Student name:\_\_\_\_\_\_\_\_\_\_

**MULTIPLE CHOICE - Choose the one alternative that best completes the statement or answers the question.  
1)** The stock of Ramba Moving sold for $53 per share at the beginning of the year. During the year, the company paid a dividend of $2.50 per share and then ended the year with a stock price of $51.75. The change in the stock price is best described as a:

1) \_\_\_\_\_\_

A) capital gain.   
 B) positive total dollar return.  
 C) capital loss.  
 D) negative total dollar return.  
 E) negative dividend yield.

**2)** For any given stock, the capital gains yield plus the dividend yield equals the:

2) \_\_\_\_\_\_

A) variance of returns.   
 B) geometric return.  
 C) average period return.  
 D) current yield.  
 E) total return.

**3)** The portfolio of small-company common stocks measured by Ibbotson, et al. is best described as the stocks of the firms that:

3) \_\_\_\_\_\_

A) represent the smallest twenty percent of the companies listed on the NYSE.   
 B) have gone public within the past five years.  
 C) are too small to be listed on the NYSE.  
 D) are included in the S&P 500 index.  
 E) trade publicly for $5 per share or less.

**4)** Based on the period from 1926 through 2020, \_\_\_\_\_ have tended to outperform other securities over the long-term.

4) \_\_\_\_\_\_

A) U.S. Treasury bills   
 B) large-company stocks  
 C) long-term corporate bonds  
 D) small-company stocks  
 E) long-term government bonds

**5)** During the period from 1926 through 2020, U.S. Treasury bills produced annual rates of return that:

5) \_\_\_\_\_\_

A) ranged from −1 percent to +15 percent.   
 B) ranged from −1 percent to +5 percent.  
 C) were negative only during the Great Depression.  
 D) have always been positive.  
 E) never exceeded 6 percent.

**6)** Another term that refers to the average rate of return is the:

6) \_\_\_\_\_\_

A) variance.   
 B) standard deviation.  
 C) real return.  
 D) mean.  
 E) histogram.

**7)** Which one of the following types of securities produced the lowest real rate of annual return, on average, for the period from 1926 through 2020?

7) \_\_\_\_\_\_

A) U.S. Treasury bills   
 B) Long-term government bonds  
 C) Small-company stocks  
 D) Large-company stocks  
 E) Long-term corporate bonds

**8)** On average, for the period from 1926 through 2020:

8) \_\_\_\_\_\_

A) the real rate of return on U.S. Treasury bills has been negative.   
 B) small-company stocks underperformed large-company stocks.  
 C) long-term government bonds produced higher returns than long-term corporate bonds.  
 D) the excess return on long-term corporate bonds exceeded the excess return on long-term government bonds.  
 E) the excess return on large-company stocks exceeded the excess return on small-company stocks.

**9)** Over the period from 1926 through 2020, the annual rate of return on \_\_\_\_\_ was more volatile than the annual rate of return on \_\_\_\_\_.

9) \_\_\_\_\_\_

A) large-company stocks; small-company stocks   
 B) U.S. Treasury bills; small-company stocks  
 C) U.S. Treasury bills; long-term government bonds  
 D) long-term corporate bonds; small-company stocks  
 E) large-company stocks; long-term corporate bonds

**10)** Which one of the following is a correct ranking of securities based on their volatility during the period from 1926 to 2020? Rank from highest to lowest volatility.

10) \_\_\_\_\_\_

A) Large-company stocks, intermediate-term government bonds, long-term government bonds   
 B) Small-company stocks, long-term corporate bonds, large-company stocks  
 C) Long-term government bonds, long-term corporate bonds, small-company stocks  
 D) Small-company stocks, large-company stocks, long-term corporate bonds  
 E) Long-term corporate bonds, large-company stocks, U.S. Treasury bills

**11)** During the period from 1926 to 2020, small-company stocks had an average annual return of approximately \_\_\_\_ percent.

11) \_\_\_\_\_\_

A) 8   
 B) 14  
 C) 12  
 D) 16  
 E) 10

**12)** During the period from 1926 to 2020, the average annual rate of inflation was approximately \_\_\_\_\_ percent.

12) \_\_\_\_\_\_

A) 5   
 B) 2  
 C) 1  
 D) 4  
 E) 3

**13)** The average annual return on long-term corporate bonds during the period from 1926 to 2020 was \_\_\_\_ percent.

13) \_\_\_\_\_\_

A) 3.8   
 B) 5.2  
 C) 6.5  
 D) 7.9  
 E) 8.4

**14)** The average annual return on small-company stocks was about \_\_\_\_\_ percentage points greater than the average annual return on large-company stocks during the period from 1926 to 2020.

14) \_\_\_\_\_\_

A) 7   
 B) 6  
 C) 5  
 D) 4  
 E) 3

**15)** The average annual estimated real return on U.S. Treasury bills during the period from 1926 to 2020 was \_\_\_\_\_ percent.

15) \_\_\_\_\_\_

A) .4   
 B) 1.6  
 C) 2.2  
 D) 3.1  
 E) 3.8

**16)** The excess return is computed by \_\_\_\_\_\_ the average return for the investment.

16) \_\_\_\_\_\_

A) subtracting the inflation rate from   
 B) adding the inflation rate to  
 C) subtracting the average return on the U.S. Treasury bill from  
 D) adding the average return on the U.S. Treasury bill to  
 E) subtracting the average return on long-term government bonds from

**17)** Which one of the following statements concerning the excess return is correct?

17) \_\_\_\_\_\_

A) The greater the volatility of returns, the greater the expected excess return.   
 B) The lower the volatility of returns, the greater the expected excess return.  
 C) The lower the average rate of return, the greater the excess return.  
 D) The excess return is not correlated to the average rate of return.  
 E) The excess return is not affected by the volatility of returns.

**18)** Which one of the following statements concerning the standard deviation is correct?

18) \_\_\_\_\_\_

A) The standard deviation is a measure of total return.   
 B) The higher the standard deviation, the higher the expected return.  
 C) The standard deviation varies in direct relation to increases in dividend yield.  
 D) The higher the standard deviation, the lower the risk.  
 E) The lower the standard deviation, the less certain the rate of return in any one given year.

**19)** The standard deviation of small-company stocks:

19) \_\_\_\_\_\_

A) had an average value of about 20 percent for the period 1926 to 2020.   
 B) is roughly equivalent to the standard deviation on stocks of all sizes.  
 C) is about ten times as large as the standard deviation of U.S. Treasury bills.  
 D) is less than the standard deviation on large-company stocks.  
 E) produces a narrow normal distribution curve.

**20)** Capital market history shows us that a correct ordering of the average return by asset class, from lowest to highest, is:

20) \_\_\_\_\_\_

A) corporate bonds, U.S. Treasury bills, small-company stocks, large-company stocks.   
 B) U.S. Treasury bills, small-company stocks, large-company stocks, government bonds.  
 C) government bonds, U.S. Treasury bills, large-company stocks, small-company stocks.  
 D) U.S. Treasury bills, government bonds, large-company stocks, small-company stocks.  
 E) U.S. Treasury bills, long-term government bonds, intermediate-term government bonds, small-company stock.

**21)** The average squared difference between the actual return and the average return is called the:

21) \_\_\_\_\_\_

A) volatility return.   
 B) variance.  
 C) standard deviation.  
 D) risk premium.  
 E) excess return.

