

Question #1 of 87

Question ID: 1462961

An investor's portfolio currently has an expected return of 11% with a variance of 0.0081. She is considering replacing 20% of the portfolio with a security that has an expected return of 12% and a standard deviation of 0.07. If the covariance between the returns on the existing portfolio and the returns on the added security is 0.0058, the variance of returns on the new portfolio will be *closest* to:

A) 0.00545.



B) 0.00724.



C) 0.00984.



Explanation

$$0.8^2(0.0081) + 0.2^2(0.07^2) + 2(0.8)(0.2)(0.0058) = 0.00724.$$

(Module 62.4, LOS 62.g)

Question #2 of 87

Question ID: 1458917

A portfolio manager invests 40% of a portfolio in Asset X, which has an expected standard deviation of returns of 15%, and the remainder in Asset Y, which has an expected standard deviation of returns of 25%. If the covariance of returns between assets X and Y is 0.0158, the expected standard deviation of portfolio returns is closest to:

A) 18.4%.



B) 2.7%.



C) 16.3%.



Explanation

The expected standard deviation of portfolio returns is:

$$[0.40^2 \times 0.15^2 + 0.60^2 \times 0.25^2 + 2(0.40 \times 0.60 \times 0.0158)]^{1/2} = 18.35\%.$$

(Module 62.4, LOS 62.g)

Question #3 of 87

Question ID: 1458916

Two assets are perfectly positively correlated. If 30% of an investor's funds were put in the asset with a standard deviation of 0.3 and 70% were invested in an asset with a standard deviation of 0.4, what is the standard deviation of the portfolio?

A) 0.151.



B) 0.426.



C) 0.370.



Explanation

$\sigma_{\text{portfolio}} = [W_1^2\sigma_1^2 + W_2^2\sigma_2^2 + 2W_1W_2\sigma_1\sigma_2r_{1,2}]^{1/2}$ given $r_{1,2} = +1$

$\sigma = [W_1^2\sigma_1^2 + W_2^2\sigma_2^2 + 2W_1W_2\sigma_1\sigma_2]^{1/2} = (W_1\sigma_1 + W_2\sigma_2)^{1/2}$

$\sigma = (W_1\sigma_1 + W_2\sigma_2) = (0.3)(0.3) + (0.7)(0.4) = 0.09 + 0.28 = 0.37$

(Module 62.4, LOS 62.g)

Question #4 of 87

Question ID: 1458913

An investor has a two-stock portfolio (Stocks A and B) with the following characteristics:

- $\sigma_A = 55\%$
- $\sigma_B = 85\%$
- $\text{Covariance}_{A,B} = 0.09$
- $W_A = 70\%$
- $W_B = 30\%$

The variance of the portfolio is *closest* to:

A) 0.39.



B) 0.54.



C) 0.25.



Explanation

The formula for the *variance* of a 2-stock portfolio is:

$$s^2 = [W_A^2\sigma_A^2 + W_B^2\sigma_B^2 + 2W_AW_B\sigma_A\sigma_B r_{A,B}]$$

Since $\sigma_A\sigma_B r_{A,B} = \text{Cov}_{A,B}$, then




$$s^2 = [(0.7^2 \times 0.55^2) + (0.3^2 \times 0.85^2) + (2 \times 0.7 \times 0.3 \times 0.09)] = [0.1482 + 0.0650 + 0.0378] = 0.2511.$$

(Module 62.4, LOS 62.g)

Question #5 of 87

Question ID: 1462959

Becky Scott and Sid Fiona have the same expectations about the risk and return of the market portfolio; however, Scott selects a portfolio with 30% T-bills and 70% invested in the market portfolio, while Fiona holds a leveraged portfolio, having borrowed to invest 130% of his portfolio equity value in the market portfolio. Regarding their preferences between risk and return and their indifference curves, it is *most likely* that:

- A) Scott is risk averse but Fiona is not. 
- B) Fiona's indifference curves are flatter than Scott's. 
- C) Scott is willing to take on more risk to increase her expected portfolio return than Fiona is. 

Explanation



Even risk-averse investors will prefer leveraged risky portfolios if the increase in expected return is enough to offset the increase in portfolio risk. Scott's portfolio selection implies that she is more risk averse than Fiona, has steeper indifference curves, and is willing to take on less additional risk for an incremental increase in expected returns than Fiona.

(Module 62.4, LOS 62.e)

Question #6 of 87

Question ID: 1458887

The particular portfolio on the efficient frontier that best suits an individual investor is determined by:

- A) the current market risk-free rate as compared to the current market return rate. 
- B) the individual's utility curve. 

