***Fundamentals of Investments, 8e* (Jordan)**

**Chapter 1 A Brief History of Risk and Return**

1) The total dollar return on a share of stock is defined as the:

A) change in the price of the stock over a period of time.

B) dividend income divided by the beginning price per share.

C) capital gain or loss plus any dividend income.

D) change in the stock price divided by the original stock price.

E) annual dividend income received.

Answer: C

Explanation: See Section 1.1

Difficulty: 1 Easy

Section: 1.1 Returns

Topic: Stock returns and yields

Learning Objective: 01-01 How to calculate the return on an investment using different methods.

Bloom's: Level 1 Remember

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2) The dividend yield is defined as the annual dividend expressed as a percentage of the:

A) average stock price.

B) initial stock price.

C) ending stock price.

D) total annual return.

E) capital gain.

Answer: B

Explanation: See Section 1.1

Difficulty: 1 Easy

Section: 1.1 Returns

Topic: Stock returns and yields

Learning Objective: 01-01 How to calculate the return on an investment using different methods.

Bloom's: Level 1 Remember

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3) The capital gains yield is equal to:

A) (Pt - Pt + 1 + Dt + 1)/Pt + 1.

B) (Pt + 1 - Pt + Dt)/Pt.

C) Dt + 1/Pt.

D) (Pt + 1 - Pt)/Pt.

E) (Pt + 1 - Pt)/Pt + 1.

Answer: D

Explanation: See Section 1.1

Difficulty: 1 Easy

Section: 1.1 Returns

Topic: Stock returns and yields

Learning Objective: 01-01 How to calculate the return on an investment using different methods.

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4) When the total return on an investment is expressed on a per-year basis it is called the:

A) capital gains yield.

B) dividend yield.

C) holding period return.

D) effective annual return.

E) initial return.

Answer: D

Explanation: See Section 1.1

Difficulty: 1 Easy

Section: 1.1 Returns

Topic: Annual, holding period, and effective rates

Learning Objective: 01-01 How to calculate the return on an investment using different methods.

Bloom's: Level 1 Remember

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5) The risk-free rate is:

A) another term for the dividend yield.

B) defined as the increase in the value of a share of stock over time.

C) the rate of return earned on an investment in a firm that you personally own.

D) defined as the total of the capital gains yield plus the dividend yield.

E) the rate of return on a riskless investment.

Answer: E

Explanation: See Section 1.3

Difficulty: 1 Easy

Section: 1.3 Average Returns: The First Lesson

Topic: Risk and return relationship

Learning Objective: 01-01 How to calculate the return on an investment using different methods.

Bloom's: Level 1 Remember

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6) The rate of return earned on a U.S. Treasury bill is frequently used as a proxy for the:

A) risk premium.

B) deflated rate of return.

C) risk-free rate.

D) expected rate of return.

E) market rate of return.

Answer: C

Explanation: See Section 1.3

Difficulty: 1 Easy

Section: 1.3 Average Returns: The First Lesson

Topic: Risk and return relationship

Learning Objective: 01-01 How to calculate the return on an investment using different methods.

Bloom's: Level 1 Remember

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7) The risk premium is defined as the rate of return on:

A) a risky asset minus the risk-free rate.

B) the overall market.

C) a U.S. Treasury bill.

D) a risky asset minus the inflation rate.

E) a riskless investment.

Answer: A

Explanation: See Section 1.3

Difficulty: 1 Easy

Section: 1.3 Average Returns: The First Lesson

Topic: Risk premiums

Learning Objective: 01-03 The historical risks on various important types of investments.

Bloom's: Level 1 Remember

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8) The additional return earned for accepting risk is called the:

A) inflated return.

B) capital gains yield.

C) real return.

D) riskless rate.

E) risk premium.

Answer: E

Explanation: See Section 1.3

Difficulty: 1 Easy

Section: 1.3 Average Returns: The First Lesson

Topic: Risk premiums

Learning Objective: 01-03 The historical risks on various important types of investments.

Bloom's: Level 1 Remember

Accessibility: Keyboard Navigation

9) The standard deviation is a measure of:

A) volatility.

B) total return.

C) capital gains.

D) changes in dividend yields.

E) changes in the capital gains rate.

Answer: A

Explanation: See Section 1.4

Difficulty: 1 Easy

Section: 1.4 Return Variability: The Second Lesson

Topic: Standard deviation and variance

Learning Objective: 01-03 The historical risks on various important types of investments.

Bloom's: Level 1 Remember

Accessibility: Keyboard Navigation

10) A frequency distribution, which is completely defined by its average (mean) and variance or standard deviation, is referred to as a(n):

A) normal distribution.

B) variance distribution.

C) expected rate of return.

D) average geometric return.

E) average arithmetic return.

Answer: A

Explanation: See Section 1.4

Difficulty: 1 Easy

Section: 1.4 Return Variability: The Second Lesson

Topic: Normal probability distribution

Learning Objective: 01-03 The historical risks on various important types of investments.

Bloom's: Level 1 Remember

Accessibility: Keyboard Navigation

11) The arithmetic average return is the:

A) summation of the returns for a number of years, t, divided by (t - 1).

B) compound total return for a period of years, t, divided by t.

C) average compound return earned per year over a multi-year period.

D) average squared return earned in a single year.

E) return earned in an average year over a multi-year period.

Answer: E

Explanation: See Section 1.5

Difficulty: 1 Easy

Section: 1.5 More on Average Returns

Topic: Arithmetic, geometric, and dollar-weighted returns

Learning Objective: 01-01 How to calculate the return on an investment using different methods.

Bloom's: Level 1 Remember

Accessibility: Keyboard Navigation

12) The average compound return earned per year over a multi-year period is called the:

A) total return

B) average capital gains yield

C) variance

D) arithmetic average return

E) geometric average return

Answer: E

Explanation: See Section 1.5

Difficulty: 1 Easy

Section: 1.5 More on Average Returns

Topic: Arithmetic, geometric, and dollar-weighted returns

Learning Objective: 01-01 How to calculate the return on an investment using different methods.

Bloom's: Level 1 Remember

Accessibility: Keyboard Navigation

13) The average compound return earned per year over a multi-year period when inflows and outflows are considered is called the:

A) total return.

B) average capital gains yield.

C) dollar-weighted average return.

D) arithmetic average return.

E) geometric average return.

Answer: C

Explanation: See Section 1.5

Difficulty: 1 Easy

Section: 1.5 More on Average Returns

Topic: Arithmetic, geometric, and dollar-weighted returns

Learning Objective: 01-01 How to calculate the return on an investment using different methods.

Bloom's: Level 1 Remember

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14) Which one of the following statements is correct concerning the dividend yield and the total return?

A) The dividend yield can be zero while the total return must be a positive value.

B) The total return can be negative but the dividend yield cannot be negative.

C) The total return must be greater than the dividend yield.

D) The total return plus the capital gains yield is equal to the dividend yield.

E) The dividend yield exceeds the total return when a stock increases in value.

Answer: B

Explanation: See Section 1.1

Difficulty: 1 Easy

Section: 1.1 Returns

Topic: Stock returns and yields

Learning Objective: 01-01 How to calculate the return on an investment using different methods.

Bloom's: Level 2 Understand

Accessibility: Keyboard Navigation

15) An annualized return:

A) is less than a holding period return when the holding period is less than one year.

B) is expressed as the summation of the capital gains yield and the dividend yield on an investment.

C) is expressed as the capital gains yield that would have been realized if an investment had been held for a twelve-month period.

D) is computed as (1 + holding period percentage return)m, where m is the number of holding periods in a year.

E) is computed as (1 + holding period percentage return)m, where m is the number of months in the holding period.

Answer: D

Explanation: See Section 1.1

Difficulty: 1 Easy

Section: 1.1 Returns

Topic: Annual, holding period, and effective rates

Learning Objective: 01-01 How to calculate the return on an investment using different methods.

Bloom's: Level 2 Understand

Accessibility: Keyboard Navigation

16) Stacey purchased 300 shares of Coulter Industries stock and held it for 4 months before reselling it. What is the value of "m" when computing the annualized return on this investment?

A) 0.25

B) 0.33

C) 0.40

D) 3.00

E) 4.00

Answer: D

Explanation: See Section 1.1

Difficulty: 1 Easy

Section: 1.1 Returns

Topic: Annual, holding period, and effective rates

Learning Objective: 01-01 How to calculate the return on an investment using different methods.

Bloom's: Level 2 Understand

Accessibility: Keyboard Navigation

17) Capital gains are included in the return on an investment:

A) when either the investment is sold or the investment has been owned for at least one year.

B) only if the investment is sold and the capital gain is realized.

C) whenever dividends are paid.

D) whether or not the investment is sold.

E) only if the investment incurs a loss in value or is sold.

Answer: D

Explanation: See Section 1.1

Difficulty: 1 Easy

Section: 1.1 Returns

Topic: Stock returns and yields

Learning Objective: 01-01 How to calculate the return on an investment using different methods.