**22)** The standard deviation for a set of stock returns can be calculated as the:

22) \_\_\_\_\_\_

A) positive square root of the average return.   
 B) average squared difference between the actual return and the average return.  
 C) positive square root of the variance.  
 D) average return divided by N minus one, where N is the number of returns.  
 E) variance squared.

**23)** A symmetric, bell-shaped frequency distribution that is completely defined by its mean and standard deviation is the \_\_\_\_\_ distribution.

23) \_\_\_\_\_\_

A) gamma   
 B) Poisson  
 C) bimodal  
 D) normal  
 E) uniform

**24)** The variance of returns is computed by dividing the sum of the:

24) \_\_\_\_\_\_

A) squared deviations by the number of returns minus one.   
 B) average returns by the number of returns minus one.  
 C) average returns by the number of returns plus one.  
 D) squared deviations by the average rate of return.  
 E) squared deviations by the number of returns plus one.

**25)** The Sharpe ratio is computed as the average:

25) \_\_\_\_\_\_

A) equity risk premium divided by the standard deviation.   
 B) squared deviation divided by the average excess return.  
 C) excess return divided by the variance of the returns.  
 D) equity risk premium divided by the variance.  
 E) squared deviation divided by the (Number of returns − 1).

**26)** The average compound return earned per year over a multi-year period is called the \_\_\_\_\_ average return.

26) \_\_\_\_\_\_

A) arithmetic   
 B) standard  
 C) variant  
 D) geometric  
 E) real

**27)** The return earned in an average year over a multi-year period is called the \_\_\_\_\_ average return.

27) \_\_\_\_\_\_

A) arithmetic   
 B) standard  
 C) variant  
 D) geometric  
 E) real

**28)** Of the following countries, which one had the highest historical equity risk premium for the period 1900-2010?

28) \_\_\_\_\_\_

A) Germany   
 B) Ireland  
 C) Switzerland  
 D) Spain  
 E) Norway

**29)** Which country had the highest Sharpe ratio based on historical equity risk premiums and standard deviations of returns for the period 1900-2010?

29) \_\_\_\_\_\_

A) Italy   
 B) Australia  
 C) United States  
 D) Germany  
 E) Norway

**30)** When estimating the future equity risk premium, it is important to include assumptions about the:

30) \_\_\_\_\_\_

A) historical distribution of returns on derivative securities only.   
 B) future risk environment only.  
 C) amount of risk aversion of future investors only.  
 D) historical distribution of returns on derivative securities and the future risk environment.  
 E) future risk environment and the amount of risk aversion of future investors.

**31)** From November 2007 through January 2009, the S&P 500 index lost approximately what percent of its value?

31) \_\_\_\_\_\_

A) 37   
 B) 51  
 C) 53  
 D) 33  
 E) 45

**32)** In 2008, which country experienced a decline in its stock market value in excess of 90 percent?

32) \_\_\_\_\_\_

A) India   
 B) Russia  
 C) China  
 D) United States  
 E) Iceland

**33)** In 2008, which asset class had the highest rate of return in the U.S.?

33) \_\_\_\_\_\_

A) Small-company stocks   
 B) Long-term U.S. Treasury bonds  
 C) Large-company stocks  
 D) U.S. Treasury bills  
 E) High-quality long-term corporate bonds

**34)** One year ago, you purchased 100 shares of stock for $39.46 per share. The stock paid quarterly dividends of $1.50 per share. Today, the stock is worth $28.70 per share. What is the total dollar return per share to date from this investment?

34) \_\_\_\_\_\_

A) −$76.00   
 B) −$4.76  
 C) −$6.00  
 D) −$14.76  
 E) −$16.76

**35)** Six months ago, you purchased 100 shares of stock at a price of $43.89 per share. The stock paid a quarterly dividend of $.10 per share. Today, you sold all your shares for $45.13 per share. What is the total amount of your capital gains on this investment?

35) \_\_\_\_\_\_

A) $1.24   
 B) $1.64  
 C) $40.00  
 D) $124.00  
 E) $164.00

**36)** A year ago, you purchased 300 shares of stock at a price of $49.03 per share. The stock paid an annual dividend of $.10 per share. Today, you sold all your shares for $58.14 per share. What is your total dollar return on this investment?

36) \_\_\_\_\_\_

A) $2,755   
 B) $2,733  
 C) $2,703  
 D) $2,763  
 E) $3,006

**37)** One year ago, you purchased 100 shares of stock at a price of $24.36 per share. During the last year, you received quarterly dividends of $.80 per share. Today, the stock price is $34.48. What is the dividend yield?

37) \_\_\_\_\_\_

A) 13.14%   
 B) 29.35%  
 C) 3.28%  
 D) 9.28%  
 E) 41.54%

**38)** The stock of Cain & Campos is currently selling for $28 per share. The stock has a dividend yield of 2.6 percent. How much dividend income will you receive per year if you purchase 500 shares of this stock?

38) \_\_\_\_\_\_

A) $130   
 B) $364  
 C) $424  
 D) $280  
 E) $728

**39)** One year ago, you purchased a stock at a price of $32 per share. Today, you sold the stock and realized a total return of 14.62 percent. Your capital gain was $3.48 per share. What was your dividend yield on this stock?

39) \_\_\_\_\_\_

A) 2.25%   
 B) 3.75%  
 C) 3.35%  
 D) 2.85%  
 E) 4.35%

**40)** You just sold 500 shares of Alcove stock at a price of $29.40 per share. Last year you paid $33.44 per share to buy this stock. You received dividends totaling $.95 per share. What is your capital gains yield on this investment?

40) \_\_\_\_\_\_

A) −13.7%   
 B) 11.4%  
 C) 2.8%  
 D) −.7%  
 E) −12.1%

**41)** You purchased 300 shares of Deltona stock for $43.90 per share. You have received a total of $630 in dividends and $14,620 in proceeds from selling the shares. What is your capital gains yield on this stock?

41) \_\_\_\_\_\_

A) 6.23%   
 B) 11.01%  
 C) 17.68%  
 D) 9.55%  
 E) 15.79%

**42)** Today, you sold 300 shares of Workbench stock and realized a total return of 12.5 percent. You purchased the shares one year ago at a price of $27.43 per share. You have received a total of $192 in dividends. What is your capital gains yield on this investment?

42) \_\_\_\_\_\_

A) 14.80%   
 B) 9.39%  
 C) 6.67%  
 D) 10.17%  
 E) 11.67%

**43)** Six months ago, you purchased 1,200 shares of Talisman stock for $21.20 per share and have received total dividend payments of $.60 per share. Today, you sold all your shares for $22.20 per share. What is your total dollar return on this investment?

43) \_\_\_\_\_\_

A) $720   
 B) $1,200  
 C) $1,440  
 D) $1,920  
 E) $3,840

**44)** One year ago, you purchased 100 shares of Acreage stock at a price of $28.68 per share. The company pays quarterly dividends of $1.50 per share. Today, you sold all your shares for $29.42 per share. What is your total percentage return on this investment?

44) \_\_\_\_\_\_

A) 23.5%   
 B) 5.2%  
 C) 22.9%  
 D) 20.4%  
 E) 20.9%

**45)** You bought 360 shares of stock at a total cost of $7,754.40. You received a total of $403.20 in dividends and sold your shares for $19.98 per share. What was your total rate of return?

