACSB: Analytical Thinking*

*Accessibility: Keyboard Navigation*

*Blooms: Analyze*

*Difficulty: 1 Basic*

*Learning Objective: 10-01 Calculate the return on an investment.*

*Section: 10.1 Returns*

*Topic: Dollar and percentage yields and returns*

46. The stock of Southern United is priced at $52 a share and has a dividend yield of 3.6 percent. The firm pays constant annual dividends. What is the amount of the next dividend per share?

A. $1.826

B. $1.729

**C.** $1.872

D. $1.878

E. $1.724

D = .036 x$52 = $1.872

*AACSB: Analytical Thinking*

*Accessibility: Keyboard Navigation*

*Blooms: Analyze*

*Difficulty: 1 Basic*

*Learning Objective: 10-01 Calculate the return on an investment.*

*Section: 10.1 Returns*

*Topic: Dollar and percentage yields and returns*

47. One year ago, you bought a stock for $29.15 a share. You received a dividend of $1.04 per share last month and sold the stock today for $28.80 a share. What is the capital gains yield on this investment?

A. 2.37 percent

B. 1.76 percent

**C.** -1.20 percent

D. -1.62 percent

E. .53 percent

Capital gains yield = ($28.80-29.15)/$29.15 = -.0120, or -1.20 percent

*AACSB: Analytical Thinking*

*Accessibility: Keyboard Navigation*

*Blooms: Analyze*

*Difficulty: 1 Basic*

*Learning Objective: 10-01 Calculate the return on an investment.*

*Section: 10.1 Returns*

*Topic: Dollar and percentage yields and returns*

48. Hercules Movers pays a constant annual dividend of $1.48 per share on its stock. Last year at this time, the market rate of return on this stock was 15.7 percent. Today, the market rate has fallen to 13.3 percent. What would your capital gains yield have been if you had purchased this stock one year ago and then sold the stock today?

A. -15.29 percent

B. -22.03 percent

C. 8.16 percent

D. 16.47 percent

**E.** 18.05 percent

Capital gains yield = [($1.48 / .133) -($1.48 / .157)]/($1.48 / .157) = .1805, or 18.05 percent

*AACSB: Analytical Thinking*

*Accessibility: Keyboard Navigation*

*Blooms: Analyze*

*Difficulty: 1 Basic*

*Learning Objective: 10-01 Calculate the return on an investment.*

*Section: 10.1 Returns*

*Topic: Dollar and percentage yields and returns*

49. One year ago, Debra purchased 5,400 shares of KNF stock for $218,056. Today, she sold those shares for $19.49 a share. What is the capital gains yield on this investment if the dividend yield is 1.7 percent?

A. -28.01 percent

B. -48.82 percent

C. 3.07 percent

**D.** -51.73 percent

E. 4.53 percent

Capital gains yield = [$19.49-($218,056 / 5,400)]/($218,056 / 5,400) = -.5173, or-51.73 percent

*AACSB: Analytical Thinking*

*Accessibility: Keyboard Navigation*

*Blooms: Analyze*

*Difficulty: 1 Basic*

*Learning Objective: 10-01 Calculate the return on an investment.*

*Section: 10.1 Returns*

*Topic: Dollar and percentage yields and returns*

50. One year ago, Peyton purchased 7,200 shares of Broncos stock for $329,640. Today, he sold those shares for $58.92 a share. What is the total return on this investment if the dividend yield is 2.2 percent?

A. 33.98 percent

**B.** 30.89 percent

C. 24.50 percent

D. 20.10 percent

E. 28.40 percent

Total return = [($58.92-($329,640/ 7,200)]/($329,640 / 7,200) + .022 = .3089, or 30.89 percent

*AACSB: Analytical Thinking*

*Accessibility: Keyboard Navigation*

*Blooms: Analyze*

*Difficulty: 1 Basic*

*Learning Objective: 10-01 Calculate the return on an investment.*

*Section: 10.1 Returns*

*Topic: Dollar and percentage yields and returns*

51. One year ago, LaTresa purchased 300 shares of Outland Co. stock for $7,092. The stock does not pay any regular dividends but it did pay a special dividend of $.43 a share last week. This morning, she sold her shares for $24.05 a share. What was the total percentage return on this investment?

A. 7.67 percent

B. 4.83 percent

C. 2.50 percent

**D.** 3.55 percent

E. 8.24 percent

Total return = [$24.05- ($7,092 / 300) + $.43)]/($7,092 / 300) = .0355, or 3.55 percent

*AACSB: Analytical Thinking*

*Accessibility: Keyboard Navigation*

*Blooms: Analyze*

*Difficulty: 1 Basic*

*Learning Objective: 10-01 Calculate the return on an investment.*

*Section: 10.1 Returns*

*Topic: Dollar and percentage yields and returns*

52. Assume that last year, Isaac earned 13.6 percent on his investments while U.S. Treasury bills yielded 2.7 percent, and the inflation rate was 2.2 percent. What real rate of return did he earn on his investments last year?