Bloom's: Level 2 Understand

Accessibility: Keyboard Navigation

18) When we refer to the rate of return on an investment, we are generally referring to the:

A) capital gains yield.

B) effective annual rate of return.

C) total percentage return.

D) dividend yield.

E) annualized dividend yield.

Answer: C

Explanation: See Section 1.1

Difficulty: 1 Easy

Section: 1.1 Returns

Topic: Stock returns and yields

Learning Objective: 01-01 How to calculate the return on an investment using different methods.

Bloom's: Level 2 Understand

Accessibility: Keyboard Navigation

19) Which one of the following should be used to compare the overall performance of three different investments?

A) holding period dollar return

B) capital gains yield

C) dividend yield

D) holding period percentage return

E) effective annual return

Answer: E

Explanation: See Section 1.1

Difficulty: 1 Easy

Section: 1.1 Returns

Topic: Annual, holding period, and effective rates

Learning Objective: 01-01 How to calculate the return on an investment using different methods.

Bloom's: Level 2 Understand

Accessibility: Keyboard Navigation

20) If you multiply the number of shares outstanding for a stock by the price per share, you are computing the firm's:

A) equity ratio.

B) total book value.

C) market share.

D) market capitalization.

E) time value.

Answer: D

Explanation: See Section 1.2

Difficulty: 1 Easy

Section: 1.2 The Historical Record

Topic: Market, book, and other firm values

Learning Objective: 01-01 How to calculate the return on an investment using different methods.

Bloom's: Level 2 Understand

Accessibility: Keyboard Navigation

21) Which one of the following is considered the best method of comparing the returns on various-sized investments?

A) total dollar return

B) real dollar return

C) absolute dollar return

D) percentage return

E) variance return

Answer: D

Explanation: See Section 1.1

Difficulty: 1 Easy

Section: 1.1 Returns

Topic: Stock returns and yields

Learning Objective: 01-01 How to calculate the return on an investment using different methods.

Bloom's: Level 2 Understand

Accessibility: Keyboard Navigation

22) Which one of the following had the highest average return for the period 1926-2016?

A) large-company stocks

B) U.S. Treasury bills

C) long-term government bonds

D) small-company stocks

E) long-term corporate bonds

Answer: D

Explanation: See Section 1.2

Difficulty: 1 Easy

Section: 1.2 The Historical Record

Topic: Historical market performance

Learning Objective: 01-02 The historical returns on various important types of investments.

Bloom's: Level 2 Understand

Accessibility: Keyboard Navigation

23) Which one of the following statements is correct based on the historical returns for the period 1926-2016?

A) For the period, Treasury bills yielded a higher rate of return than long-term government bonds.

B) The inflation rate exceeded the rate of return on Treasury bills during some years.

C) Small-company stocks outperformed large-company stocks every year during the period.

D) Bond prices, in general, were more volatile than stock prices.

E) For the period, large-company stocks outperformed small-company stocks.

Answer: B

Explanation: See Section 1.2

Difficulty: 1 Easy

Section: 1.2 The Historical Record

Topic: Historical market performance

Learning Objective: 01-02 The historical returns on various important types of investments.

Bloom's: Level 2 Understand

Accessibility: Keyboard Navigation

24) Which category(ies) of investments had an annual rate of return that exceeded 100 percent for at least one year during the period 1926-2016?

A) only large-company stocks

B) both large-company and small-company stocks

C) only small-company stocks

D) corporate bonds, large-company stocks, and small-company stocks

E) No category earned an annual return in excess of 100 percent for any given year during the period

Answer: C

Explanation: See Section 1.2

Difficulty: 1 Easy

Section: 1.2 The Historical Record

Topic: Historical market performance

Learning Objective: 01-02 The historical returns on various important types of investments.

Bloom's: Level 2 Understand

Accessibility: Keyboard Navigation

25) For the period 1926-2016, the annual return on large-company stocks:

A) was negative following every three-year period of positive returns.

B) was only negative for two or more consecutive years during the Great Depression.

C) remained negative for at least two consecutive years anytime that it was negative.

D) never exceeded a positive 30 percent nor lost more than 20 percent.

E) was unpredictable based on the prior year's performance.

Answer: E

Explanation: See Section 1.2

Difficulty: 2 Medium

Section: 1.2 The Historical Record

Topic: Historical market performance

Learning Objective: 01-02 The historical returns on various important types of investments.

Bloom's: Level 2 Understand

Accessibility: Keyboard Navigation

26) Which one of the following had the highest risk premium for the period 1926-2016?

A) U.S. Treasury bills

B) long-term government bonds

C) large-company stocks

D) small-company stocks

E) intermediate-term government bonds

Answer: D

Explanation: See Section 1.3

Difficulty: 1 Easy

Section: 1.3 Average Returns: The First Lesson

Topic: Historical market performance

Learning Objective: 01-03 The historical risks on various important types of investments.

Bloom's: Level 2 Understand

Accessibility: Keyboard Navigation

27) Based on the period 1926-2016, the risk premium for U.S. Treasury bills was:

A) 0.0 percent.

B) 1.2 percent.

C) 2.0 percent.

D) 2.4 percent.

E) 2.7 percent.

Answer: A

Explanation: See Section 1.3

Difficulty: 1 Easy

Section: 1.3 Average Returns: The First Lesson

Topic: Historical market performance

Learning Objective: 01-03 The historical risks on various important types of investments.

Bloom's: Level 2 Understand

Accessibility: Keyboard Navigation

28) Based on the period of 1926-2015, the risk premium for small-company stocks averaged:

A) 12.3 percent.

B) 13.9 percent.

C) 15.0 percent.

D) 16.8 percent.

E) 17.4 percent.

Answer: B

Explanation: See Section 1.3

Difficulty: 1 Easy

Section: 1.3 Average Returns: The First Lesson

Topic: Historical market performance

Learning Objective: 01-03 The historical risks on various important types of investments.

Bloom's: Level 2 Understand

Accessibility: Keyboard Navigation

29) The average risk premium on large-company stocks for the period 1926-2015 was:

A) 6.7 percent.

B) 8.3 percent.

C) 8.5 percent.

D) 12.3 percent.

E) 13.6 percent.

Answer: B

Explanation: See Section 1.3

Difficulty: 1 Easy

Section: 1.3 Average Returns: The First Lesson

Topic: Historical market performance

Learning Objective: 01-03 The historical risks on various important types of investments.

Bloom's: Level 2 Understand

Accessibility: Keyboard Navigation

30) The average risk premium on long-term corporate bonds for the period 1926-2015 was:

A) 2.4 percent.

B) 2.9 percent.

C) 3.3 percent.

D) 3.7 percent.

E) 3.9 percent.

Answer: B

Explanation: See Section 1.3

Difficulty: 1 Easy

Section: 1.3 Average Returns: The First Lesson

Topic: Historical market performance

Learning Objective: 01-03 The historical risks on various important types of investments.

Bloom's: Level 2 Understand

Accessibility: Keyboard Navigation

31) Which one of the following had the narrowest bell curve for the period 1926-2015?

A) large-company stocks

B) long-term corporate bonds

C) long-term government bonds

D) small-company stocks

E) U.S. Treasury bills

Answer: E

Explanation: See Section 1.4

Difficulty: 1 Easy

Section: 1.4 Return Variability: The Second Lesson

Topic: Historical market performance

Learning Objective: 01-03 The historical risks on various important types of investments.

Bloom's: Level 2 Understand

Accessibility: Keyboard Navigation

32) Which one of the following had the greatest volatility of returns for the period 1926-2015?

A) large-company stocks

B) U.S. Treasury bills

C) long-term government bonds

D) small-company stocks

E) long-term corporate bonds

Answer: D

Explanation: See Section 1.4

Difficulty: 1 Easy

Section: 1.4 Return Variability: The Second Lesson

Topic: Historical market performance

Learning Objective: 01-03 The historical risks on various important types of investments.

Bloom's: Level 2 Understand

Accessibility: Keyboard Navigation

33) Which one of the following had the smallest standard deviation of returns for the period 1926-2015?

A) large-company stocks

B) small-company stocks

C) long-term government bonds

D) intermediate-term government bonds

E) long-term corporate bonds

Answer: E

Explanation: See Section 1.4

Difficulty: 1 Easy

Section: 1.4 Return Variability: The Second Lesson

Topic: Historical market performance

Learning Objective: 01-03 The historical risks on various important types of investments.

Bloom's: Level 2 Understand

Accessibility: Keyboard Navigation

34) For the period 1926-2015, long-term government bonds had an average return that \_\_\_\_\_\_\_\_ the average return on long-term corporate bonds while having a standard deviation that \_\_\_\_\_\_\_\_ the standard deviation of the long-term corporate bonds.

A) exceeded; was less than

B) exceeded; equaled

C) exceeded; exceeded

D) was less than; exceeded

E) was less than; was less than

Answer: D

Explanation: See Section 1.4

Difficulty: 2 Medium

Section: 1.4 Return Variability: The Second Lesson

Topic: Historical market performance

Learning Objective: 01-04 The relationship between risk and return.