45) \_\_\_\_\_\_

A) 3.67%   
 B) −2.04%  
 C) −1.29%  
 D) 7.24%  
 E) 5.38%

**46)** You bought 600 shares of stock at $24.20 each. At the end of the year, you received a total of $720 in dividends, and your stock was worth a total of $15,678. What was your total dollar capital gain and total dollar return?

46) \_\_\_\_\_\_

A) $1,878; $2,598   
 B) $1,878; $1,158  
 C) $1,158; $1,878  
 D) $1,158; $2,598  
 E) $2,598; $1,878

**47)** Roller Mills shares are currently selling for $27.38 each. You bought 200 shares one year ago at $26.59 and received dividend payments of $1.27 per share. What was your percentage capital gain for the year?

47) \_\_\_\_\_\_

A) 7.75%   
 B) 2.97%  
 C) −2.89%  
 D) 3.21%  
 E) 7.52%

**48)** One year ago, you purchased 300 shares of Midwya stock at a price of $22.05 per share, received $460 in dividends over the year, and today sold all your shares for $29.32 per share. What was your dividend yield?

48) \_\_\_\_\_\_

A) 5.23%   
 B) 5.87%  
 C) 6.95%  
 D) 1.92%  
 E) 2.48%

**49)** You purchased 300 shares of stock at a price of $37.23 per share. Over the last year, you have received total dividend income of $351. What is the capital gains yield if your total return is 11.47 percent?

49) \_\_\_\_\_\_

A) 8.33%   
 B) 7.26%  
 C) 9.39%  
 D) 9.50%  
 E) 7.67%

**50)** The stock of Cylinder Systems is currently selling for $59.48 per share. The stock has an expected growth rate of 4.22 percent and an expected total return for the next year of 9.87 percent. How much dividend income should you expect to receive next year if you purchase 800 shares of this stock today?

50) \_\_\_\_\_\_

A) $2,309.20   
 B) $2,008.04  
 C) $2,688.50  
 D) $2,380.15  
 E) $2,001.10

**51)** A stock had annual returns of 7.63 percent, 9.28 percent, −3.11 percent, and 15.09 percent for the past four years, respectively. What is the real arithmetic average rate of return for this period if inflation averaged 2.3 percent?

51) \_\_\_\_\_\_

A) 4.15%   
 B) 5.24%  
 C) 4.81%  
 D) 5.02%  
 E) 5.36%

**52)** Three years ago, you purchased a stock at a price of $33.48. The stock paid annual dividends of $.60 per share. Today, the stock is worth $35.20 per share. What is your holding period return?

52) \_\_\_\_\_\_

A) 10.51%   
 B) 10.03%  
 C) 6.93%  
 D) 5.14%  
 E) 6.59%

**53)** Two years ago, you purchased 100 shares of stock in Nature Core at a price of $43.26 per share. The stock pays an annual dividend of $.10 per share. Today, you sold all your shares for $46.71 per share. What is your holding period return?

53) \_\_\_\_\_\_

A) 8.24%   
 B) 7.81%  
 C) 7.97%  
 D) 8.44%  
 E) 8.90%

**54)** A stock had annual returns of 11.6 percent, 9.3 percent, −22.8 percent, and 34.6 percent during the last four-year period. What is his arithmetic mean return on this investment?

54) \_\_\_\_\_\_

A) 7.94%   
 B) 19.58%  
 C) 14.62%  
 D) 11.47%  
 E) 8.18%

**55)** Assume that over the last several decades, the total annual returns on large-company common stocks averaged 12.1 percent, small-company stocks averaged 16.5 percent, long-term government bonds averaged 6 percent, and U.S. T-bills averaged 3.4 percent. What was the average excess return earned by long-term government bonds, and small-company stocks respectively?

55) \_\_\_\_\_\_

A) 4.4%; 2.6%   
 B) 1.8%; 13.3%  
 C) 2.6%; 13.1%  
 D) 2.6%; 4.4%  
 E) 1.9%; 5.1%  
 F) 4.4%; 2.6%

**56)** You invested in long-term corporate bonds and earned 6.8 percent. During that same time period, large-company stocks returned 12.6 percent, long-term government bonds returned 6.4 percent, U.S. Treasury bills returned 4.2 percent, and inflation averaged 3.8 percent. What excess return did you earn?

56) \_\_\_\_\_\_

A) 2.6%   
 B) 2.3%  
 C) 1.3%  
 D) .4%  
 E) 3.0%

**57)** You have a sampling of returns for the Malta Stock Fund. The returns are 7.25 percent, 5.63 percent, 12.56 percent, and 1.08 percent. What is the mean and variance of this sampling?

57) \_\_\_\_\_\_

A) 6.57%; .00287   
 B) 6.63%; .00225  
 C) 6.65%; .00215  
 D) 6.63%; .00287  
 E) 6.63%; .00215

**58)** A stock had returns of 5 percent, −17 percent, and 11 percent during the past three years, respectively. What is the standard deviation of these returns?

58) \_\_\_\_\_\_

A) 14.74%   
 B) 12.04%  
 C) 45.94%  
 D) 5.63%  
 E) 2.17%

**59)** A stock has an expected rate of return of 8.3 percent and a standard deviation of 6.4 percent. Which one of the following best describes the probability that this stock will lose more than 4.50 percent in any one given year?

59) \_\_\_\_\_\_

A) Less than 2.5 percent   
 B) Less than 1.0 percent  
 C) Less than 1.5 percent  
 D) Less than .5 percent  
 E) Less than 5 percent

**60)** A stock had annual returns of 3 percent, 18 percent, and −24 percent over a three-year period. Based on this information, what is the 68 percent probability range for any one given year?

60) \_\_\_\_\_\_

A) −40.53% to 38.53%   
 B) −20.28% to 22.28%  
 C) −20.28% to 20.28%  
 D) −22.28% to 20.28%  
 E) −43.56% to 41.56%

**61)** A stock had annual returns of 8 percent, 14 percent, and 2 percent for the past three years. Based on these returns, what is the probability that this stock will return more than 26 percent in any one given year?

61) \_\_\_\_\_\_

A) 2.5%   
 B) 1.0%  
 C) .5%  
 D) 5.0%  
 E) 16.0%

**62)** A stock had returns of 16 percent, 4 percent, −22 percent, 15 percent, and −2 percent for the past five years. What is the variance of these returns?

62) \_\_\_\_\_\_

A) .01997   
 B) .02037  
 C) .02402  
 D) .01869  
 E) .02340

**63)** A stock had returns of 8 percent, 39 percent, 11 percent, and −24 percent for the past four years. Which one of the following best describes the probability that this stock will *not* lose more than 43 percent in any one given year?

63) \_\_\_\_\_\_

A) 92.5%   
 B) 95.0%  
 C) 97.5%  
 D) 84.0%  
 E) 99.5%

**64)** Over the past four years, a stock produced returns of 14 percent, 22 percent, 6 percent, and −19 percent. What is the approximate probability that an investor in this stock will *not* lose more than 30 percent nor earn more than 41 percent in any one given year?

64) \_\_\_\_\_\_

A) 84%   
 B) 95%  
 C) 68%  
 D) 5%  
 E) 34%

**65)** The returns on a portfolio during the last three years were 4 percent, −15 percent, and 12.5 percent. What is the standard deviation of these returns?