A. 11.63 percent

**B.** 11.15 percent

C. 13.56 percent

D. 12.24 percent

E. 10.39 percent

Real return = (1.136/1.022) - 1 = .1115, or 11.15 percent

*AACSB: Analytical Thinking*

*Accessibility: Keyboard Navigation*

*Blooms: Analyze*

*Difficulty: 1 Basic*

*Learning Objective: 10-01 Calculate the return on an investment.*

*Section: 10.3 Average Returns: The First Lesson*

*Topic: Fisher effect*

53. Assume you earned 17.1 percent on your investments for a time period when the risk-free rate was 4.2 percent and the inflation rate was 4.6 percent. What was your real rate of return for the period?

A. -1.00 percent

B. 10.06 percent

**C.** 11.95 percent

D. -1.67 percent

E. 12.08 percent

Real return = (1.171 /1.046) - 1 = .1195, or 11.95 percent

*AACSB: Analytical Thinking*

*Accessibility: Keyboard Navigation*

*Blooms: Analyze*

*Difficulty: 1 Basic*

*Learning Objective: 10-01 Calculate the return on an investment.*

*Section: 10.3 Average Returns: The First Lesson*

*Topic: Fisher effect*

54. Sarah earned a 3.3 percent real rate of return on her investments for the past year. During that time, the risk-free rate was 3.6 percent and the inflation rate was 3.1 percent. What was her nominal rate of return?

A. 5.30 percent

B. 6.06 percent

**C.** 6.50 percent

D. 6.67 percent

E. 6.91 percent

Nominal rate = (1.033 x1.031) - 1 = .0650, or 6.50 percent

*AACSB: Analytical Thinking*

*Accessibility: Keyboard Navigation*

*Blooms: Analyze*

*Difficulty: 1 Basic*

*Learning Objective: 10-01 Calculate the return on an investment.*

*Section: 10.3 Average Returns: The First Lesson*

*Topic: Fisher effect*

55. Assume that large-company stocks had an average rate of return of 12.1 percent over the past 88 years while T-bills returned an average of 3.5 percent and inflation averaged 3.0 percent. Given this, the real return on large-company stocks was:

A. 6.67 percent

B. 5.60 percent

**C.** 8.83 percent

D. 7.94 percent

E. 9.10 percent

Real return = (1.121 / 1.030) - 1 = .0883, or 8.83 percent

*AACSB: Analytical Thinking*

*Accessibility: Keyboard Navigation*

*Blooms: Analyze*

*Difficulty: 1 Basic*

*Learning Objective: 10-02 Discuss the historical returns on various important types of investments.*

*Section: 10.1 Returns*

*Topic: Fisher effect*

56. Assume that over the past 88 years, U.S. Treasury bills had an average return of 3.5 percent as compared to 6.1 percent on long-term government bonds. During this same time period, assume inflation averaged 3.0 percent. What was the average nominal risk premium on the long-term government bonds?

A. 3.1 percent

B. .1 percent

C. 2.9 percent

D. 1.8 percent

**E.** 2.6 percent

Nominal risk premium = 6.1 percent -3.5 percent = 2.6 percent

*AACSB: Analytical Thinking*

*Accessibility: Keyboard Navigation*

*Blooms: Analyze*

*Difficulty: 1 Basic*

*Learning Objective: 10-02 Discuss the historical returns on various important types of investments.*

*Section: 10.3 Average Returns: The First Lesson*

*Topic: Risk premium*

57. Based on the past 88 years, the inflation rate averaged 3.0 percent and the U.S. Treasury bill yield was 3.5 percent, and the historical risk premium on small-company stocks was 13.2 percent. If these averages hold, what nominal rate of return should you expect to earn on small-company stocks over the next several years?

A. 15.5 percent

**B.** 16.7 percent

C. 19.7 percent

D. 13.5 percent

E. 13.7 percent

Nominal return on small-company stocks = 3.5 percent + 13.2 percent = 16.7 percent

*AACSB: Analytical Thinking*

*Accessibility: Keyboard Navigation*

*Blooms: Analyze*

*Difficulty: 1 Basic*

*Learning Objective: 10-02 Discuss the historical returns on various important types of investments.*

*Section: 10.3 Average Returns: The First Lesson*

*Topic: Risk premium*

58. Assume large-company stocks returned 12.1 percent on average over the past 88 years. The risk premium on these stocks was 8.6 percent and the inflation rate was 3.0 percent. What was the average nominal risk-free rate of return for those 88 years?

**A.** 3.5 percent

B. 9.1 percent

C. 4.6 percent

D. .5 percent

E. 6.5 percent

Nominal risk-free rate = 12.1 percent -8.6 percent = 3.5 percent

*AACSB: Analytical Thinking*

*Accessibility: Keyboard Navigation*

*Blooms: Analyze*

*Difficulty: 1 Basic*

*Learning Objective: 10-02 Discuss the historical returns on various important types of investments.*

*Section: 10.3 Average Returns: The First Lesson*

*Topic: Risk premium*

59. Over the past five years, a stock returned 6.2 percent, -10.4 percent, -2.2 percent, 16.9 percent, and 5.8 percent, respectively. What is the variance of these returns?