Bloom's: Level 2 Understand

Accessibility: Keyboard Navigation

35) The mean plus or minus one standard deviation defines the \_\_\_\_\_\_\_\_ percent probability range of a normal distribution.

A) 50

B) 68

C) 82

D) 90

E) 95

Answer: B

Explanation: See Section 1.4

Difficulty: 1 Easy

Section: 1.4 Return Variability: The Second Lesson

Topic: Normal probability distribution

Learning Objective: 01-03 The historical risks on various important types of investments.

Bloom's: Level 2 Understand

Accessibility: Keyboard Navigation

36) Assume you own a portfolio that is invested 50 percent in large-company stocks and 50 percent in corporate bonds. If you want to increase the potential annual return on this portfolio, you could:

A) decrease the investment in stocks and increase the investment in bonds.

B) replace the corporate bonds with intermediate-term government bonds.

C) replace the corporate bonds with Treasury bills.

D) increase the standard deviation of the portfolio.

E) reduce the expected volatility of the portfolio.

Answer: D

Explanation: See Section 1.4

Difficulty: 2 Medium

Section: 1.4 Return Variability: The Second Lesson

Topic: Standard deviation and variance

Learning Objective: 01-04 The relationship between risk and return.

Bloom's: Level 2 Understand

Accessibility: Keyboard Navigation

37) Which one of the following statements is correct?

A) The standard deviation of the returns on Treasury bills is zero.

B) Large-company stocks are historically riskier than small-company stocks.

C) The standard deviation is a means of measuring the volatility of returns on an investment.

D) A risky asset will always have a higher annual rate of return than a riskless asset.

E) There is an indirect relationship between risk and return.

Answer: C

Explanation: See Section 1.4

Difficulty: 2 Medium

Section: 1.4 Return Variability: The Second Lesson

Topic: Standard deviation and variance

Learning Objective: 01-04 The relationship between risk and return.

Bloom's: Level 2 Understand

Accessibility: Keyboard Navigation

38) The wider the distribution of an investment's returns over time, the \_\_\_\_\_\_\_\_ the expected average rate of return and the \_\_\_\_\_\_\_\_ the expected volatility of those returns.

A) higher; higher

B) higher; lower

C) lower; higher

D) lower; lower

E) The distribution of returns does not affect the expected average rate of return.

Answer: A

Explanation: See Section 1.4

Difficulty: 1 Easy

Section: 1.4 Return Variability: The Second Lesson

Topic: Normal probability distribution

Learning Objective: 01-04 The relationship between risk and return.

Bloom's: Level 2 Understand

Accessibility: Keyboard Navigation

39) Which one of the following should be used as the mean return when you are defining the normal distribution of an investment's annual rates of return?

A) arithmetic average return for the period

B) geometric average return for the period

C) total return for the period divided by N - 1

D) arithmetic average return for the period divided by N - 1

E) geometric average return for the period divided by N - 1

Answer: A

Explanation: See Section 1.4

Difficulty: 1 Easy

Section: 1.4 Return Variability: The Second Lesson

Topic: Normal probability distribution

Learning Objective: 01-03 The historical risks on various important types of investments.

Bloom's: Level 2 Understand

Accessibility: Keyboard Navigation

40) The geometric mean return on large-company stocks for the 1926-2015 period:

A) is approximately equal to the arithmetic mean return plus one-half of the standard deviation.

B) exceeds the arithmetic mean return.

C) is approximately equal to the arithmetic mean return minus one-half of the standard deviation.

D) is approximately equal to the arithmetic mean return plus one-half of the variance.

E) is less than the arithmetic mean return.

Answer: E

Explanation: See Section 1.5

Difficulty: 1 Easy

Section: 1.5 More on Average Returns

Topic: Arithmetic, geometric, and dollar-weighted returns

Learning Objective: 01-02 The historical returns on various important types of investments.

Bloom's: Level 2 Understand

Accessibility: Keyboard Navigation

41) You have owned a stock for seven years. The geometric average return on this investment for those seven years is positive even though the annual rates of return have varied significantly. Given this, you know the arithmetic average return for the period is:

A) positive but less than the geometric average return.

B) less than the geometric return and could be negative, zero, or positive.

C) equal to the geometric average return.

D) either equal to or greater than the geometric average return.

E) greater than the geometric average return.

Answer: E

Explanation: See Section 1.5

Difficulty: 2 Medium

Section: 1.5 More on Average Returns

Topic: Arithmetic, geometric, and dollar-weighted returns

Learning Objective: 01-01 How to calculate the return on an investment using different methods.

Bloom's: Level 2 Understand

Accessibility: Keyboard Navigation

42) The geometric return on an investment is approximately equal to the arithmetic return:

A) plus half the standard deviation.

B) plus half the variance.

C) minus half the standard deviation.

D) minus half the variance.

E) divided by two.

Answer: D

Explanation: See Section 1.5

Difficulty: 1 Easy

Section: 1.5 More on Average Returns

Topic: Arithmetic, geometric, and dollar-weighted returns

Learning Objective: 01-01 How to calculate the return on an investment using different methods.

Bloom's: Level 2 Understand

Accessibility: Keyboard Navigation

43) Blume's formula is used to:

A) predict future rates of return.

B) convert an arithmetic average return into a geometric average return.

C) convert a geometric average return into an arithmetic average return.

D) measure past performance in a consistent manner.

E) compute the historical mean return over a multi-year period of time.

Answer: A

Explanation: See Section 1.5

Difficulty: 1 Easy

Section: 1.5 More on Average Returns

Topic: Arithmetic, geometric, and dollar-weighted returns

Learning Objective: 01-01 How to calculate the return on an investment using different methods.

Bloom's: Level 2 Understand

Accessibility: Keyboard Navigation

44) One year ago, you purchased 200 shares of Southern Foods common stock for $39.50 a share.

Today, you sold your shares for $35.40 a share. During this past year, the stock paid $1.25 in dividends per share. What is your dividend yield on this investment?

A) 3.165 percent

B) 3.375 percent

C) 3.442 percent

D) 3.533 percent

E) 3.610 percent

Answer: A

Explanation: $1.23 / $39.50 = 3.165 percent

Difficulty: 1 Easy

Section: 1.1 Returns

Topic: Stock returns and yields

Learning Objective: 01-01 How to calculate the return on an investment using different methods.

Bloom's: Level 3 Apply

Accessibility: Keyboard Navigation

45) You purchased a stock for $25.50 a share, received a dividend of $0.70 per share, and sold the stock after one year for $28.55 a share. What was your dividend yield on this investment?

A) 2.30 percent

B) 2.38 percent

C) 2.45 percent

D) 2.67 percent

E) 2.75 percent

Answer: E

Explanation: $0.70 / $25.50 = 2.75 percent

Difficulty: 1 Easy

Section: 1.1 Returns

Topic: Stock returns and yields

Learning Objective: 01-01 How to calculate the return on an investment using different methods.

Bloom's: Level 3 Apply

Accessibility: Keyboard Navigation

46) One year ago, you purchased 500 shares of stock at a cost of $10,500. The stock paid an annual dividend of $1.10 per share. Today, you sold those shares for $23.90 each. What is the capital gains yield on this investment?

A) 9.96 percent

B) 10.52 percent

C) 12.49 percent

D) 13.81 percent

E) 14.75 percent

Answer: D

Explanation: [($23.90 × 500) - $10,500)] / $10,500 = 13.81 percent

Difficulty: 1 Easy

Section: 1.1 Returns

Topic: Stock returns and yields

Learning Objective: 01-01 How to calculate the return on an investment using different methods.

Bloom's: Level 3 Apply

Accessibility: Keyboard Navigation

47) Today, you sold 800 shares of DeSoto Inc., for $57.60 a share. You bought the shares one year ago at a price of $61.20 a share. Over the year, you received a total of $500 in dividends. What is your capital gains yield on this investment?

A) -6.03 percent

B) -5.88 percent

C) -4.86 percent

D) 6.25 percent

E) 7.34 percent

Answer: B

Explanation: ($57.60 - $61.20) / $61.20 = -5.88 percent

Difficulty: 1 Easy

Section: 1.1 Returns

Topic: Stock returns and yields

Learning Objective: 01-01 How to calculate the return on an investment using different methods.

Bloom's: Level 3 Apply

Accessibility: Keyboard Navigation

48) One year ago, you purchased 300 shares of Southern Cotton at $32.60 a share. During the past year, you received a total of $280 in dividends. Today, you sold your shares for $35.80 a share. What is your total return on this investment?

A) 8.79 percent

B) 9.64 percent

C) 10.16 percent

D) 11.64 percent

E) 12.68 percent

Answer: E

Explanation: [$35.80 - $32.60 + ($280 / 300)] / $32.60 = 12.68 percent

Difficulty: 1 Easy

Section: 1.1 Returns

Topic: Stock returns and yields

Learning Objective: 01-01 How to calculate the return on an investment using different methods.

Bloom's: Level 3 Apply

Accessibility: Keyboard Navigation

49) You purchased a stock for $50.00 a share and resold it one year later. Your total return for the year was 11.5 percent and the dividend yield was 2.8 percent. At what price did you resell the stock?