65) \_\_\_\_\_\_

A) 11.50%   
 B) 14.08%  
 C) 38.74%  
 D) 4.75%  
 E) 1.98%

**66)** Suppose you own a risky asset with an expected return of 12.6 percent and a standard deviation of 18.2 percent. If the returns are normally distributed, the most accurate probability that the stock will return more than 50 percent in any one given year is best described as less than:

66) \_\_\_\_\_\_

A) .025 percent.   
 B) .05 percent.  
 C) 2.5 percent.  
 D) .01 percent.  
 E) 1.25 percent.

**67)** The return pattern on your favorite stock has been 5.39 percent, 8.26 percent, −12.04 percent, and 14.27 percent over the last four years. What are the average arithmetic and geometric rates of return?

67) \_\_\_\_\_\_

A) 3.45%; 3.21%   
 B) 3.97%; 3.48%  
 C) 3.88%; 3.64%  
 D) 3.92%; 3.56%  
 E) 3.51%; 3.26%

**68)** What are the arithmetic and geometric average returns (*answer in that order*) for a stock with annual returns of 4 percent, 9 percent, −6 percent, and 18 percent?

68) \_\_\_\_\_\_

A) 5.89%; 6.25%   
 B) 6.25%; 5.89%  
 C) 6.25%; 8.33%  
 D) 8.33%; 5.89%  
 E) 8.33%; 8.33%

**69)** What are the arithmetic and geometric (*answer in that order*) average returns for a stock with annual returns of 9.4 percent, 8.2 percent, −7.3 percent, 4.1 percent, and 9.5 percent?

69) \_\_\_\_\_\_

A) 5.61%; 4.58%   
 B) 5.61%; 4.78%  
 C) 4.78%; 4.58%  
 D) 4.58%; 5.61%  
 E) 4.58%; 4.78%

**70)** A stock had returns of 3.5 percent, −24 percent, 12 percent, and 30.2 percent over the past five years. What is the geometric average return for this time period?

70) \_\_\_\_\_\_

A) 17.4%   
 B) 5.4%  
 C) 17.0%  
 D) 3.5%  
 E) 4.3%

**71)** A stock was priced at $23.08, $24.15, $23.99, and $24.26 at end of Years 1 to 4, respectively. The annual dividend is constant at $.20 per share. What is the geometric average return on this stock?

71) \_\_\_\_\_\_

A) 3.27%   
 B) 2.52%  
 C) 2.56%  
 D) 2.48%  
 E) 2.54%

**72)** Assume a stock had an historical equity risk premium of 5.49 percent and a standard deviation of 11.46 percent over the past two decades. What is the 95.4 percent range for the equity risk premium?

72) \_\_\_\_\_\_

A) −.18% to 9.26%   
 B) −.57% to 15.09%  
 C) .41% to 20.03%  
 D) −.36% to 10.62%  
 E) 1.08% to 22.49%

**73)** You purchased 420 shares of stock at a price of $41.52 per share. Over the last year, you have received total dividend income of $480. What is the dividend yield?

73) \_\_\_\_\_\_

A) 13.2%   
 B) 48.6%  
 C) 2.8%  
 D) 11.6%  
 E) 1.1%

**74)** Six months ago, you purchased 2,800 shares of ABC stock for $31.99 a share. You have received dividend payments equal to $.60 a share. Today, you sold all of your shares for $34.67 a share. What is your total dollar return on this investment?

74) \_\_\_\_\_\_

A) $1,680   
 B) $7,504  
 C) $9,184  
 D) $18,368  
 E) $12,507

**75)** Last year, you purchased a stock at a price of $72.00 a share. Over the course of the year, you received $1.80 per share in dividends and inflation averaged 2.3 percent. Today, you sold your shares for $76.10 a share. What is your approximate real rate of return on this investment?

75) \_\_\_\_\_\_

A) 8.0%   
 B) 8.2%  
 C) 3.4%  
 D) 10.5%  
 E) 5.9%

**76)** What are the arithmetic and geometric average returns for a stock with annual returns of 14 percent, 9 percent, −2 percent, and 15 percent?

76) \_\_\_\_\_\_

A) 9.00%; 8.78%   
 B) 9.00%; 9.88%  
 C) 9.88%; 8.78%  
 D) 9.88%; 9.00%  
 E) 8.78%; 9.00%

**77)** You own a stock that had returns of 11.61 percent, −15.92 percent, 20.78 percent, and 19.37 percent over the past four years. What was the arithmetic average return for this stock?

77) \_\_\_\_\_\_

A) 9.71%   
 B) 9.32%  
 C) 8.96%  
 D) 8.41%  
 E) 7.85%

**78)** You own a stock that had returns of 12.44 percent, −16.94 percent, 22.06 percent, 25.74 percent, and 9.86 percent over the past five years. What was the arithmetic average return for this stock?

78) \_\_\_\_\_\_

A) 10.63%   
 B) 10.07%  
 C) 9.51%  
 D) 11.06%  
 E) 11.52%

**79)** You own a stock that had returns of 9.31 percent, −6.72 percent, 22.38 percent, and 15.07 percent over the past four years. What was the geometric average return for this stock?

79) \_\_\_\_\_\_

A) 10.01%   
 B) 8.84%  
 C) 10.84%  
 D) 9.47%  
 E) 10.41%

**80)** A stock had returns of 12.09 percent, −15.79 percent, 22.51 percent, 27.44 percent, and 11.26 percent over the past five years. What was the geometric average return for this stock?

80) \_\_\_\_\_\_

A) 11.50%   
 B) 12.46%  
 C) 10.39%  
 D) 11.96%  
 E) 10.95%

**81)** A bond had a price of $946.58 at the beginning of the year and a price of $982.90 at the end of the year. The bond's par value is $1,000 and its coupon rate is 5.9 percent. What was the percentage return on the bond for the year?

81) \_\_\_\_\_\_

A) 10.74%   
 B) 10.07%  
 C) 8.81%  
 D) 6.00%  
 E) 3.70%

**82)** A bond par value is $2,000 and the coupon rate is 6.4 percent. The bond price was $1,946.89 at the beginning of the year and $1,984.45 at the end of the year. The inflation rate for the year was 2.3 percent. What was the bond's real return for the year?

82) \_\_\_\_\_\_

A) 6.06%   
 B) 6.45%  
 C) 6.47%  
 D) 8.50%  
 E) 5.31%

**83)** You purchased a stock at a price of $45.82. The stock paid a dividend of $1.75 per share and the stock price at the end of the year is $51.67. What is the capital gains yield?

83) \_\_\_\_\_\_

A) 10.76%   
 B) 16.59%  
 C) 12.77%  
 D) 3.82%  
 E) 11.32%

**84)** You purchased a stock at a price of $48.01. The stock paid a dividend of $1.87 per share and the stock price at the end of the year is $54.01. What was the dividend yield?

84) \_\_\_\_\_\_

A) 4.67%   
 B) 12.50%  
 C) 4.28%  
 D) 16.39%  
 E) 3.90%

**85)** You purchased a stock at a price of $50.44. The stock paid a dividend of $1.71 per share and the stock price at the end of the year was $55.90. What was the total return for the year?

85) \_\_\_\_\_\_

A) 13.52%   
 B) 12.83%  
 C) 3.39%  
 D) 10.82%  
 E) 14.21%

**86)** You purchased a stock at a price of $54.24. The stock paid a dividend of $1.39 per share and the stock price at the end of the year is $48.78. What are your capital gains on this investment?