A. .008351

B. .076290

**C.** .010439

D. .012547

E. .091306

Average return = (.062-.104-.022 + .169 + .058)/5 = .0326

σ2 = [(.062 -.0326)2 + (-.104-.0326)2 + (-.022 -.0326)2 + (.169 -.0326)2 + (.058 -.0326)2]/(5 - 1) =.010439

*AACSB: Analytical Thinking*

*Accessibility: Keyboard Navigation*

*Blooms: Analyze*

*Difficulty: 2 Intermediate*

*Learning Objective: 10-03 Explain the historical risks on various important types of investments.*

*Section: 10.4 The Variability Of Returns: The Second Lesson*

*Topic: Standard deviation and variance*

60. Windsor stock has produced returns of 13.8 percent, 11.7 percent, 2.3 percent, -21.4 percent, and 8.9 percent over the past five years, respectively. What is the variance of these returns?

**A.** .020574

B. .031947

C. .035682

D. .019515

E. .020016

Average return = (.138 + .117 + .023-.214 + .089)/5 = .0306

σ2 = [(.138-.0306)2 + (.117 -.0306)2 + (.023 -.0306)2 + (-.214 -.0306)2 + (.089 -.0306)2]/(5 - 1) = .020574

*AACSB: Analytical Thinking*

*Accessibility: Keyboard Navigation*

*Blooms: Analyze*

*Difficulty: 2 Intermediate*

*Learning Objective: 10-03 Explain the historical risks on various important types of investments.*

*Section: 10.4 The Variability Of Returns: The Second Lesson*

*Topic: Standard deviation and variance*

61. Five years ago, you purchased 800 shares of stock. The annual returns have been 6.4 percent, -28.7 percent, 2.1 percent, 14.4 percent, and 32.6 percent, respectively. What is the variance of these returns?

**A.** .049888

B. .030021

C. .030068

D. .050133

E. .050284

Average return = (.064 - .287 + .021 +.144 + .326)/5 = .0536

σ2 = [(.064 -.0536)2 + (-.287 -.0536)2 + (.021 -.0536)2 + (.144-.0536)2 + (.326-.0536)2]/(5 - 1) = .049888

*AACSB: Analytical Thinking*

*Accessibility: Keyboard Navigation*

*Blooms: Analyze*

*Difficulty: 2 Intermediate*

*Learning Objective: 10-03 Explain the historical risks on various important types of investments.*

*Section: 10.4 The Variability Of Returns: The Second Lesson*

*Topic: Standard deviation and variance*

62. Over the past six years, a stock had annual returns of 18 percent, -6 percent, 2 percent, 27 percent, -11 percent, and 13 percent, respectively. What is the standard deviation of these returns?

A. 15.27 percent

**B.** 14.66 percent

C. 13.59 percent

D. 15.08 percent

E. 14.38 percent

Average return = (.18-.06 + .02 + .27 -.11 + .13)/6 = .071667

σ2 = [(.18-.071667)2 + (-.06-.071667)2 + (.02 -.071667)2 + (.27 -.071667)2 + (-.11 -.071667)2 + (.13-.071667)2]/ (6 - 1) = .021497

σ = .021497.5 = .1466, or 14.66 percent

*AACSB: Analytical Thinking*

*Accessibility: Keyboard Navigation*

*Blooms: Analyze*

*Difficulty: 2 Intermediate*

*Learning Objective: 10-03 Explain the historical risks on various important types of investments.*

*Section: 10.4 The Variability Of Returns: The Second Lesson*

*Topic: Standard deviation and variance*

63. A stock has produced returns of 19 percent, 6 percent, -21 percent, -2 percent, and 14 percent for the past five years, respectively. What is the standard deviation of these returns?

A. 14.65 percent

B. 8.87 percent

C. 9.23 percent

**D.** 15.71 percent

E. 16.64 percent

Average return = (.19 + .06 -.21 -.02 + .14)/5 = .032

σ2 = [(.19 -.032)2 + (.06 -.032)2 + (-.21 -.032)2 + (-.02 -.032)2 + (.14 -.032)2]/(5 - 1) = .02467

σ = .02467.5 = .1571, or 15.71 percent

*AACSB: Analytical Thinking*

*Accessibility: Keyboard Navigation*

*Blooms: Analyze*

*Difficulty: 2 Intermediate*

*Learning Objective: 10-03 Explain the historical risks on various important types of investments.*

*Section: 10.4 The Variability Of Returns: The Second Lesson*

*Topic: Standard deviation and variance*

64. A stock has yielded returns of 9 percent, 16 percent, 18 percent, and -6 percent over the past four years, respectively. What is the standard deviation of these returns?