A) $42.78

B) $50.62

C) $51.93

D) $52.08

E) $54.35

Answer: B

Explanation: Capital gains yield = 11.5 percent - 2.8 percent = 8.7 percent

$50.00 × (1 + 0.087) = $54.35

Difficulty: 1 Easy

Section: 1.1 Returns

Topic: Stock returns and yields

Learning Objective: 01-01 How to calculate the return on an investment using different methods.

Bloom's: Level 3 Apply

Accessibility: Keyboard Navigation

50) A stock sold for $25 at the beginning of the year. The end of year stock price was $25.70. What is the amount of the annual dividend if the total return for the year was 7.7 percent?

A) $1.23

B) $1.38

C) $1.60

D) $1.81

E) $2.31

Answer: A

Explanation: ($25.70 - $25 + D) / $25 = 0.077; D = $1.23

Difficulty: 1 Easy

Section: 1.1 Returns

Topic: Stock returns and yields

Learning Objective: 01-01 How to calculate the return on an investment using different methods.

Bloom's: Level 3 Apply

Accessibility: Keyboard Navigation

51) Todd purchased 600 shares of stock at a price of $68.20 a share and received a dividend of $1.42 per share. After six months, he resold the stock for $71.30 a share. What was his total dollar return?

A) $1,008

B) $1,860

C) $2,712

D) $3,211

E) $3,400

Answer: C

Explanation: 600 × ($71.30 - $68.20 + $1.42) = $2,712

Difficulty: 1 Easy

Section: 1.1 Returns

Topic: Dollar and percentage returns

Learning Objective: 01-01 How to calculate the return on an investment using different methods.

Bloom's: Level 3 Apply

Accessibility: Keyboard Navigation

52) Christine owns a stock that dropped in price from $43.80 to 39.49 over the past year. The dividend yield on that stock is 1.8 percent. What is her total return on this investment for the year?

A) -11.31 percent

B) -10.49 percent

C) -9.91 percent

D) -9.59 percent

E) -8.04 percent

Answer: E

Explanation: [($39.49 - $43.80) / $39.49] + 0.018 = -8.04 percent

Difficulty: 1 Easy

Section: 1.1 Returns

Topic: Stock returns and yields

Learning Objective: 01-01 How to calculate the return on an investment using different methods.

Bloom's: Level 3 Apply

Accessibility: Keyboard Navigation

53) You have been researching a company and have estimated that the firm's stock will sell for $44 a share one year from now. You also estimate the stock will have a dividend yield of 2.18 percent. How much are you willing to pay per share today to purchase this stock if you desire a total return of 15 percent on your investment?

A) $37.55

B) $38.00

C) $38.24

D) $39.00

E) $40.20

Answer: D

Explanation: 0.15 = [($44 - P0) / P0] + 0.0218; P0 = $39

Difficulty: 1 Easy

Section: 1.1 Returns

Topic: Stock returns and yields

Learning Objective: 01-01 How to calculate the return on an investment using different methods.

Bloom's: Level 3 Apply

Accessibility: Keyboard Navigation

54) Shane purchased a stock this morning at a cost of $13 a share. He expects to receive an annual dividend of $0.27 a share next year. What will the price of the stock have to be one year from today if Shane is to earn a 8 percent rate of return on this investment?

A) $12.38

B) $12.60

C) $12.88

D) $13.77

E) $14.28

Answer: D

Explanation: 0.08 = (P1 - $13 + $0.27)/$13; P1 = $13.77

Difficulty: 1 Easy

Section: 1.1 Returns

Topic: Stock returns and yields

Learning Objective: 01-01 How to calculate the return on an investment using different methods.

Bloom's: Level 3 Apply

Accessibility: Keyboard Navigation

55) Ellen just sold a stock and realized a 5.8 percent return for a 5-month holding period. What was her annualized rate of return?

A) 11.98 percent

B) 14.49 percent

C) 19.78 percent

D) 21.29 percent

E) 27.20 percent

Answer: B

Explanation: 1 + EAR = (1 + 0.058)12 / 5 - 1 = 14.49 percent

Difficulty: 1 Easy

Section: 1.1 Returns

Topic: Annual, holding period, and effective rates

Learning Objective: 01-01 How to calculate the return on an investment using different methods.

Bloom's: Level 3 Apply

Accessibility: Keyboard Navigation

56) You purchased a stock eight months ago for $36 a share. Today, you sold that stock for $41.50 a share. The stock pays no dividends. What was your annualized rate of return?

A) 23.32 percent

B) 24.77 percent

C) 25.70 percent

D) 26.03 percent

E) 27.67 percent

Answer: A

Explanation: HPR = ($41.50 − $36) / $36 = 0.062

Annualized rate of return = (1 + 0.062)12 / 8 - 1 = 23.32 percent

Difficulty: 2 Medium

Section: 1.1 Returns

Topic: Annual, holding period, and effective rates

Learning Objective: 01-01 How to calculate the return on an investment using different methods.

Bloom's: Level 3 Apply

Accessibility: Keyboard Navigation

57) Eight months ago, you purchased 300 shares of a non-dividend paying stock for $27 a share. Today, you sold those shares for $31.59 a share. What was your annualized rate of return on this investment?

A) 17.00 percent

B) 21.45 percent

C) 25.50 percent

D) 26.55 percent

E) 28.00 percent

Answer: D

Explanation: HPR = ($31.59 − $27)/$27 = 0.17

Annualized rate of return = (1 + 0.17)12/8 - 1 = 26.55 percent

Difficulty: 2 Medium

Section: 1.1 Returns

Topic: Annual, holding period, and effective rates

Learning Objective: 01-01 How to calculate the return on an investment using different methods.

Bloom's: Level 3 Apply

Accessibility: Keyboard Navigation

58) Jack owned a stock for five months and earned an annualized rate of return of 6 percent. What was the holding period return?

A) 2.37 percent

B) 2.42 percent

C) 2.46 percent

D) 2.64 percent

E) 2.72 percent

Answer: C

Explanation: Annualized return = (1 + x)12 / 5 - 1 = 0.06; x = 1.065 / 12 - 1; x = HPR = 2.46 percent

Difficulty: 2 Medium

Section: 1.1 Returns

Topic: Annual, holding period, and effective rates

Learning Objective: 01-01 How to calculate the return on an investment using different methods.

Bloom's: Level 3 Apply

Accessibility: Keyboard Navigation

59) Scott purchased 200 shares of Frozen Foods stock for $48 a share. Four months later, he received a dividend of $0.22 a share and also sold the shares for $42 each. What was his annualized rate of return on this investment?

A) -44.69 percent

B) -40.14 percent

C) -33.00 percent

D) -31.95 percent

E) -28.07 percent

Answer: D

Explanation: HPR = ($42 − $48 + $0.22) / $48 = −0.120417

Annualized return = (1 - 0.120417)12 / 4 - 1 = -31.95 percent

Difficulty: 2 Medium

Section: 1.1 Returns

Topic: Annual, holding period, and effective rates

Learning Objective: 01-01 How to calculate the return on an investment using different methods.

Bloom's: Level 3 Apply

Accessibility: Keyboard Navigation

60) A stock has an average historical risk premium of 5.6 percent. The expected risk-free rate for next year is 2.4 percent. What is the expected rate of return on this stock for next year?

A) 6.50 percent

B) 7.53 percent

C) 8.00 percent

D) 9.34 percent

E) 11.70 percent

Answer: C

Explanation: Expected return = 5.6 percent + 2.4 percent = 8.0 percent

Difficulty: 1 Easy

Section: 1.3 Average Returns: The First Lesson

Topic: Expected return

Learning Objective: 01-03 The historical risks on various important types of investments.

Bloom's: Level 3 Apply

Accessibility: Keyboard Navigation

61) Last year, ABC stock returned 11.43 percent, the risk-free rate was 3.0 percent, and the inflation rate was 2.5 percent. What was the risk premium on ABC stock?

A) 8.20 percent

B) 8.43 percent

C) 8.60 percent

D) 8.88 percent

E) 8.97 percent

Answer: B

Explanation: Risk premium = 11.43 percent - 3.0 percent = 8.43 percent

Difficulty: 1 Easy

Section: 1.3 Average Returns: The First Lesson

Topic: Risk premiums

Learning Objective: 01-03 The historical risks on various important types of investments.

Bloom's: Level 3 Apply

Accessibility: Keyboard Navigation

62) Over the past four years, Jellystone Quarry stock produced returns of 12.5, 15.1, 8.7, and 2.6 percent, respectively. For the same time period, the risk-free rate 4.7, 5.3, 3.9, and 3.4 percent, respectively. What is the arithmetic average risk premium on this stock during these four years?

A) 5.13 percent

B) 5.25 percent

C) 5.40 percent

D) 5.83 percent

E) 5.97 percent

Answer: C

Explanation: Average risk premium = [(0.125 - 0.047) + (0.151 - 0.053) + (0.087 - 0.039) + (0.026 - 0.034)] / 4 = 5.40 percent

Difficulty: 1 Easy

Section: 1.3 Average Returns: The First Lesson

Topic: Risk premiums

Learning Objective: 01-03 The historical risks on various important types of investments.