C) the individual's asset allocation plan.



Explanation




The *optimal portfolio* for each investor is the highest indifference curve that is tangent to the efficient frontier. The optimal portfolio is the portfolio that gives the investor the greatest possible utility.

(Module 62.4, LOS 62.e)

Question #7 of 87

Question ID: 1458927

Which of the following statements about portfolio theory is *least accurate*?

- Assuming that the correlation coefficient is less than one, the risk of the
- A) portfolio will always be less than the simple weighted average of individual stock risks. 
 - B) For a two-stock portfolio, the lowest risk occurs when the correlation coefficient is close to negative one. 
 - C) less than one with the other portfolio asset returns but has the same risk, adding the asset will not decrease the overall portfolio standard deviation. 

Explanation

When the return on an asset added to a portfolio has a correlation coefficient of less than one with the other portfolio asset returns but has the same risk, adding the asset *will* decrease the overall portfolio standard deviation. Any time the correlation coefficient is less than one, there are benefits from diversification. The other choices are true.

(Module 62.4, LOS 62.h)

Question #8 of 87

Question ID: 1458870

Computing the internal rate of return of the inflows and outflows of a portfolio would give the:

- A) money-weighted return. 
- B) net present value. 
- C) time-weighted return. 

Explanation

The money-weighted return is the internal rate of return on a portfolio that equates the present value of inflows and outflows over a period of time.

(Module 62.1, LOS 62.b)

Question #9 of 87

Question ID: 1462964

In the Markowitz framework, risk is defined as the:

- A) variance of returns.
- B) probability of a loss.
- C) beta of an investment.



Explanation

The Markowitz framework assumes that all investors view risk as the variability of returns. The variability of returns is measured as the variance (or equivalently standard deviation) of returns. The capital asset pricing model (CAPM) employs beta as the measure of an investment's systematic risk.

(Module 62.4, LOS 62.i)

Question #10 of 87

Question ID: 1458935

On a graph of risk, measured by standard deviation and expected return, the *efficient frontier* represents:

- A) all portfolios plotted in the northeast quadrant that maximize return.
- B) the set of portfolios that dominate all others as to risk and return.
- C) the group of portfolios that have extreme values and therefore are "efficient" in their allocation.



Explanation

The efficient set is the set of portfolios that dominate all other portfolios as to risk and return. That is, they have highest expected return at each level of risk.

(Module 62.4, LOS 62.i)

Question #11 of 87

Question ID: 1458866

An investor expects a stock currently selling for \$20 per share to increase to \$25 by year-end. The dividend last year was \$1 but he expects this year's dividend to be \$1.25. What is the expected holding period return on this stock?

A) 24.00%.



B) 28.50%.



C) 31.25%.

**Explanation**

Return = [dividend + (ending value – beginning value)] / beginning price value

$$= [1.25 + (25 - 20)] / 20 = 6.25 / 20 = 0.3125$$

(Module 62.1, LOS 62.a)

Question #12 of 87

Question ID: 1458871

Which of the following is *most accurate* with respect to the relationship of the money-weighted return to the time-weighted return? If funds are contributed to a portfolio just prior to a period of favorable performance, the:

A) money-weighted rate of return will tend to be depressed.



B) money-weighted rate of return will tend to be elevated.



C) time-weighted rate of return will tend to be elevated.

**Explanation**

The time-weighted returns are what they are and will not be affected by cash inflows or outflows. The money-weighted return is susceptible to distortions resulting from cash inflows and outflows. The money-weighted return will be biased upward if the funds are invested just prior to a period of favorable performance and will be biased downward if funds are invested just prior to a period of relatively unfavorable performance. The opposite will be true for cash outflows.

(Module 62.1, LOS 62.b)

Question #13 of 87

Question ID: 1458933

Which one of the following portfolios does not lie on the efficient frontier?

Portfolio	Expected Return	Standard Deviation
A	7	5
B	9	12
C	11	10
D	15	15

A) B.



B) C.



C) A.

**Explanation**

Portfolio B has a lower expected return than Portfolio C with a *higher* standard deviation.

(Module 62.4, LOS 62.i)

Question #14 of 87

Question ID: 1458910

Using the following correlation matrix, which two stocks would combine to make the lowest-risk portfolio? (Assume the stocks have equal risk and returns.)

Stock	A	B	C
A	+ 1	--	--
B	- 0.2	+ 1	--
C	+ 0.6	- 0.1	+ 1

A) A and B.



B) A and C.



C) C and B.

**Explanation**

Portfolios A and B have the lowest correlation coefficient and will thus create the lowest-risk portfolio.