A. 15.52 percent

B. 15.86 percent

C. 11.05 percent

D. 9.38 percent

**E.** 10.87 percent

Average return = (.09 + .16 + .18 -.06)/4 = .0925

σ2 = [(.09 -.0925)2 + (.16 -.0925)2 + (.18 -.0925)2 + (-.06 -.0925)2 ]/(4 -1) = .011825

σ = .011825.5 = .1087, or 10.87 percent

*AACSB: Analytical Thinking*

*Accessibility: Keyboard Navigation*

*Blooms: Analyze*

*Difficulty: 2 Intermediate*

*Learning Objective: 10-03 Explain the historical risks on various important types of investments.*

*Section: 10.4 The Variability Of Returns: The Second Lesson*

*Topic: Standard deviation and variance*

65. Kelly decided to accept the risk and purchased a high growth stock. Her returns for the past five years are 32 percent, 24 percent, -48 percent, 12 percent, and -9 percent, respectively. What is the standard deviation of these returns?

A. 23.20 percent

B. 35.46 percent

C. 17.88 percent

**D.** 32.03 percent

E. 28.39 percent

Average return = (.32 + .24-.48 + .12-.09)/5 =.022

σ2 = [(.32 -.022)2 + (.24 -.022)2 + (-.48-.022)2 + (.12-.022)2 + (-.09-.022)2]/(5 - 1) = .10262

σ = .10262.5 = .3203, or 32.03 percent

*AACSB: Analytical Thinking*

*Accessibility: Keyboard Navigation*

*Blooms: Analyze*

*Difficulty: 2 Intermediate*

*Learning Objective: 10-03 Explain the historical risks on various important types of investments.*

*Section: 10.4 The Variability Of Returns: The Second Lesson*

*Topic: Standard deviation and variance*

66. Over the past four years, the annual percentage returns on large-company stocks were 15, 7, 4, and 18 percent. For the same time period, U.S. Treasury bills produced the returns of 6, 3, 2, and 4 percent. Inflation averaged 2.8 percent over the four-year period. The average real rate of return on large-company stocks was \_\_\_ percent as compared to \_\_\_\_\_ percent for Treasury bills.

A. 6.47; .92

B. 6.47; 1.08

**C.** 7.98; .92

D. 7.98; 1.08

E. 7.98; 1.22

*Large-company stocks:*

Average nominal return = (.15 + .07 + .04 + .18)/4 = .11

Average real rate: *r* = (1.11/1.028) - 1 = .0798, or 7.98 percent

*U.S. Treasury bills:*

Average nominal return = (.06 + .03 + .02 + .04)/4 = .0375

Average real rate: *r* = (1.0375/1.028) -1 = .92 percent

*AACSB: Analytical Thinking*

*Accessibility: Keyboard Navigation*

*Blooms: Analyze*

*Difficulty: 2 Intermediate*

*Learning Objective: 10-02 Discuss the historical returns on various important types of investments.*

*Section: 10.3 Average Returns: The First Lesson*

*Topic: Fisher effect*

67. Over the past four years, a stock produced returns of 6 percent, 8 percent, 19 percent, and 2 percent, respectively. Based on these four years, what range of returns would you expect to see 95 percent of the time?

A. -.58 percent to 31.33 percent

B. -5.80 percent to 27.02 percent

C. -.23 percent to 24.39 percent

D. -.02 percent to 24.39 percent

**E.** -5.80 percent to 23.30 percent

Average return = (.06 + .08 + .19 + .02)/4 = .0875, or 8.75 percent

σ2 = [(.06 -.0875)2 + (.08 -.0875)2 + (.19 -.0875)2 + (.02 -.0875)2]/(4 - 1) = .005292

σ = .005292.5= .072744, or 7.2744 percent

95 percent probability range = 8.75 percent ± 2 ×7.2744 percent

Range of returns = -5.80 percent to 23.30 percent

*AACSB: Analytical Thinking*

*Accessibility: Keyboard Navigation*

*Blooms: Analyze*

*Difficulty: 2 Intermediate*

*Learning Objective: 10-03 Explain the historical risks on various important types of investments.*

*Section: 10.4 The Variability Of Returns: The Second Lesson*

*Topic: Normal probability distribution*

68. Over the past four years, a stock produced returns of 13 percent, -9 percent, 8 percent, and 14 percent, respectively. Based on these four years, what range of returns would you expect to see 99 percent of the time?

**A.** -25.48 percent to 38.48 percent

B. -22.39 percent to 26.41 percent

C. -32.39 percent to 48.56 percent

D. -18.46 percent to 22.41 percent

E. -18.46 percent to 24.39 percent

Average return = (.13 -.09 + .08 + .14)/4 = .065, or 6.5 percent

σ2 = [(.13 -.065)2 + (-.09-.065)2 + (.08 -.065)2 + (.14 -.065)2]/(4 -1) = .011367

σ = .011367.5 = .106615, or 10.6615 percent

99 percent probability range = 6.5 percent ± 3 ×10.6615 percent

Range of returns = -25.48 percent to 38.48 percent

*AACSB: Analytical Thinking*

*Accessibility: Keyboard Navigation*

*Blooms: Analyze*

*Difficulty: 2 Intermediate*

*Learning Objective: 10-03 Explain the historical risks on various important types of investments.*

*Section: 10.4 The Variability Of Returns: The Second Lesson*

*Topic: Normal probability distribution*

69. A security produced returns of 11 percent, 7 percent, 9 percent, 13 percent, and -14 percent over the past five years, respectively. Based on these five years, what is the probability that this stock will earn more than 16.16 percent in any one given year?