Bloom's: Level 3 Apply

Accessibility: Keyboard Navigation

63) Over the past five years, Teen Clothing stock produced returns of 18.7, 5.8, 7.9, 10.8, and 11.6 percent, respectively. For the same five years, the risk-free rate 5.2, 3.4, 2.8, 3.4, and 3.9 percent, respectively. What is the arithmetic average risk premium on Teen Clothing stock for this time period?

A) 6.89 percent

B) 7.01 percent

C) 7.22 percent

D) 7.34 percent

E) 7.57 percent

Answer: C

Explanation: Average risk premium = [(0.187 - 0.052) + (0.058 - 0.034) + (0.079 - 0.028) + (0.108 - 0.034) + (0.116 - 0.039)] / 5 = 7.22 percent

Difficulty: 1 Easy

Section: 1.3 Average Returns: The First Lesson

Topic: Risk premiums

Learning Objective: 01-03 The historical risks on various important types of investments.

Bloom's: Level 3 Apply

Accessibility: Keyboard Navigation

64) Over the past ten years, large-company stocks have returned an average of 9.8 percent annually, long-term corporate bonds have earned 4.6 percent, and U.S. Treasury bills have returned 3.0 percent. How much additional risk premium would you have earned if you had invested in large-company stocks rather than long-term corporate bonds over those ten years?

A) 1.7 percent

B) 3.7 percent

C) 5.2 percent

D) 5.8 percent

E) 8.1 percent

Answer: C

Explanation: Additional risk premium = (0.098 - 0.030) - (0.046 - 0.030) = 5.2 percent

Difficulty: 1 Easy

Section: 1.3 Average Returns: The First Lesson

Topic: Risk premiums

Learning Objective: 01-03 The historical risks on various important types of investments.

Bloom's: Level 3 Apply

Accessibility: Keyboard Navigation

65) An asset had annual returns of 12, 18, 6, -9, and 5 percent, respectively, for the last five years. What is the variance of these returns?

A) 0.00810

B) 0.01013

C) 0.01065

D) 0.02038

E) 0.04052

Answer: B

Explanation: Mean = (0.12 + 0.18 + 0.06 - 0.09 + 0.05) / 5 = 0.064

Var = [(0.12 - 0.064)2 + (0.18 - 0.064)2 + (0.06 - 0.064)2 + (-0.09 - 0.064)2 + (0.05 - 0.064)2] / (5 - 1) = 0.01013

Difficulty: 1 Easy

Section: 1.4 Return Variability: The Second Lesson

Topic: Standard deviation and variance

Learning Objective: 01-03 The historical risks on various important types of investments.

Bloom's: Level 3 Apply

Accessibility: Keyboard Navigation

66) Over the past five years, Southwest Railway stock had annual returns of 10, 14, -6, 7.5, and 16 percent, respectively. What is the variance of these returns?

A) 0.00548

B) 0.00685

C) 0.00770

D) 0.01370

E) 0.02740

Answer: C

Explanation: Mean = (0.10 + 0.14 - 0.06 + 0.075 + 0.16) / 5 = 0.0830

Var = [(0.10 - 0.083)2 + (0.14 - 0.083)2 + (-0.06 - 0.083)2 + (0.075 - 0.083)2 + (0.16 - 0.083)2] / (5 - 1) = 0.0077

Difficulty: 1 Easy

Section: 1.4 Return Variability: The Second Lesson

Topic: Standard deviation and variance

Learning Objective: 01-03 The historical risks on various important types of investments.

Bloom's: Level 3 Apply

Accessibility: Keyboard Navigation

67) An asset had returns of 7.7, 5.4, 3.6, -4.2, and -1.3 percent, respectively, over the past five years. What is the variance of these returns?

A) 0.00173

B) 0.00184

C) 0.00216

D) 0.00240

E) 0.00259

Answer: D

Explanation: Mean = (0.077 + 0.054 + 0.036 - 0.042 - 0.013) / 5 = 0.0224

Var = [(0.077 - 0.0224)2 + (0.054 - 0.0224)2 + (0.036 - 0.0224)2 + (-0.042 - 0.0224)2 + (-0.013 - 0.0224)2] / (5 - 1) = 0.00240

Difficulty: 1 Easy

Section: 1.4 Return Variability: The Second Lesson

Topic: Standard deviation and variance

Learning Objective: 01-03 The historical risks on various important types of investments.

Bloom's: Level 3 Apply

Accessibility: Keyboard Navigation

68) An asset had annual returns of 13, 10, -14, 3, and 36 percent, respectively, for the past five years. What is the standard deviation of these returns?

A) 8.96 percent

B) 16.05 percent

C) 17.92 percent

D) 18.09 percent

E) 20.03 percent

Answer: D

Explanation: Mean = (0.13 + 0.10 - 0.14 + 0.03 + 0.36) / 5 = 0.096

Var = [(0.13 - 0.096)2 + (0.10 - 0.096)2 + (-0.14 - 0.096)2 + (0.03 - 0.096)2 + (0.36 - 0.096)2] / (5 - 1) = 0.032735

Std Dev = √ (0.032735) = 18.09 percent

Difficulty: 1 Easy

Section: 1.4 Return Variability: The Second Lesson

Topic: Standard deviation and variance

Learning Objective: 01-03 The historical risks on various important types of investments.

Bloom's: Level 3 Apply

Accessibility: Keyboard Navigation

69) Over the past four years, a stock produced returns of 13, 6, -5, and 18 percent, respectively. What is the standard deviation of these returns?

A) 8.63 percent

B) 9.93 percent

C) 9.97 percent

D) 10.11 percent

E) 10.15 percent

Answer: C

Explanation: Mean = (0.13 + 0.06 - 0.05 + 0.18) / 4 = 0.08

Var = [(0.13 - 0.08)2 + (0.06 - 0.08)2 + (-0.05 - 0.08)2 + (0.18 - 0.08)2] / (4 - 1) = 0.009933

Std Dev = √ (0.009933) = 9.97 percent

Difficulty: 1 Easy

Section: 1.4 Return Variability: The Second Lesson

Topic: Standard deviation and variance

Learning Objective: 01-03 The historical risks on various important types of investments.

Bloom's: Level 3 Apply

Accessibility: Keyboard Navigation

70) Downtown Industries common stock had returns of 7.2, 11.5, 10.5, and 7.5 percent, respectively, over the past four years. What is the standard deviation of these returns?

A) 2.15 percent

B) 2.38 percent

C) 2.41 percent

D) 2.59 percent

E) 2.82 percent

Answer: A

Explanation: Mean = (0.072 + 0.115 + 0.105 + 0.075) / 4 = 0.0918

Var = [(0.072 - 0.0918)2 + (0.115 - 0.0918)2 + (0.105 - 0.0918)2 + (0.075 - 0.0918)2] / (4 - 1) = 0.000462

Std Dev = √ (0.000462) = 2.15 percent

Difficulty: 1 Easy

Section: 1.4 Return Variability: The Second Lesson

Topic: Standard deviation and variance

Learning Objective: 01-03 The historical risks on various important types of investments.

Bloom's: Level 3 Apply

Accessibility: Keyboard Navigation

71) An asset has an average annual historical return of 11.6 percent and a standard deviation of 17.8 percent. What range of returns would you expect to see 95 percent of the time?

A) -41.8 to + 65.0 percent

B) -34.4 to + 53.6 percent

C) -24.0 to + 47.2 percent

D) -6.2 to + 29.4 percent

E) -5.4 to + 41.0 percent

Answer: C

Explanation: Range = 11.6 percent ± 2(17.8 percent) = -24.0 to + 47.2 percent

Difficulty: 2 Medium

Section: 1.4 Return Variability: The Second Lesson

Topic: Normal probability distribution

Learning Objective: 01-04 The relationship between risk and return.

Bloom's: Level 3 Apply

Accessibility: Keyboard Navigation

72) A stock has an average historical return of 11.3 percent and a standard deviation of 20.2 percent. Which range of returns would you expect to see approximately two-thirds of the time?

A) -23.8 to + 53.0 percent

B) +4.6 to + 33.8 percent

C) +5.8 to + 31.6 percent

D) -3.9 to + 32.5 percent

E) -8.9 to + 31.5 percent

Answer: E

Explanation: Range = 11.3 percent ± 20.2 percent = -8.9 to + 31.5 percent

Difficulty: 2 Medium

Section: 1.4 Return Variability: The Second Lesson

Topic: Normal probability distribution

Learning Objective: 01-04 The relationship between risk and return.

Bloom's: Level 3 Apply

Accessibility: Keyboard Navigation

73) An asset has an average historical rate of return of 13 percent and a variance of 0.0106. What range of returns would you expect to see approximately two-thirds of the time?