86) \_\_\_\_\_\_

A) −$1.39   
 B) −$4.77  
 C) −$4.07  
 D) −$5.11  
 E) −$5.46

**87)** Three months ago, you purchased a stock for $74.60. The stock is currently priced at $81.34. What is the EAR on your investment?

87) \_\_\_\_\_\_

A) 9.03%   
 B) 41.34%  
 C) 45.10%  
 D) 33.13%  
 E) 36.14%

**88)** Seven months ago, you purchased 200 shares of Mitchum Trading for $52.86 per share. The stock pays a quarterly dividend of $.20 per share and is currently priced at $53.85. What is the total dividend income you received?

88) \_\_\_\_\_\_

A) $139.00   
 B) $109.50  
 C) $198.00  
 D) $40.00  
 E) $80.00

**89)** One year ago, you purchased 460 shares of Titan Wood Products for $69.68 per share. The stock has paid dividends of $.78 per share over the past year and is currently priced at $74.80. What is your total dollar return on your investment?

89) \_\_\_\_\_\_

A) $2,534.60   
 B) $2,804.47  
 C) $2,355.20  
 D) $2,714.00  
 E) $1,357.00

**90)** You purchased 420 shares of Barden Enterprises stock for $50.78 per share at the beginning of the year. The stock is currently priced at $52.83 per share. What is your dividend yield if you received total dividends of $540 over the year?

90) \_\_\_\_\_\_

A) 2.62%   
 B) 2.43%  
 C) 2.53%  
 D) 2.23%  
 E) 1.27%

**91)** You own 440 shares of Maslyn Tours stock that sells for $57.13 per share. If the stock has a dividend yield of 2.9 percent, how much do you expect to receive next year in dividend income from this investment?

91) \_\_\_\_\_\_

A) $774.54   
 B) $753.28  
 C) $709.99  
 D) $728.98  
 E) $809.98

**92)** One year ago, you purchased a stock at a price of $63.54 per share. Today, you sold your stock at a loss of 18.99 percent. Your capital loss was $13.76 per share. What was the dividend yield on this stock?

92) \_\_\_\_\_\_

A) 2.67%   
 B) 18.77%  
 C) 2.75%  
 D) 17.21%  
 E) 2.96%

**93)** One year ago, you purchased a stock at a price of $55.49 per share. Today, you sold your stock at a loss of 18.67 percent. Your capital loss was $12.71 per share. What was the total dividends per share paid on this stock over the year?

93) \_\_\_\_\_\_

A) $4.24   
 B) $2.35  
 C) $2.14  
 D) $2.61  
 E) $3.88

**94)** You purchased GARP stock one year ago at a price of $66.80 per share. Today, you sold your stock and earned a total return of 18.67 percent. The stock paid dividends of$2.80 per share over the year. What was the capital gains yield on your investment?

94) \_\_\_\_\_\_

A) 17.43%   
 B) 16.09%  
 C) 18.67%  
 D) 14.48%  
 E) 13.16%

**95)** You purchased Butterfly Wing Corporation stock exactly one year ago at a price of $75.63 per share. Over the past year, the stock paid dividends of $2.50 per share. Today, you sold your stock and earned a total return of 15.07 percent. What was the price at which you sold the stock?

95) \_\_\_\_\_\_

A) $91.38   
 B) $87.03  
 C) $89.20  
 D) $84.53  
 E) $92.83

**96)** Last year, you purchased 540 shares of Forever, Incorporated, stock at a price of $46.10 per share. You received $756 in dividends and a total of $27,416 when you sold the stock. What was the capital gains yield on this stock?

96) \_\_\_\_\_\_

A) 9.62%   
 B) 9.35%  
 C) 8.68%  
 D) 10.13%  
 E) 3.04%

**97)** You purchased 1,200 shares of Barrett Golf Corporation stock at a price of $35.84 per share. While you owned the stock, you received dividends totaling $.59 per share. Today, you sold your stock at a price of $39.79 per share. What was your total dollar return on the investment?

97) \_\_\_\_\_\_

A) $5,448   
 B) $5,271  
 C) $5,094  
 D) $4,740  
 E) $4,503

**98)** You purchased 1,050 shares of stock in Natural Chicken Wings, Incorporated, at a price of $43.40 per share. Since you purchased the stock, you have received dividends of $.97 per share. Today, you sold your stock at a price of $46.65 per share. What was your total percentage return on this investment?

98) \_\_\_\_\_\_

A) 10.37%   
 B) 8.61%  
 C) 7.49%  
 D) 9.72%  
 E) 11.06%

**99)** You purchased 1,150 shares of stock in Natural Chicken Wings, Incorporated, at a price of $43.46 per share. Since you purchased the stock, you have received dividends of $1.01 per share. Today, you sold your stock at a price of $46.71 per share. What was your total percentage return on this investment?

99) \_\_\_\_\_\_

A) 7.48%   
 B) 9.80%  
 C) 10.46%  
 D) 11.15%  
 E) 8.64%

**100)** You purchased shares of stock one year ago at a price of $62.92 per share. During the year, you received dividend payments of $1.87 and sold the stock for $70.04 per share. If the inflation rate during the year was 2.27 percent, what was your real return?

100) \_\_\_\_\_\_

A) 10.59%   
 B) 14.32%  
 C) 16.88%  
 D) 8.85%  
 E) 11.75%

**101)** An asset has an average return of 10.39 percent and a standard deviation of 19.23 percent. What range of returns should you expect to see with a 68 percent probability?

101) \_\_\_\_\_\_

A) −28.07% to 48.85%   
 B) −18.46% to 39.24%  
 C) −47.30% to 68.08%  
 D) −8.84% to 11.94%  
 E) −8.84% to 29.62%

**102)** An asset has an average return of 10.55 percent and a standard deviation of 20.46 percent. What range of returns should you expect to see with a 95 percent probability?

102) \_\_\_\_\_\_

A) −30.37% to 51.47%   
 B) −50.83% to 71.93%  
 C) −20.14% to 41.24%  
 D) −9.91% to 11.19%  
 E) −9.91% to 31.01%

**103)** What range of returns should you expect to see with a 99 percent probability on an asset that has an average return of 11.39 percent and a standard deviation of 24.91 percent?

103) \_\_\_\_\_\_

A) −25.98% to 48.76%   
 B) −13.52% to 36.30%  
 C) −63.34% to 86.12%  
 D) −38.43% to 61.21%  
 E) −13.52% to 9.26%

**104)** An asset has an average return of 10.49 percent and a standard deviation of 22.56 percent. What is the most you should expect to lose in any given year with a probability of 16 percent?

104) \_\_\_\_\_\_

A) −12.07%   
 B) −34.63%  
 C) −57.19%  
 D) −33.05%  
 E) −23.35%

**105)** An asset has an average return of 11.27 percent and a standard deviation of 24.09 percent. What is the most you should expect to lose in any given year with a probability of 2.5 percent?

105) \_\_\_\_\_\_

A) −12.82%   
 B) −24.87%  
 C) −59.45%  
 D) −36.91%  
 E) −61.00%

**106)** An asset has an average return of 11.21 percent and a standard deviation of 22.92 percent. What is the most you should expect to earn in any given year with a probability of 16 percent?

106) \_\_\_\_\_\_

A) 23.17%   
 B) 11.71%  
 C) 34.63%  
 D) 34.13%  
 E) 57.55%

**107)** An asset has an average return of 10.85 percent and a standard deviation of 23.46 percent. What is the most you should expect to earn in any given year with a probability of 2.5 percent?