A. .5 percent

B. 1.0 percent

C. 2.5 percent

D. 5.0 percent

**E.** 16.0 percent

Average return = (.11 + .07 + .09 + .13 -.14)/5 = .052

σ2 = [(.11 -.052)2 + (.07 -.052)2 + (.09 -.052)2 + (.13 -.052)2 + (-.14-.052)2]/(5 - 1) = .012020

σ = .012020.5 = .1096

Upper end of 68 percent probability range = .052 + .1096 = .1616, or 16.16 percent

Probability of earning more than 16.16 percent = (1 -.68)/2 = .16, or 16 percent

*AACSB: Analytical Thinking*

*Accessibility: Keyboard Navigation*

*Blooms: Analyze*

*Difficulty: 2 Intermediate*

*Learning Objective: 10-03 Explain the historical risks on various important types of investments.*

*Section: 10.4 The Variability Of Returns: The Second Lesson*

*Topic: Normal probability distribution*

70. A security produced returns of 12 percent, -11 percent, -2 percent, 15 percent, and 9 percent over the past five years, respectively. Based on these five years, what is the probability that an investor in this stock will lose more than 17.06 percent in any one given year?

A. .50 percent

B. 1.00 percent

C. 1.25 percent

**D.** 2.50 percent

E. 5.00 percent

Average return = (.12 -.11 -.02 + .15 + .09)/5 = .046

σ2 = [(.12 -.046)2 + (-.11 -.046)2 + (-.02 -.046)2 + (.15 -.046)2 + (.09 -.046)2]/(5 - 1) = .01173

σ = .01173.5 = .1083

Lower end of 95 percent probability range = .046 - (2 ×.1083) = -.1706, or -17.06 percent

Probability of losing more than 17.06 percent = (1 -.95)/2 = .025, or 2.5 percent

*AACSB: Analytical Thinking*

*Accessibility: Keyboard Navigation*

*Blooms: Analyze*

*Difficulty: 2 Intermediate*

*Learning Objective: 10-03 Explain the historical risks on various important types of investments.*

*Section: 10.4 The Variability Of Returns: The Second Lesson*

*Topic: Normal probability distribution*

71. A bond has an average return of 11.2 percent and a standard deviation of 14.6 percent. What range of returns would you expect to see 68 percent of the time on this security?

A. -18 percent to 43.9 percent

B. -18 percent to 40.1 percent

C. -3.4 percent to 27.8 percent

**D.** -3.4 percent to 25.8 percent

E. -2.5 percent to 13.9 percent

68 percent probability range = 11.2 percent ± 14.6 percent = -3.4 percent to 25.8 percent

*AACSB: Analytical Thinking*

*Accessibility: Keyboard Navigation*

*Blooms: Analyze*

*Difficulty: 1 Basic*

*Learning Objective: 10-03 Explain the historical risks on various important types of investments.*

*Section: 10.4 The Variability Of Returns: The Second Lesson*

*Topic: Normal probability distribution*

72. You own a stock with an average return of 14.6 percent and a standard deviation of 21.2 percent. In any one given year, you have a 95 percent chance that you will not lose more than \_\_\_\_\_ percent nor earn more than \_\_\_\_ percent on this stock.

A. -25.2; 48.2

**B.** -27.8; 57.0

C. -42.4;57.0

D. -43.6; 49.4

E. -38.4; 42.6

95 percent probability range = 14.6 percent ± 2 x 21.2 percent = -27.8 percent to 57.0 percent

*AACSB: Analytical Thinking*

*Accessibility: Keyboard Navigation*

*Blooms: Analyze*

*Difficulty: 1 Basic*

*Learning Objective: 10-03 Explain the historical risks on various important types of investments.*

*Section: 10.4 The Variability Of Returns: The Second Lesson*

*Topic: Normal probability distribution*

73. Home Grown Tomatoes stock returned 11.6 percent, 3.2 percent, 8.1 percent, 14.2, and 9.8 percent over the past five years, respectively. What is the arithmetic average return for this period?

**A.** 9.38 percent

B. 10.62 percent

C. 8.10 percent

D. 11.93 percent

E. 10.10 percent

Arithmetic average = (.116 + .032 + .081 + .142 + .098)/5 = .0938, or 9.38 percent

*AACSB: Analytical Thinking*

*Accessibility: Keyboard Navigation*

*Blooms: Analyze*

*Difficulty: 1 Basic*

*Learning Objective: 10-01 Calculate the return on an investment.*

*Section: 10.5 More On Average Returns*

*Topic: Arithmetic, geometric, and dollar-weighted returns*

74. You purchased 400 shares of KNO stock five years ago and have earned annual returns of 8.3 percent, 9.6 percent, 18.25 percent, -7.7 percent, and 1.8 percent, respectively. What is your arithmetic average return?