A) -2.28 to + 24.48 percent

B) -6.52 to + 32.92 percent

C) -9.58 to + 38.8 percent

D) +2.70 to + 23.30 percent

E) +13.1 to + 13.3 percent

Answer: D

Explanation: Range = 0.13 ± √(0.0106) = + 2.70 to + 23.30 percent

Difficulty: 2 Medium

Section: 1.4 Return Variability: The Second Lesson

Topic: Normal probability distribution

Learning Objective: 01-04 The relationship between risk and return.

Bloom's: Level 3 Apply

Accessibility: Keyboard Navigation

74) Jeremy owns a stock that has historically returned 7.5 percent annually with a standard deviation of 10.2 percent. There is only a 0.5 percent chance that the stock will produce a return greater than \_\_\_\_\_\_\_\_ percent in any one year.

A) 20.9

B) 22.9

C) 32.2

D) 38.1

E) 54.8

Answer: D

Explanation: Return = 7.5 percent + 3(10.2 percent) = 38.1 percent

Difficulty: 2 Medium

Section: 1.4 Return Variability: The Second Lesson

Topic: Normal probability distribution

Learning Objective: 01-04 The relationship between risk and return.

Bloom's: Level 3 Apply

Accessibility: Keyboard Navigation

75) Jefferson Mills stock produced returns of 14.8, 22.6, 5.9, and 9.7 percent, respectively, over the past four years. During those same years, U.S. Treasury bills returned 3.8, 4.6, 4.8, and 4.0 percent, respectively, for the same time period. What is the variance of the risk premiums on Jefferson Mills stock for these four years?

A) 0.00298

B) 0.00196

C) 0.00396

D) 0.00478

E) 0.00528

Answer: E

Explanation: Annual risk premiums are 11.0, 18.0, 1.1, and 5.7 percent, respectively.

Mean = (0.11 + 0.18 + 0.011 + 0.057) / 4 = 0.0895

Var = [(0.11 - 0.0895)2 + (0.18 - 0.0895)2 + (0.011 - 0.0895)2 + (0.057 - 0.0895)2] / (4 - 1) = 0.00528

Difficulty: 2 Medium

Section: 1.4 Return Variability: The Second Lesson

Topic: Standard deviation and variance

Learning Objective: 01-03 The historical risks on various important types of investments.

Bloom's: Level 3 Apply

Accessibility: Keyboard Navigation

76) Over the past four years, the common stock of Jess Electronics Co. produced annual returns of 7.2, 5.8, 11.2, and 13.6 percent, respectively. Treasury bills produced returns of 3.4, 3.3, 4.1, and 4.0 percent, respectively over the same period. What is the standard deviation of the risk premium on Jess Electronics Co. stock for this time period?

A) 2.23 percent

B) 2.86 percent

C) 3.22 percent

D) 4.46 percent

E) 4.61 percent

Answer: C

Explanation: Annual risk premiums are 3.8, 2.5, 7.1, and 9.6 percent, respectively.

Mean = (0.038 + 0.025 + 0.071 + 0.096) / 4 = 0.0575

Var = [(0.038 - 0.0575)2 + (0.025 - 0.0575)2 + (0.071 - 0.0575)2 + (0.096 - 0.0575)2] / (4 - 1) = 0.001034

Std Dev = √ (0.001034) = 3.22 percent

Difficulty: 2 Medium

Section: 1.4 Return Variability: The Second Lesson

Topic: Standard deviation and variance

Learning Objective: 01-03 The historical risks on various important types of investments.

Bloom's: Level 3 Apply

Accessibility: Keyboard Navigation

77) Big Town Markets common stock returned 13.8, 14.2, 9.7, 5.3, and 12.2 percent, respectively, over the past five years. What is the arithmetic average return?

A) 10.99 percent

B) 11.04 percent

C) 11.56 percent

D) 12.20 percent

E) 13.80 percent

Answer: B

Explanation: Return = (0.138 + 0.142 + 0.097 + 0.053 + 0.122) / 5 = 11.04 percent

Difficulty: 1 Easy

Section: 1.5 More on Average Returns

Topic: Arithmetic, geometric, and dollar-weighted returns

Learning Objective: 01-01 How to calculate the return on an investment using different methods.

Bloom's: Level 3 Apply

Accessibility: Keyboard Navigation

78) Over the past four years, Hi-Tech Development stock returned 35.2, 38.8, 18.4, and -32.2 percent annually. What is the arithmetic average return?

A) 15.05 percent

B) 17.67 percent

C) 20.53 percent

D) 24.20 percent

E) 32.25 percent

Answer: A

Explanation: Return = (0.352 + 0.388 + 0.184 - 0.322) / 4 = 15.05 percent

Difficulty: 1 Easy

Section: 1.5 More on Average Returns

Topic: Arithmetic, geometric, and dollar-weighted returns

Learning Objective: 01-01 How to calculate the return on an investment using different methods.

Bloom's: Level 3 Apply

Accessibility: Keyboard Navigation

79) You own a stock that has produced an arithmetic average return of 8.6 percent over the past five years. The annual returns for the first four years were 16, 11, -19, and 3 percent, respectively. What was the rate of return on the stock in year five?

A) -5.00 percent

B) 2.75 percent

C) 6.25 percent

D) 28.00 percent

E) 32.00 percent

Answer: E

Explanation: Total return = 0.086 × 5 = 0.43

Year 5 return = 0.43 - (0.16 + 0.11 - 0.19 + 0.03) = 32 percent

Difficulty: 1 Easy

Section: 1.5 More on Average Returns

Topic: Arithmetic, geometric, and dollar-weighted returns

Learning Objective: 01-01 How to calculate the return on an investment using different methods.

Bloom's: Level 3 Apply

Accessibility: Keyboard Navigation

80) An asset had annual returns of 17, -35, -18, 24, and 6 percent, respectively, over the past five years. What is the arithmetic average return?

A) -1.2 percent

B) 0.8 percent

C) 1.2 percent

D) 1.6 percent

E) 2.3 percent

Answer: A

Explanation: Average = (0.17 - 0.35 - 0.18 + 0.24 + 0.06) / 5 = -1.2 percent

Difficulty: 1 Easy

Section: 1.5 More on Average Returns

Topic: Arithmetic, geometric, and dollar-weighted returns

Learning Objective: 01-01 How to calculate the return on an investment using different methods.

Bloom's: Level 3 Apply

Accessibility: Keyboard Navigation

81) Celsius stock had year end prices of $42, $37, $44, and $46 over the past four years, respectively. What is the arithmetic average rate of return?

A) 3.17 percent

B) 3.85 percent

C) 4.28 percent

D) 10.63 percent

E) 11.79 percent

Answer: B

Explanation: Annual returns are: ($37 - $42) / $42 = -0.119048; ($44 - $37) / $37 = 0.189189;

($46 - $44) / $44 = 0.045455

Average = (-0.119048 + 0.189189 + 0.045455) / 3 = 3.85 percent

Difficulty: 1 Easy

Section: 1.5 More on Average Returns

Topic: Arithmetic, geometric, and dollar-weighted returns

Learning Objective: 01-01 How to calculate the return on an investment using different methods.

Bloom's: Level 3 Apply

Accessibility: Keyboard Navigation

82) Blackstone Mines stock returned 10.5, 17.2, -9.0, and 14.5 percent over the past four years, respectively. What is the geometric average return?

A) 5.84 percent

B) 6.36 percent

C) 7.78 percent

D) 9.94 percent

E) 10.33 percent

Answer: C

Explanation: Geometric average = [(1 + 0.105)(1 + 0.1723)(1 - 0.090)(1 + 0.145)]1 / 4 - 1 = 7.78 percent

Difficulty: 1 Easy

Section: 1.5 More on Average Returns

Topic: Arithmetic, geometric, and dollar-weighted returns

Learning Objective: 01-01 How to calculate the return on an investment using different methods.

Bloom's: Level 3 Apply

Accessibility: Keyboard Navigation

83) You invested $5,000 eight years ago. The arithmetic average return on your investment is 10.6 percent and the geometric average return is 10.23 percent. What is the value of your portfolio today?

A) $9,092

B) $10,623

C) $10,899

D) $10,947

E) $11,195

Answer: C

Explanation: FV = $5,000 × (1 + 0.1023)8 = $10,899

Difficulty: 1 Easy

Section: 1.5 More on Average Returns

Topic: Arithmetic, geometric, and dollar-weighted returns

Learning Objective: 01-01 How to calculate the return on an investment using different methods.

Bloom's: Level 3 Apply

Accessibility: Keyboard Navigation

84) Joanne invested $15,000 six years ago. Her arithmetic average return on this investment is 8.72 percent, and her geometric average return is 8.50 percent. What is Joanne's portfolio worth today?

A) $23,989

B) $24,472

C) $26,409

D) $26,514

E) $26,766

Answer: B

Explanation: FV = $15,000 × (1 + 0.085)6 = $24,472.01

Difficulty: 1 Easy

Section: 1.5 More on Average Returns

Topic: Arithmetic, geometric, and dollar-weighted returns

Learning Objective: 01-01 How to calculate the return on an investment using different methods.