107) \_\_\_\_\_\_

A) 69.50%   
 B) 81.23%  
 C) 46.04%  
 D) 57.77%  
 E) 34.31%

**108)** A stock had returns of 16.19 percent, 24.00 percent, −11.97 percent, and 9.60 percent over four of the past five years. The arithmetic average return over the five years was 13.22 percent. What was the stock return for the missing year?

108) \_\_\_\_\_\_

A) 28.28%   
 B) 15.06%  
 C) 22.62%  
 D) 25.45%  
 E) 4.34%

**109)** A stock had the following year-end prices and dividends:

|  |  |  |
| --- | --- | --- |
| **Year** | **Price** | **Dividend** |
| **0** | $ 59.83 | — |
| **1** | 70.90 | $ 1.23 |
| **2** | 62.50 | 1.51 |
| **3** | 72.18 | 1.58 |

What was the arithmetic average return for the stock?

109) \_\_\_\_\_\_

A) 9.62%   
 B) 16.10%  
 C) 12.02%  
 D) 8.70%  
 E) 16.00%

**110)** A stock had returns of 17.68 percent, −5.04 percent, and 20.27 percent for the past three years. What is the variance of the returns?

110) \_\_\_\_\_\_

A) .01551   
 B) .01939  
 C) .02586  
 D) .13925  
 E) .00833

**111)** A stock had returns of 18.18 percent, −5.34 percent, 20.57 percent, and 8.73 percent for the past four years. What is the variance of the returns?

111) \_\_\_\_\_\_

A) .01842   
 B) .01658  
 C) .01381  
 D) .00631  
 E) .11753

**112)** A stock had returns of 14.35 percent, 18.75 percent, −14.55 percent, 12.35 percent, and 25.03 percent for the past five years. What is the variance of the returns?

112) \_\_\_\_\_\_

A) .00266   
 B) .02306  
 C) .03075  
 D) .15187  
 E) .02768

**113)** A stock had returns of 16.87 percent, −6.63 percent, and 23.63 percent for the past three years. What is the standard deviation of the returns?

113) \_\_\_\_\_\_

A) 12.54%   
 B) 15.88%  
 C) 9.20%  
 D) 2.52%  
 E) 25.23%

**114)** A stock had returns of 16.79 percent, −10.56 percent, 21.84 percent, and 13.39 percent for the past four years. What is the standard deviation of the returns?

114) \_\_\_\_\_\_

A) 12.94%   
 B) 2.07%  
 C) 11.50%  
 D) 20.67%  
 E) 14.38%

**115)** A stock had returns of 18.22 percent, 21.32 percent, −14.36 percent, 8.84 percent, and 27.91 percent for the past five years. What is the standard deviation of the returns?

115) \_\_\_\_\_\_

A) 27.07%   
 B) 16.45%  
 C) 20.57%  
 D) 2.71%  
 E) 13.16%

**116)** Over a certain period, large-company stocks had an average return of 11.99 percent, the average risk-free rate was 2.46 percent, and small-company stocks averaged 16.97 percent. What was the risk premium on small-company stocks for this period?

116) \_\_\_\_\_\_

A) 9.53%   
 B) 19.43%  
 C) 11.61%  
 D) 4.98%  
 E) 14.51%

**117)** If the risk premium on the stock market was 6.66 percent and the risk-free rate was 2.50 percent, what is the stock market return?

117) \_\_\_\_\_\_

A) 7.33%   
 B) 6.66%  
 C) 9.16%  
 D) 4.16%  
 E) 9.99%

**ESSAY. Write your answer in the space provided or on a separate sheet of paper.  
118)** Assume you are comparing two stocks that are identical in every way except that one stock pays dividends and the other does not. How would you expect this difference to affect the annual performance of the dividend-paying stock as compared to the non-dividend-paying stock?

**119)** What does the historical record reveal about the relationship between the returns on U.S. Treasury bills and the rate of inflation as measured by the consumer price index? Is this relationship what investors would tend to expect? Why or why not?

**120)** Based on historical market performance, what can we conclude about the relationship between return and risk?

**121)** What are the lessons learned from capital market history? What evidence is there to suggest these lessons are correct?

**122)** Suppose you have $30,000 invested in the stock market and your banker comes to you and tries to get you to move that money into the bank's certificates of deposit (CDs). He explains that the CDs are 100 percent government insured and that you are taking unnecessary risks by being in the stock market. How would you respond?

**Answer Key**Test name: Chapter 10

1) C

2) E

3) A

4) D

5) A

6) D

7) A

8) D

9) E

10) D

11) D

12) E

13) C

14) D

15) A

16) C

17) A

18) B

19) C

20) D

21) B

22) C

23) D

24) A

25) A

26) D

27) A

28) A

29) B

30) E

31) E

32) E

33) B

34) B

Total dollar return = $28.70 − 39.46 + $1.50(4)  
 Total dollar return = −$4.76

35) D

Capital gain = ($45.13 − 43.89)(100)  
 Capital gain = $124

36) D

Total dollar return = ($58.14 − 49.03 + .10)(300)  
 Total dollar return = $2,763

37) A

Dividend yield = 4($.80)/$24.36  
 Dividend yield = .1314, or 13.14%

38) B

Dividend income = $28(.026)(500)  
 Dividend income = $364

39) B

Dividend yield = .1462 − ($3.48/$32)  
 Dividend yield = .0375, or 3.75%

40) E

g = ($29.40 − 33.44)/($33.44)  
 g = −.121 or −12.1%

41) B

*g* = [$14,620 − (300)($43.90)]/[300($43.90)]  
 *g* = .1101, or 11.01%

42) D

*g* = .125 − [($192/300)/$27.43]  
 *g* = .1017, or 10.17%

43) D

Total dollar return = ($22.20 − 21.20 + .60)(1,200)  
 Total dollar return = $1,920

44) A

R = [$29.42 − 28.68 + $1.50(4)]/$28.68  
 R = .235, or 23.5%

45) B

*R* = [360($19.98) − $7,754.40 + 403.20]/$7,754.40  
 *R* = −.0204, or −2.04%

46) C

Capital gain = $15,678 − 600($24.20)  
 Capital gain = $1,158  
   
 Total dollar return = $1,158 + 720  
 Total dollar return = $1,878

47) B

*g* = ($27.38 − 26.59)/$26.59  
 *g* = .0297, or 2.97%

48) C

Dividend yield = ($460/300)/$22.05  
 Dividend yield = .0695, or 6.95%

49) A

*g* = .1147 − [($351/300)/$37.23]  
 *g* = .0833, or 8.33%

50) C

Dividend income = (.0987 − .0422)($59.48)(800)  
 Dividend income = $2,688.50

51) C

*R* = [.0763 + .0928 + (−.0311) + .1509]/4  
 *R* = .0722, or 7.22%  
   
 *r* = 1.0722/1.023 − 1  
 *r* = .0481, or 4.81%

52) A

*R*3 = [$35.20 − 33.48 + 3($.60)]/$33.48  
 *R*3 = .1051, or 10.51%

53) D

*R*2 = [$46.71 − 43.26 + 2($.10)]/$43.26  
 *R*2 = .0844, or 8.44%

54) E

Mean = [.116 + .093 + (−.228) + .346]/4  
 Mean = .0818, or 8.18%

55) C

Excess returnLong-term bonds = 6% − 3.4%  
 Excess returnLong-term bonds = 2.6%  
   
 Excess returnSmall-company stocks = 16.5% − 3.4%  
 Excess returnSmall-company stocks = 13.1%