A. 5.47 percent

**B.** 6.05 percent

C. 6.23 percent

D. 6.47 percent

E. 8.01 percent

Arithmetic average = (.083 + .096 + .1825 -.077 + .018)/5 = .0605, or 6.05 percent

*AACSB: Analytical Thinking*

*Accessibility: Keyboard Navigation*

*Blooms: Analyze*

*Difficulty: 1 Basic*

*Learning Objective: 10-01 Calculate the return on an investment.*

*Section: 10.5 More On Average Returns*

*Topic: Arithmetic, geometric, and dollar-weighted returns*

75. A stock produced returns of 11 percent, 19 percent, and 2 percent over three of the past four years, respectively. The arithmetic average for the past four years is 9 percent. What is the standard deviation of the stock's returns for the four-year period?

A. 5.46 percent

B. 8.54 percent

C. 9.09 percent

D. 6.83 percent

**E.** 7.70 percent

Average return = .09 = (.11 + .19 + .02 + *x*)/4

*x* = .04

σ2 = [(.11-.09)2 + (.19 -.09)2 + (.02-.09)2 + (.04 -.09)2]/(4 - 1) = .005933

σ = .005933.5 = .0770, or 7.70 percent

*AACSB: Analytical Thinking*

*Accessibility: Keyboard Navigation*

*Blooms: Analyze*

*Difficulty: 2 Intermediate*

*Learning Objective: 10-03 Explain the historical risks on various important types of investments.*

*Section: 10.4 The Variability Of Returns: The Second Lesson*

*Topic: Standard deviation and variance*

76. A stock produced returns of 14 percent, 17percent, and -1 percent over three of the past four years, respectively. The arithmetic average for the past four years is 6 percent. What is the standard deviation of the stock's returns for the four-year period?

A. 11.63 percent

B. 15.94 percent

C. 9.70 percent

D. 6.25 percent

**E.** 11.23 percent

Average return = .06 = (.14 + .17 -.01 + *x*)/4

*x* = -.06

σ2 = [(.14 -.06)2 + (.17 -.06)2 + (-.01-.06)2 + (-.06-.06)2]/(4 - 1) = .01260

σ = .01260.5= .1123, or 11.23 percent

*AACSB: Analytical Thinking*

*Accessibility: Keyboard Navigation*

*Blooms: Analyze*

*Difficulty: 2 Intermediate*

*Learning Objective: 10-03 Explain the historical risks on various important types of investments.*

*Section: 10.4 The Variability Of Returns: The Second Lesson*

*Topic: Standard deviation and variance*

77. Your portfolio has provided you with returns of 11.4 percent, 6.2 percent, -.7 percent, and 14.6 percent over the past four years, respectively. What is the geometric average return for this period?

A. 7.25 percent

**B.** 7.72 percent

C. 7.57 percent

D. 7.63 percent

E. 7.55 percent

Geometric average return = (1.114 ×1.062 ×.993 ×1.146)1/4- 1 = .0772, or 7.72 percent

*AACSB: Analytical Thinking*

*Accessibility: Keyboard Navigation*

*Blooms: Analyze*

*Difficulty: 2 Intermediate*

*Learning Objective: 10-01 Calculate the return on an investment.*

*Section: 10.5 More On Average Returns*

*Topic: Arithmetic, geometric, and dollar-weighted returns*

78. The common stock of Mountain Farms has yielded 14.2 percent, 11.7 percent, 3.4 percent, -2.8 percent, and 15.8 percent over the past five years, respectively. What is the geometric average return?

A. 7.91 percent

B. 8.03 percent

**C.** 8.22 percent

D. 8.27 percent

E. 7.64 percent

Geometric average return = (1.142 ×1.117 ×1.034 ×.972 ×1.158)1/5- 1 = .0822, or 8.22 percent

*AACSB: Analytical Thinking*

*Accessibility: Keyboard Navigation*

*Blooms: Analyze*

*Difficulty: 2 Intermediate*

*Learning Objective: 10-01 Calculate the return on an investment.*

*Section: 10.5 More On Average Returns*

*Topic: Arithmetic, geometric, and dollar-weighted returns*

79. A stock has produced returns of 11.9 percent, 5.6 percent, 16.4 percent, and -4.2 percent over the past four years, respectively. What is the geometric average return?

**A.** 7.14 percent

B. 7.47 percent

C. 6.83 percent

D. 6.91 percent

E. 7.02 percent

Geometric average return = (1.119 ×1.056 ×1.164 ×.958)1/4- 1 = .0714, or 7.14 percent

*AACSB: Analytical Thinking*

*Accessibility: Keyboard Navigation*

*Blooms: Analyze*

*Difficulty: 2 Intermediate*

*Learning Objective: 10-01 Calculate the return on an investment.*

*Section: 10.5 More On Average Returns*

*Topic: Arithmetic, geometric, and dollar-weighted returns*

80. Over the last four years, the common stock of Plymouth Shippers has had an arithmetic average return of 10.4 percent. Three of those four years produced returns of 16.1 percent, 15.6 percent, and 9.4 percent, respectively. What is the geometric average return for this four-year period?