Bloom's: Level 3 Apply

Accessibility: Keyboard Navigation

85) A stock produced annual returns of 8.3, -21, 12, 42, and 9 percent over the past five years, respectively. What is the geometric average return?

A) 5.78 percent

B) 6.03 percent

C) 6.34 percent

D) 7.21 percent

E) 8.20 percent

Answer: E

Explanation: Geometric average = [(1 + 0.083)(1 - 0.21)(1 + 0.12)(1 + 0.42)(1 + 0.09)]1 / 5 - 1 = 8.20 percent

Difficulty: 1 Easy

Section: 1.5 More on Average Returns

Topic: Arithmetic, geometric, and dollar-weighted returns

Learning Objective: 01-01 How to calculate the return on an investment using different methods.

Bloom's: Level 3 Apply

Accessibility: Keyboard Navigation

86) Over the past five years, an investment produced annual returns of 16.5, 21, -18, 4, and 17 percent, respectively. What is the geometric average return?

A) 6.42 percent

B) 7.06 percent

C) 8.00 percent

D) 15.60 percent

E) 16.00 percent

Answer: B

Explanation: Geometric average = [(1 + 0.165)(1 + 0.21)(1 - 0.18)(1 + 0.04)(1 + 0.17)]1 / 5 - 1 = 7.06 percent

Difficulty: 1 Easy

Section: 1.5 More on Average Returns

Topic: Arithmetic, geometric, and dollar-weighted returns

Learning Objective: 01-01 How to calculate the return on an investment using different methods.

Bloom's: Level 3 Apply

Accessibility: Keyboard Navigation

87) A portfolio had an original value of $7,400 seven years ago. The current value of the portfolio is $11,898. What is the average geometric return on this portfolio?

A) 7.02 percent

B) 7.47 percent

C) 7.59 percent

D) 7.67 percent

E) 7.88 percent

Answer: A

Explanation: $7,400 (1 + R)7 = $11,898; R = 7.02 percent

Difficulty: 1 Easy

Section: 1.5 More on Average Returns

Topic: Arithmetic, geometric, and dollar-weighted returns

Learning Objective: 01-01 How to calculate the return on an investment using different methods.

Bloom's: Level 3 Apply

Accessibility: Keyboard Navigation

88) An initial investment of $41,800 fifty years ago is worth $1,533,913 today. What is the geometric average return on this investment?

A) 7.47 percent

B) 8.02 percent

C) 9.23 percent

D) 10.47 percent

E) 11.08 percent

Answer: A

Explanation: $41,800(1 + R)50 = $1,533,913; R = 7.47 percent

N = 50; PV = -41800, PMT = 0, FV = 1533913 --- I / y = 7.471%

Difficulty: 1 Easy

Section: 1.5 More on Average Returns

Topic: Arithmetic, geometric, and dollar-weighted returns

Learning Objective: 01-01 How to calculate the return on an investment using different methods.

Bloom's: Level 3 Apply

Accessibility: Keyboard Navigation

89) A stock had year end prices of $24, $27, $32, and $26 over the past four years, respectively. What is the geometric average return?

A) 2.02 percent

B) 2.18 percent

C) 2.55 percent

D) 2.70 percent

E) 2.81 percent

Answer: D

Explanation: ($26 / $24)1 / 3 - 1 = 2.70 percent

Difficulty: 1 Easy

Section: 1.5 More on Average Returns

Topic: Arithmetic, geometric, and dollar-weighted returns

Learning Objective: 01-01 How to calculate the return on an investment using different methods.

Bloom's: Level 3 Apply

Accessibility: Keyboard Navigation

90) The geometric return on a stock over the past 10 years was 7.9 percent. The arithmetic return over the same period was 8.8 percent. What is the best estimate of the average return on this stock over the next 5 years?

A) 8.40 percent

B) 9.05 percent

C) 9.08 percent

D) 9.13 percent

E) 9.47 percent

Answer: A

Explanation: Projected return = {[(5 - 1) / (10 - 1)] × 0.0790} + {[(10 - 5) / (10 - 1)] × 0.0880} = 8.40 percent

Difficulty: 2 Medium

Section: 1.5 More on Average Returns

Topic: Arithmetic, geometric, and dollar-weighted returns

Learning Objective: 01-01 How to calculate the return on an investment using different methods.

Bloom's: Level 3 Apply

Accessibility: Keyboard Navigation

91) The geometric return on an asset over the past 12 years has been 14.50 percent. The arithmetic return over the same period was 14.96 percent. What is the best estimate of the average return on this asset over the next 5 years?

A) 14.47 percent

B) 14.67 percent

C) 14.79 percent

D) 14.88 percent

E) 14.86 percent

Answer: C

Explanation: Projected return = {[(5 - 1) / (12 - 1)] × 0.1450} + {[(12 - 5) / (12 - 1)] × 0.1496} = 14.79 percent

Difficulty: 2 Medium

Section: 1.5 More on Average Returns

Topic: Arithmetic, geometric, and dollar-weighted returns

Learning Objective: 01-01 How to calculate the return on an investment using different methods.

Bloom's: Level 3 Apply

Accessibility: Keyboard Navigation

92) A stock has an average arithmetic return of 10.55 percent and an average geometric return of 10.41 percent based on the annual returns for the last 15 years. What is projected average annual return on this stock for the next 10 years?

A) 10.17 percent

B) 10.21 percent

C) 10.38 percent

D) 10.46 percent

E) 10.79 percent

Answer: D

Explanation: Projected return = {[(10 - 1) / (15 - 1)] × 0.1041} + {[(15 - 10) / (15 - 1)] × 0.1055} = 10.46 percent

Difficulty: 2 Medium

Section: 1.5 More on Average Returns

Topic: Arithmetic, geometric, and dollar-weighted returns

Learning Objective: 01-01 How to calculate the return on an investment using different methods.

Bloom's: Level 3 Apply

Accessibility: Keyboard Navigation

93) Leeanne owns a stock that has an average geometric return of 12.30 percent and an average arithmetic return of 12.55 percent over the past six years. What average annual rate of return should Leeanne expect to earn over the next four years?

A) 12.38 percent

B) 12.40 percent

C) 12.44 percent

D) 12.47 percent

E) 12.51 percent

Answer: B

Explanation: Projected return = {[(4 - 1) / (6 - 1)] × 0.1230} + {[(6 - 4) / (6 - 1)] × 0.1255} = 12.40 percent

Difficulty: 2 Medium

Section: 1.5 More on Average Returns

Topic: Arithmetic, geometric, and dollar-weighted returns

Learning Objective: 01-01 How to calculate the return on an investment using different methods.

Bloom's: Level 3 Apply

Accessibility: Keyboard Navigation

94) Tom decides to begin investing some portion of his annual bonus, beginning this year with $6,000. In the first year he earns an 8 percent return and adds $3,000 to his investment. In the second his portfolio loses 4 percent but, sticking to his plan, he adds $1,000 to his portfolio. In this year his portfolio returns 2 percent. What is Tom's dollar-weighted average return on his investments?

A) 0.34 percent

B) 1.20 percent

C) 1.54 percent

D) 2.23 percent

E) 2.58 percent

Answer: B

Explanation: Using the Cash Flow worksheet in a financial calculator, the cash flows to be entered are:

CF0 = -6000

CF1 = -3000

CF2 = -1000

CF3 = ((((6000 × 1.08) + 3000) × 0.96) + 1000) × (1.02) = $10,302.82

Solve for IRR = 1.20 percent

Difficulty: 2 Medium

Section: 1.5 More on Average Returns

Topic: Arithmetic, geometric, and dollar-weighted returns

Learning Objective: 01-01 How to calculate the return on an investment using different methods.

Bloom's: Level 3 Apply

Accessibility: Keyboard Navigation

95) Bill has been adding funds to his investment account each year for the past 3 years. He started with an initial investment of $1,000. After earning a 10 percent return the first year, he added $3,000 to his portfolio. In this year his investments lost 5 percent. Undeterred, Bill added $2,000 the next year and earned a 2 percent return. Last year, discouraged by the recent results, he only added $500 to his portfolio, but in this final year his investments earned 8 percent. What was Bill's dollar-weighted average return for his investments?

A) 1.5 percent

B) 2.0 percent

C) 2.5 percent

D) 3.0 percent

E) 3.5 percent

Answer: D

Explanation: Using the Cash Flow worksheet in a financial calculator, the cash flows to be entered are:

CF0 = -1000

CF1 = -3000

CF2 = -2000

CF3 = -500

CF4 = (((((1000 × 1.1) + 3000) × 0.95) + 2000) × (1.02)) + 500) × 1.08 = $7,033.93

Solve for IRR = 3.0 percent

Difficulty: 2 Medium

Section: 1.5 More on Average Returns

Topic: Arithmetic, geometric, and dollar-weighted returns

Learning Objective: 01-01 How to calculate the return on an investment using different methods.