The standard deviation of a portfolio = $[W_1^2\sigma_1^2 + W_2^2\sigma_2^2 + 2W_1W_2\sigma_1\sigma_2r_{1,2}]^{1/2}$

The correlation coefficient, $r_{1,2}$, varies from + 1 to - 1. The smaller the correlation coefficient, the smaller $\sigma_{\text{portfolio}}$ can be. If the correlation coefficient were - 1, it would be possible to make $\sigma_{\text{portfolio}}$ go to zero by picking the proper weightings of W_1 and W_2 .

(Module 62.4, LOS 62.g)

Question #15 of 87

Question ID: 1458922

Adding a stock to a portfolio will reduce the risk of the portfolio if the correlation coefficient is *less* than which of the following?

A) +1.00.



B) 0.00.



C) +0.50.



Explanation

Adding any stock that is not perfectly correlated with the portfolio (+1) will reduce the risk of the portfolio.

(Module 62.4, LOS 62.h)

Question #16 of 87

Question ID: 1458900

The correlation coefficient between stocks A and B is 0.75. The standard deviation of stock A's returns is 16% and the standard deviation of stock B's returns is 22%. What is the covariance between stock A and B?

A) 0.3750.



B) 0.0264.



C) 0.0352.



Explanation

$\text{cov}_{1,2} = 0.75 \times 0.16 \times 0.22 = 0.0264 = \text{covariance between A and B.}$

(Module 62.3, LOS 62.f)

Question #17 of 87

Question ID: 1458931

Of the six attainable portfolios listed, which portfolios are not on the efficient frontier?

Portfolio	Expected Return	Standard Deviation
A	26%	28%
B	23%	34%
C	14%	23%
D	18%	14%
E	11%	8%
F	18%	16%

A) A, B, and C.



B) B, C, and F.



C) C, D, and E.

**Explanation**

Portfolio B cannot lie on the frontier because its risk is higher than that of Portfolio A's with lower return. Portfolio C cannot lie on the frontier because it has higher risk than Portfolio D with lower return. Portfolio F cannot lie on the frontier cannot lie on the frontier because its risk is higher than Portfolio D.

(Module 62.4, LOS 62.i)

Question #18 of 87

Question ID: 1458857

An asset manager's portfolio had the following annual rates of return:

Year	Return
20X7	+6%
20X8	-37%
20X9	+27%

The manager states that the return for the period is -5.34%. The manager has reported the:

A) arithmetic mean return.



B) geometric mean return.



C) holding period return.



Explanation

Geometric Mean Return = $\sqrt[3]{(1 + 0.06)(1 - 0.37)(1 + 0.27)} - 1 = -5.34\%$

Holding period return = $(1 + 0.06)(1 - 0.37)(1 + 0.27) - 1 = -15.2\%$

Arithmetic mean return = $(6\% - 37\% + 27\%) / 3 = -1.33\%$.

(Module 62.1, LOS 62.a)

Question #19 of 87

Question ID: 1458929

Which of the following statements *best* describes an investment that is not on the efficient frontier?

A) The portfolio has a very high return.



B) There is a portfolio that has a lower risk for the same return.



C) There is a portfolio that has a lower return for the same risk.



Explanation

The efficient frontier outlines the set of portfolios that gives investors the highest return for a given level of risk or the lowest risk for a given level of return. Therefore, if a portfolio is not on the efficient frontier, there must be a portfolio that has lower risk for the same return. Equivalently, there must be a portfolio that produces a higher return for the same risk.

(Module 62.4, LOS 62.i)

Question #20 of 87

Question ID: 1458865

An investor sold a 30-year bond at a price of \$850 after he purchased it at \$800 a year ago. He received \$50 of interest at the time of the sale. The annualized holding period return is:

A) 6.25%.



B) 15.0%.



C) 12.5%.



Explanation

The holding period return (HPR) is calculated as follows:

$$\text{HPR} = (P_t - P_{t-1} + D_t) / P_{t-1}$$

where:

P_t = price per share at the end of time period t

D_t = cash distributions received during time period t.

Here, $\text{HPR} = (850 - 800 + 50) / 800 = 0.1250$, or **12.50%**.

(Module 62.1, LOS 62.a)

Question #21 of 87

Question ID: 1462958

An investor buys a non-dividend paying stock for \$100 at the beginning of the year with 50% initial margin. At the end of the year, the stock price is \$95. Deflation of 2% occurred during the year. Which of the following return measures for this investment will be greatest?

A) Nominal return.



B) Real return.



C) Leveraged return.