A. 9.72 percent

B. 10.41 percent

C. 8.93 percent

**D.** 10.22 percent

E. 9.38 percent

Arithmetic average return = .104 = (.161 + .156 + .094 + *x*)/4

*x* = .005

Geometric average return = [1.161 ×1.156 ×1.094 ×1.005)1/4- 1 = .1022, or 10.22 percent

*AACSB: Analytical Thinking*

*Accessibility: Keyboard Navigation*

*Blooms: Analyze*

*Difficulty: 2 Intermediate*

*Learning Objective: 10-01 Calculate the return on an investment.*

*Section: 10.5 More On Average Returns*

*Topic: Arithmetic, geometric, and dollar-weighted returns*

81. Over the last four years, a stock has had an arithmetic average return of 12.8 percent. Three of those four years produced returns of 22.6 percent, 15.2 percent, and -24.1 percent, respectively. What is the geometric average return for this four-year period?

**A.** 10.18 percent

B. 8.39 percent

C. 11.67 percent

D. 12.40 percent

E. 12.67 percent

Arithmetic average return = .128 = (.226 + .152 -.241 + *x*)/4

*x* = -.375, or 37.5 percent

Geometric average return = [1.226 ×1.152 ×.759 ×1.375)1/4- 1 = .1018, or 10.18 percent

*AACSB: Analytical Thinking*

*Accessibility: Keyboard Navigation*

*Blooms: Analyze*

*Difficulty: 2 Intermediate*

*Learning Objective: 10-01 Calculate the return on an investment.*

*Section: 10.5 More On Average Returns*

*Topic: Arithmetic, geometric, and dollar-weighted returns*

82. Suppose a stock had an initial price of $36 per share, paid a dividend of $.42 per share during the year, and had an ending share price of $34. What was the capital gains yield?

A. 6.72 percent

B. 7.12 percent

C. 3.78 percent

**D.** -5.56 percent

E. -4.94 percent

Capital gains yield = ($34 -36)/$36 = -.0556, or -5.56 percent

*AACSB: Analytical Thinking*

*Accessibility: Keyboard Navigation*

*Blooms: Analyze*

*Difficulty: 1 Basic*

*Learning Objective: 10-01 Calculate the return on an investment.*

*Section: 10.1 Returns*

*Topic: Dollar and percentage yields and returns*

83. Suppose you bought a$1,000 face value bond with a 5 percent coupon one year ago for $1,020. The bond sells today for $986. If the inflation rate last year was 2.3 percent, what was your total real rate of return on this investment?

A. .02 percent

**B.** -.71 percent

C. .31 percent

D. .89 percent

E. -.48 percent

Nominal return = ($986 -1,020 + 50)/$1,020 = .015686 Real rate = (1.015686 /1.023) - 1 = -.0071, or -.71 percent

*AACSB: Analytical Thinking*

*Accessibility: Keyboard Navigation*

*Blooms: Analyze*

*Difficulty: 1 Basic*

*Learning Objective: 10-01 Calculate the return on an investment.*

*Section: 10.3 Average Returns: The First Lesson*

*Topic: Fisher effect*

84. A stock has returns for five years of 14 percent, -16 percent, 12 percent, 23 percent, and 4 percent, respectively. The stock has an average return of \_\_\_\_\_\_ percent and a standard deviation of \_\_\_\_\_ percent.

A. 7.40; 13.54

B. 7.04; 14.63

**C.** 7.40; 14.72

D. 8.60; 14.63

E. 8.60; 16.36

Average return = (.14 -.16 + .12 + .23 + .04)/5 = .074, or 7.40 percent

σ2 = [(.14-.074)2 + (-.16-.074)2 + (.12-.074)2 + (.23-.074)2 + (.04-.074)2]/(5 - 1) = .021680

σ = .021680.5 = .1472, or 14.72 percent

*AACSB: Analytical Thinking*

*Accessibility: Keyboard Navigation*

*Blooms: Analyze*

*Difficulty: 1 Basic*

*Learning Objective: 10-01 Calculate the return on an investment.*

*Section: 10.4 The Variability Of Returns: The Second Lesson*

*Topic: Standard deviation and variance*

85. You've observed the following returns on Blast It Corporation's stock over the past five years: 19 percent, -23 percent, 31 percent, 18 percent, and -7 percent, respectively. What was the variance of the returns over this period?

A. .03598

**B.** .04838

C. .03692

D. .04714

E. .03781

Average return = (.19 -.23 + .31 + .18 -.07)/5 = .076

σ2 = [(.19-.076)2 + (-.23-.076)2 + (.31-.076)2 + (.18 -.076)2 + (-.07-.076)2]/(5 - 1) = .04838

*AACSB: Analytical Thinking*

*Accessibility: Keyboard Navigation*

*Blooms: Analyze*

*Difficulty: 1 Basic*

*Learning Objective: 10-03 Explain the historical risks on various important types of investments.*

*Section: 10.4 The Variability Of Returns: The Second Lesson*

*Topic: Standard deviation and variance*

86. You purchased a zero coupon bond one year ago for $346.72. The market interest rate is now 5.75 percent. If the bond had 15 years to maturity when you originally purchased it, what is your total return to date if the face value of the bond is $1,000?