56) A

Excess return = 6.8% − 4.2%  
 Excess return = 2.6%

57) B

Average return = (.0725 + .0563 + .1256 + .0108)/4  
 Average return = .0663, or 6.63%  
   
 Variance = [(.0725 − .0663)2 + (.0563 − .0663)2 + (.1256 − .0663)2 + (.0108 − .0663)2]/(4 − 1)  
 Variance = .00225

58) A

Average return = [.05 + (−.17) + .11]/3  
 Average return = −.0333  
   
 SD = {[(.05 − .0333)2 + (−.17 − .0333)2 + (.11 − .0333)2]/(3 − 1)}.5  
 SD = .1474, or 14.74%

59) A

Lower bound95% = .083 − 2(.064)  
 Lower bound95% = −.0450, or −4.50%  
   
 The probability of losing more than 4.50 percent in any one year is less than 2.5 percent.

60) D

Average return = [.03 + .18 + (−.24)]/3  
 Average return = −.01, or −1%  
   
 σ = {[.03 − (−.01)]2 + [.18 − (−.01)]2 + [(−.24) − (−.01)]2}/(3 − 1).5  
 σ = .2128, or 21.28%  
   
 Range68% = −.01 ± 1(.2128)  
 Range68% = −.2228 to .2028, or −22.28% to 20.28%

61) C

Average return = (.08 + .14 + .02)/3  
 Average return = .08, or 8%  
   
 SD = {[(.08 − .08)2 + (.14 − .08)2 + (.02 − .08)2]/(3 − 1)}.5  
 SD = .06, or 6%  
   
 Upper bound99% = .08 + 3(.06)  
 Upper bound99% = .26, or 26%  
   
 There is a .5 percent probability the stock will return more than 26 percent in any one given year.

62) C

Average return = [.16 + .04 + (−.22) + .15 + (−.02)]/5  
 Average return = .022, or 2.20%  
   
 Variance = [(.16 − .022)2 + (.04 − .022)2 + (−.22 − .022)2 + (.15 − .022)2 + (−.02 − .022)2]/(5 − 1)  
 Variance = .02402

63) C

Average return = [.08 + .39 + .11 + (−.24)]/4  
 Average return = .085, or 8.5%  
   
 SD = {[(.08 − .085)2 + (.39 − .085)2 + (.11 − .085)2 + (−.24 − .085)2]/(4 − 1)}.5  
 SD = .2577, or 25.77%  
   
 Lower bound95% = .085 − 2(.2577)  
 Lower bound95% = −.4305, or −43.05%  
   
 Probability of *not* losing more than 43 percent in any given year is approximately 97.5 percent.

64) B

Average return = [.14 + .22 + .06 + (−.19)]/4  
 Average return = .0575, or 5.75%  
   
 SD = {[(.14 − .0575)2 + (.22 − .0575)2 + (.06 − .0575)2 + (−.19 − .0575)2]/(4 − 1)}.5  
 SD = .1775, or 17.75%  
   
 Range95% = .0575 ± 2(.1775)  
 Range95% = −.30 to .41, or −30 to 41%  
   
 Probability of *not* losing more than 30 percent nor earning more than 41 percent in any given year is approximately 95 percent.

65) B

Average return = [.04 + (−.15) + .125]/3  
 Average return = .005, or .5%  
   
 SD = {[(.04 − .005)2 + (−.15 − .005)2 + (.125 − .005)2]/(3 − 1)}.5  
 SD = .1408, or 14.08%

66) C

Upper end95% = .126 + 2(.182)  
 Upper end95% = .49, or 49%  
   
 The probability of a return of 50 percent or more in any one year is less than 2.5 percent.

67) B

AverageArithmetic = [.0539 + .0826 + (−.1204) + .1427]/4  
 AverageArithmetic = .0397 or 3.97%  
   
 AverageGeometric = [1.0539(1.0826)(.8796)(1.1427)].25 − 1  
 AverageGeometric = .0348, or 3.48%

68) B

AverageArithmetic = [.04 + .09 + (−.06) + .18]/4  
 AverageArithmetic = .0625, or 6.25%  
   
 AverageGeometric = [1.04(1.09)(.94)(1.18)].25 − 1  
 AverageGeometric = .0589, or 5.89%

69) C

AverageArithmetic = (.094 + .082 + (−.073) + .041 + .095)/5  
 AverageArithmetic = .0478, or 4.78%  
   
 AverageGeometric = [1.094(1.082)(.927)(1.041)(1.095)].20 − 1  
 AverageGeometric = .0458, or 4.58%

70) D

AverageGeometric = [1.035(.76)(1.12)(1.302)].25 − 1  
 AverageGeometric = .035, or 3.5%

71) B

ReturnYear 2 = ($24.15 − 23.08 + .20)/$23.08 = .055026  
 ReturnYear 3 = ($23.99 − 24.15 + .20)/$24.15 = .001656  
 ReturnYear 4 = ($24.26 − 23.99 + .20)/$23.99 = .019591  
   
 AverageGeometric = [1.055026(1.001656)(1.019591)]1/3 − 1  
 AverageGeometric = .0252, or 2.52%

72) D

Range95.4% = .0549 ± 2(.1146/20.5)  
 Range95.4% = .0036 to .1062, or −.36% to 10.62%

73) C

Dividend yield = ($480/420)/$41.52  
 Dividend yield = .028, or 2.8%

74) C

Total dollar return = 2,800 × ($34.67 − 31.99 + .60)  
 Total dollar return = $9,184

75) E

Nominal return = ($76.10 − 72.00 + 1.80)/$72.00  
 Nominal return = .082, or 8.2%  
   
 Approximate real rate = 8.2% − 2.3%  
 Approximate real rate = 5.9%

76) A

Arithmetic Return = (.14 + .09 − .02 + .15)/4  
 Arithmetic Return = .0900, or 9.00%  
   
 Geometric Return = [(1 + .14) × (1 + .09) × (1 − .02) × (1 + .15)] ¼ − 1  
 Geometric Return = .0878, or 8.78%

77) C

Arithmetic return = (11.61% − 15.92 + 20.78 + 19.37)/4  
 Arithmetic return = 8.96%

78) A

Arithmetic return = (12.44% − 16.94 + 22.06 + 25.74 + 9.86)/5  
 Arithmetic return = 10.63%

79) D

Geometric return = [(1 + .0931) × (1 − .0672) × (1 + .2238) × (1 + .1507)]1/4 − 1  
 Geometric return = .0947, or 9.47%

80) C

Geometric return = [(1 + .1209) × (1 − .1579) × (1 + .2251) × (1 + .2744) × (1 + .1126)]1/5 − 1  
 Geometric return = .1039, or 10.39%

81) B

Bond return = ($982.90 − 946.58 + 59) / $946.58  
 Bond return = .1007, or 10.07%

82) A

Bond return = ($1,984.45 − 1,946.89 + 128)/$1,946.89  
 Bond return = .0850, or 8.50%  
   
 *r* = [(1 + .0850) / (1 + .0230] − 1  
 *r* = .0606, or 6.06%

83) C

Capital gains yield = ($51.67 − 45.82)/$45.82  
 Capital gains yield = .1277, or 12.77%