Bloom's: Level 3 Apply

Accessibility: Keyboard Navigation

96) John began his investing program with a $5,500 initial investment. The table below recaps his returns each year as well as the amounts he added to his investment account. What is his dollar-weighted average return?

|  |  |  |
| --- | --- | --- |
| Time | Investment | Return |
| 0 | $ | 5,500 |   |   | 8.5 | % |
| 1 | $ | 2,000 |   | - | 5.0 | % |
| 2 | $ | 2,600 |   |   | 4.5 | % |
| 3 | $ | 3,000 |   |   | 9.0 | % |
| 4 | $ | 900 |   | - | 2.5 | % |

A) 1.5 percent

B) 1.8 percent

C) 2.0 percent

D) 2.2 percent

E) 2.6 percent

Answer: E

Explanation: Using the Cash Flow worksheet in a financial calculator, the cash flows to be entered are:

CF0 = -5500

CF1 = -2000

CF2 = -2600

CF3 = -3000

CF4 = -900

CF5 = 15359.31 (see calculations below)

Solve for IRR = 2.6 percent

5500 × (1.085) = 5967.50

(5967.50 + 2000) × (0.95) = 7569.13

(7569.13 + 2600) × (1.045) = 10626.74

(10626.74 + 3000) × (1.09) = 14853.14

(14853.14 + 900) × (0.975) = 15359.31

Difficulty: 2 Medium

Section: 1.5 More on Average Returns

Topic: Arithmetic, geometric, and dollar-weighted returns

Learning Objective: 01-01 How to calculate the return on an investment using different methods.

Bloom's: Level 3 Apply

97) Jim began his investing program with a $4,000 initial investment. The table below recaps his returns each year as well as the amounts he added to his investment account. What is his dollar-weighted average return?

|  |  |  |
| --- | --- | --- |
| TIME | INVESTMENT | RETURN |
| 0 | $ | 4,000 |   |   | 10 | % |
| 1 | $ | 2,800 |   |   | -5 | % |
| 2 | $ | 900 |   |   | 2 | % |
| 3 | $ | 1,600 |   |   | 8 | % |
| 4 | $ | 2,100 |   |   | -3 | % |
| 5 | $ | 2,400 |   |   | 6 | % |

A) 1.6 percent

B) 2.2 percent

C) 2.6 percent

D) 3.2 percent

E) 3.6 percent

Answer: C

Explanation: Using the Cash Flow worksheet in a financial calculator, the cash flows to be entered are:

CF0 = -4000

CF1 = -2800

CF2 = -900

CF3 = -1600

CF4 = -2100

CF5 = -2400

CF6 = 15246.78 (see calculations below)

Solve for IRR = 2.6 percent

4000 × (1.10) = 4400

(4400 + 2800) × (0.95) = 6840

(6840 + 900) × (1.02) = 7894.80

(7894.80 + 1600) × (1.08) = 10254.38

(10254.38 + 2100) × (0.97) = 11983.75

(11983.75 + 2400) × (1.06) = 15246.78

Difficulty: 2 Medium

Section: 1.5 More on Average Returns

Topic: Arithmetic, geometric, and dollar-weighted returns

Learning Objective: 01-01 How to calculate the return on an investment using different methods.

Bloom's: Level 3 Apply

98) One year ago, you purchased 300 shares of stock at a cost of $6,000. The stock paid an annual dividend of $1.10 per share. Today, you sold those shares for $22.50 each. What is the capital gains yield on this investment?

A) 9.96 percent

B) 10.52 percent

C) 12.50 percent

D) 13.81 percent

E) 14.75 percent

Answer: C

Explanation: [($22.50 × 300) - $6,000)] / $6,000 = 12.50 percent

Difficulty: 1 Easy

Section: 1.1 Returns

Topic: Stock returns and yields

Learning Objective: 01-01 How to calculate the return on an investment using different methods.

Bloom's: Level 3 Apply

Accessibility: Keyboard Navigation

99) Eileen just sold a stock and realized a 6.25 percent return for a 7-month holding period. What was her annualized rate of return?

A) 9.98 percent

B) 10.95 percent

C) 12.78 percent

D) 15.29 percent

E) 17.20 percent

Answer: B

Explanation: 1 + EAR = (1 + 0.0625)12 / 7 - 1 = 10.95 percent

Difficulty: 1 Easy

Section: 1.1 Returns

Topic: Annual, holding period, and effective rates

Learning Objective: 01-01 How to calculate the return on an investment using different methods.

Bloom's: Level 3 Apply

Accessibility: Keyboard Navigation

100) Downtown Industries common stock had returns of 5.2, 10.3, 9.3, and 9.5 percent, respectively, over the past four years. What is the standard deviation of these returns?

A) 2.29 percent

B) 2.38 percent

C) 2.41 percent

D) 2.59 percent

E) 2.82 percent

Answer: A

Explanation: Mean = (0.052 + 0.103 + 0.093 + 0.095) / 4 = 0.0858

Var = [(0.052 - 0.0858)2 + (0.103 - 0.0858)2 + (0.093 - 0.0858)2 + (0.095 - 0.0858)2] / (4 - 1) = 0.00052492

Std Dev = √ (0.00052492) = 2.29 percent

Difficulty: 1 Easy

Section: 1.4 Return Variability: The Second Lesson

Topic: Standard deviation and variance

Learning Objective: 01-03 The historical risks on various important types of investments.

Bloom's: Level 3 Apply

Accessibility: Keyboard Navigation

101) You own a stock that has produced an arithmetic average return of 5.6 percent over the past five years. The annual returns for the first four years were 15, 10, -18, and 8 percent, respectively. What was the rate of return on the stock in year five?

A) -5.00 percent

B) 2.75 percent

C) 6.25 percent

D) 13.00 percent

E) 32.00 percent

Answer: D

Explanation: Total return = 0.056 × 5 = 0.28

Year 5 return = 0.28 - (0.15 + 0.10 - 0.18 + 0.08) = 13 percent

Difficulty: 1 Easy

Section: 1.5 More on Average Returns

Topic: Arithmetic, geometric, and dollar-weighted returns

Learning Objective: 01-01 How to calculate the return on an investment using different methods.

Bloom's: Level 3 Apply

Accessibility: Keyboard Navigation

102) A stock produced annual returns of 8.5, -18, 15, 17, and 12 percent over the past five years, respectively. What is the geometric average return?

A) 5.78 percent

B) 6.04 percent

C) 6.34 percent

D) 7.21 percent

E) 8.20 percent

Answer: B

Explanation: Geometric average = [(1 + 0.085)(1 - 0.18)(1 + 0.15)(1 + 0.17)(1 + 0.12)]1 / 5 - 1 = 6.04 percent

Difficulty: 1 Easy

Section: 1.5 More on Average Returns

Topic: Arithmetic, geometric, and dollar-weighted returns

Learning Objective: 01-01 How to calculate the return on an investment using different methods.

Bloom's: Level 3 Apply

Accessibility: Keyboard Navigation

103) Louis owns a stock that has an average geometric return of 10.50 percent and an average arithmetic return of 11.00 percent over the past six years. What average annual rate of return should Louis expect to earn over the next four years?

A) 10.38 percent

B) 10.40 percent

C) 10.64 percent

D) 10.70 percent

E) 10.81 percent

Answer: D

Explanation: Projected return = {[(4 - 1) / (6 - 1)] × 0.1050} + {[(6 - 4) / (6 - 1)] × 0.1100} = 10.70 percent

Difficulty: 2 Medium

Section: 1.5 More on Average Returns

Topic: Arithmetic, geometric, and dollar-weighted returns

Learning Objective: 01-01 How to calculate the return on an investment using different methods.

Bloom's: Level 3 Apply

Accessibility: Keyboard Navigation

104) John began his investing program with a $5,500 initial investment. The table below recaps his returns each year as well as the amounts he added to his investment account. What is his dollar-weighted average return?

|  |  |  |
| --- | --- | --- |
| Time | Investment | Return |
| 0 | $ | 6,500 |   |   | 7.5 | % |
| 1 | $ | 2,500 |   | - | 4.0 | % |
| 2 | $ | 3,100 |   |   | 5.0 | % |
| 3 | $ | 3,000 |   |   | 8.0 | % |
| 4 | $ | 800 |   | - | 1.5 | % |

A) 1.5 percent

B) 1.8 percent

C) 2.0 percent

D) 2.2 percent

E) 2.8 percent

Answer: E

Explanation: Using the Cash Flow worksheet in a financial calculator, the cash flows to be entered are:

CF0 = -6500

CF1 = -2500

CF2 = -3100

CF3 = -3000

CF4 = -800

CF5 = 17615.61 (see calculations below)

Solve for IRR = 2.8 percent

6500 \* (1.075) = 6987.50

(6987.50 + 2500) \* (0.96) = 9108.00

(9108.00 + 3100) \* (1.05) = 12818.40

(12818.40 + 3000) \* (1.08) = 17083.87

(17083.87 + 800) \* (0.985) = 17615.61

Difficulty: 2 Medium

Section: 1.5 More on Average Returns

Topic: Arithmetic, geometric, and dollar-weighted returns

Learning Objective: 01-01 How to calculate the return on an investment using different methods.

Bloom's: Level 3 Apply