**A.** 30.42 percent

B. 22.18 percent

C. 16.34 percent

D. 12.65 percent

E. 24.90 percent

PV = $1,000/[1 + (.0575/2)]28 = $452.19

Total return = ($452.19-346.72)/$346.72 = .3042 or 30.42 percent

*AACSB: Analytical Thinking*

*Accessibility: Keyboard Navigation*

*Blooms: Analyze*

*Difficulty: 1 Basic*

*Learning Objective: 10-01 Calculate the return on an investment.*

*Section: 10.1 Returns*

*Topic: Dollar and percentage yields and returns*

87. You bought a share of 7.5 percent preferred stock for $91.60 last year. The market price for your stock is now $89.10. What is your total return to date on this investment?

A. 5.51 percent

B. 4.73 percent

C. 5.86 percent

D. 6.10 percent

**E.** 5.46 percent

Total return = ($89.10 -91.60 + 7.50)/$91.60 = .0546, or 5.46 percent

*AACSB: Analytical Thinking*

*Accessibility: Keyboard Navigation*

*Blooms: Analyze*

*Difficulty: 1 Basic*

*Learning Objective: 10-01 Calculate the return on an investment.*

*Section: 10.1 Returns*

*Topic: Dollar and percentage yields and returns*

88. Assume that long-term corporate bonds had an average return of 6.4 percent and a standard deviation of 2.9 percent for a 50-year period. What range of returns would you expect to see on these bonds 68 percent of the time?

**A.** 3.5 percent to 9.3 percent

B. 3.5 percent to 10.9 percent

C. 2.9 percent to 6.4 percent

D. .6 percent to 11.9 percent

E. .6 percent to 12.2 percent

68 percent range = 6.4 percent ± 2.9 percent = 3.5 percent to 9.3 percent

*AACSB: Analytical Thinking*

*Accessibility: Keyboard Navigation*

*Blooms: Analyze*

*Difficulty: 1 Basic*

*Learning Objective: 10-03 Explain the historical risks on various important types of investments.*

*Section: 10.4 The Variability Of Returns: The Second Lesson*

*Topic: Normal probability distribution*

89. Assume that large-company stocks had an average return of 12.1 percent and a standard deviation of 19.6 percent for a 40-year period. What range of returns would you expect to see on these stocks 95 percent of the time?

A. -30.3 percent to 53.2 percent

B. -30.3 percent to 73.9 percent

C. -30.3 percent to 64.1 percent

D. -27.1 percent to 53.2 percent

**E.** -27.1 percent to 51.3 percent

95 percent range = 12.1 percent ± (2 x19.6 percent) = -27.1 percent to 51.3 percent

*AACSB: Analytical Thinking*

*Accessibility: Keyboard Navigation*

*Blooms: Analyze*

*Difficulty: 1 Basic*

*Learning Objective: 10-03 Explain the historical risks on various important types of investments.*

*Section: 10.4 The Variability Of Returns: The Second Lesson*

*Topic: Normal probability distribution*

90. Alpha Industries stock had returns of 17 percent, -11 percent, 9 percent, and 2 percent for four of the last five years, respectively. The average return of the stock over this period was 8.7 percent. What is the standard deviation of the stock's returns?

A. 14.67 percent

B. 12.90 percent

C. 15.14 percent

D. 15.47 percent

**E.** 14.31 percent

Average return = .087 = (.17 -.11 + .09 + .02 + *x*)/5

*x* = .265

σ2 = [(.17 -.087)2 + (-.11-.087)2 + (.09 -.087)2 + (.02-.087)2 + (.265 -.087)2]/(5 - 1) = .020470

σ = .020470.5 = .1431, or 14.31 percent

*AACSB: Analytical Thinking*

*Accessibility: Keyboard Navigation*

*Blooms: Analyze*

*Difficulty: 2 Intermediate*

*Learning Objective: 10-01 Calculate the return on an investment.*

*Section: 10.4 The Variability Of Returns: The Second Lesson*

*Topic: Standard deviation and variance*

91. A stock has had returns of 14 percent, -18 percent, 2 percent, 33 percent, 27 percent, and 6 percent over the last six years, respectively. What is the geometric return for this stock?

A. 10.82 percent

**B.** 9.32 percent

C. 10.31 percent

D. 9.47 percent

E. 8.88 percent

Geometric average = (1.14 ×.82 ×1.02 ×1.33 ×1.27 ×1.06)1/6- 1 = .0932, or 9.32 percent

*AACSB: Analytical Thinking*

*Accessibility: Keyboard Navigation*

*Blooms: Analyze*

*Difficulty: 2 Intermediate*

*Learning Objective: 10-01 Calculate the return on an investment.*

*Section: 10.5 More On Average Returns*

*Topic: Arithmetic, geometric, and dollar-weighted returns*

Chapter 10 Test Bank - Static Summary

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