84) E

Dividend yield = $1.87/$48.01  
 Dividend yield = .0390, or 3.90%

85) E

Total return = ($55.90 − 50.44 + 1.71)/$50.44  
 Total return = .1421, or 14.21%

86) E

Capital gain = $48.78 − 54.24  
 Capital gain = −$5.46

87) B

3-month return = ($81.34 − 74.60)/$74.60  
 3-month return = .0903, or 9.03%  
   
 EAR = (1 + .0903)4 − 1  
 EAR = .4134, or 41.34%

88) E

Dividend income = $.20 × 2 × 200  
 Dividend income = $80.00

89) D

Dollar return = ($74.80 − 69.68 + .78) × 460  
 Dollar return = $2,714.00

90) C

Dividend yield = ($540.00/420)/$50.78  
 Dividend yield = .0253, or 2.53%

91) D

Dividends = 440 × $57.13 × .029  
 Dividends = $728.98

92) A

Dividend yield = −.1899 − (−$13.76/$63.54)  
 Dividend yield = .0267, or 2.67%

93) B

Dividend yield = −.1867 − (−$12.71/$55.49)  
 Dividend yield = .0424, or 4.24%  
   
 Dividends per share = $55.49 × .0424  
 Dividends per share = $2.35

94) D

Dividend yield = $2.80/$66.80  
 Dividend yield = .0419, or 4.19%  
   
 Capital gains yield = 18.67% − 4.19%  
 Capital gains yield = 14.48%

95) D

Dividend yield = $2.50/$75.63  
 Dividend yield = .0331, or 3.31%  
   
 Capital gains yield = 15.07% − 3.31%  
 Capital gains yield = 11.76%  
   
 Ending price = $75.63(1 + .1176)  
 Ending price = $84.53

96) D

Capital gains yield = [($27,416/540) − 46.10]/$46.10  
 Capital gains yield = .1013, or 10.13%

97) A

Total dollar return = ($39.79 − 35.84 + .59) × 1,200  
 Total dollar return = $5,448

98) D

Total return = ($46.65 − 43.40 + .97) / $43.40  
 Total return = .0972, or 9.72%

99) B

Total return = ($46.71 − 43.46 + 1.01) / $43.46  
 Total return = .0980, or 9.80%

100) E

Nominal total return = ($70.04 − 62.92 + 1.87) / $62.92  
 Nominal total return = .1429, or 14.29%  
   
 Real return = [(1 + .1429) / (1 + .0227)] − 1  
 Real return = .1175, or 11.75%

101) E

Range = 10.39% +/− 19.23%  
 Range = −8.84% to 29.62%

102) A

Range = 10.55% +/− (20.46 × 2)%  
 Range = −30.37% to 51.47%

103) C

Range = 11.39% +/− (24.91\*3)%  
 Range = −63.34% to 86.12%

104) A

Maximum loss = 10.49% − 22.56%  
 Maximum loss = −12.07%

105) D

Maximum loss = 11.27% − (2 × 24.09%)  
 Maximum loss = −36.91%

106) D

Maximum gain = 11.21% + 22.92%  
 Maximum gain = 34.13%

107) D

Maximum gain = 10.85% + (2 × 23.46%)  
 Maximum gain = 57.77%

108) A

13.22% = (16.19% + 24.00% − 11.97% + 9.60% + *X*) / 5  
 *X* = 28.28%

109) A

Year 1 return = ($70.90 − 59.83 + 1.23) / $59.83 = .2056, or 20.56%  
 Year 2 return = ($62.50 − 70.90 + 1.51) / $70.90 = −.0972, or −9.72%  
 Year 3 return = ($72.18 − 62.50 + 1.58) / $62.50 = .1802, or 18.02%  
   
 Arithmetic average return = (20.56% − 9.72 + 18.02) / 3  
 Arithmetic average return = .0962, or 9.62%

110) B

Average return = (.1768 − .0504 + .2027)/3  
 Average return = .1097, or 10.97%  
   
 Variance = 1/2[(.1768 − .1097)2 + (−.0504 − .1097)2 + (.2027 − .1097)2]  
 Variance = .01939

111) C

Average return = (.1818 − .0534 + .2057 + .0873)/4  
 Average return = .1054, or 10.54%  
   
 Variance = 1/3[(.1818 − .1054)2 + (−.0534 − .1054)2 + (.2057 − .1054)2 + (.0873 − .1054)2]  
 Variance = .01381

112) B

Average return = (.1435 + .1875 − .1455 + .1235 + .2503)/4  
 Average return = .1119, or 11.19%  
   
 Variance = 1/4[(.1435 − .1119)2 + (.1875 − .1119)2 + (−.1455 − .1119)2 + (.1235 − .1119)2 + (.2503 − .1119)2]  
 Variance = .02306

113) B

Average return = (.1687 − .0663 + .2363)/3  
 Average return = .1129, or 11.29%  
   
 Variance = 1/2[(.1687 − .1129)2 + (−.0663 − .1129)2 + (.2363 − .1129)2]  
 Variance = .02523  
   
 Standard deviation = .025231/2  
 Standard deviation = .1588, or 15.88%

114) E

Average return = (.1679 − .1056 + .2184 + .1339)/4  
 Average return = .1037, or 10.37%  
   
 Variance = 1/3[(.1679 − .1037)2 + (−.1056 − .1037)2 + (.2184 − .1037)2 + (.1339 − .1037)2]  
 Variance = .02067  
   
 Standard deviation = .020671/2  
 Standard deviation = .1438, or 14.38%

115) B

Average return = (.1822 + .2132 − .1436 + .0884 + .2791)/5  
 Average return = .1239, or 12.39%  
   
 Variance = 1/4[(.1822 − .1239)2 + (.2132 − .1239)2 + (−.1436 − .1239)2 + (.0884 − .1239)2 + (.2791 − .1239)2]  
 Variance = .02707  
   
 Standard deviation = .027071/2  
 Standard deviation = .1645, or 16.45%

116) E

Small-company stock risk premium = 16.97% − 2.46  
 Small-company stock risk premium = 14.51%

117) C

Market return = 6.66% + 2.50  
 Market return = 9.16%

118) The presence of dividends increases a positive total rate of return and decreases a negative rate of return (causing the return to be less negative, zero, or even positive). In other words, the dividend yield increases the total return.

119) Historically, the relationship between U.S. Treasury bills and the inflation rate is a mixed bag. In other words, sometimes T-bills outperform inflation and other times T-bills underperform inflation. Investors would tend to expect to earn a positive real rate of return, but in many years, this does not occur causing investors to lose purchasing power on their T-bill investments.

120) Historical performance clearly illustrates that returns and risks are directly related over the long term. The greater the risk, the greater the expected return. For any one period, however, the actual return may vary significantly from the expected return - that’s the risk.

121) First, there is a reward for bearing risk, and second, the greater the risk, the greater the reward. As evidence, the students should provide a brief discussion of the historical rates of return and standard deviation of returns of the various asset classes discussed in the text.

122) The usual response is that bank CDs typically will offer a very low rate of return because of their low level of risk. Even if students do not know the relationship between yields on CDs and historical returns on stocks, they should recognize that because of the risk differences the CDs must have a lower expected return. So, if the investor in the question is willing to trade off some safety in order to have the chance to earn larger returns, the stock market is the correct investment.