Explanation




No calculations are needed. The real return is greater than the nominal return because the inflation rate is negative. The leveraged return is more negative than the nominal return because the investment lost value and leverage magnifies the loss.

(Module 62.1, LOS 62.a)

Question #22 of 87

Question ID: 1462960

Smith has more steeply sloped risk-return indifference curves than Jones. Assuming these investors have the same expectations, which of the following *best* describes their risk preferences and the characteristics of their optimal portfolios? Smith is:

- A) less risk averse than Jones and will choose an optimal portfolio with a lower expected return. 
- B) more risk averse than Jones and will choose an optimal portfolio with a higher expected return. 
- C) more risk averse than Jones and will choose an optimal portfolio with a lower expected return. 

Explanation




Steeply sloped risk-return indifference curves indicate that a greater increase in expected return is required as compensation for assuming an additional unit of risk, compared to less-steep indifference curves. The more risk-averse Smith will choose an optimal portfolio with lower risk and a lower expected return than the less risk-averse Jones's optimal portfolio.

(Module 62.4, LOS 62.e)

Question #23 of 87

Question ID: 1458934

In a two-asset portfolio, reducing the correlation between the two assets moves the efficient frontier in which direction?

- A) The efficient frontier is stable unless return expectations change. If expectations change, the efficient frontier will extend to the upper right with little or no change in risk. 
- B) The efficient frontier is stable unless the asset's expected volatility changes. This depends on each asset's standard deviation. 
- C) The frontier extends to the left, or northwest quadrant representing a reduction in risk while maintaining or enhancing portfolio returns. 

Explanation




Reducing correlation between the two assets results in the efficient frontier expanding to the left and possibly slightly upward. This reflects the influence of correlation on reducing portfolio risk.

(Module 62.4, LOS 62.i)

Question #24 of 87

Question ID: 1458924

Which one of the following statements about correlation is NOT correct?

- A) Potential benefits from diversification arise when correlation is less than +1. 
- B) If the correlation coefficient were -1, a zero variance portfolio could be constructed. 
- C) If the correlation coefficient were 0, a zero variance portfolio could be constructed. 

Explanation




A correlation coefficient of zero means that there is no relationship between the stock's returns. The other statements are true.

(Module 62.4, LOS 62.h)

Question #25 of 87

Question ID: 1458930

The efficient frontier is *best* described as the set of attainable portfolios that gives investors:

- A) the highest expected return for any given level of risk. 
- B) the highest diversification ratio for any given level of expected return. 
- C) the lowest risk for any given level of risk tolerance. 

Explanation

The efficient frontier is the set of efficient portfolios that gives investors the highest expected return for any given level of risk, or the lowest risk for any given level of expected return. Efficient portfolios have *low* diversification ratios.

(Module 62.4, LOS 62.i)

Question #26 of 87

Question ID: 1458920

A portfolio manager adds a new stock that has the same standard deviation of returns as the existing portfolio but has a correlation coefficient with the existing portfolio that is less than +1. Adding this stock will have what effect on the standard deviation of the revised portfolio's returns? The standard deviation will:

A) decrease only if the correlation is negative.



B) decrease.



C) increase.



Explanation

If the correlation coefficient is less than 1, there are benefits to diversification. Thus, adding the stock will reduce the portfolio's standard deviation.

(Module 62.4, LOS 62.h)

Question #27 of 87

Question ID: 1458861

An investor with a buy-and-hold strategy who makes quarterly deposits into an account should *most appropriately* evaluate portfolio performance using the portfolio's:

A) arithmetic mean return.



B) geometric mean return.



C) money-weighted return.



Explanation

Geometric mean return (time-weighted return) is the most appropriate method for performance measurement as it does not consider additions to or withdrawals from the account.

(Module 62.1, LOS 62.a)

Question #28 of 87

Question ID: 1458876

An investor buys one share of stock for \$100. At the end of year one she buys three more shares at \$89 per share. At the end of year two she sells all four shares for \$98 each. The stock paid a dividend of \$1.00 per share at the end of year one and year two. What is the investor's money-weighted rate of return?

A) 0.06%.



B) 5.29%.



C) 6.35%.



Explanation

T = 0: Purchase of first share = -\$100.00

T = 1: Dividend from first share = +\$1.00

Purchase of 3 more shares = -\$267.00

T = 2: Dividend from four shares = +4.00

Proceeds from selling shares = +\$392.00

The money-weighted return is the rate that solves the equation:

$$\$100.00 = -\$266.00 / (1 + r) + 396.00 / (1 + r)^2.$$

CFO = -100; CF1 = -266; CF2 = 396; CPT → IRR = 6.35%.

(Module 62.1, LOS 62.b)

Question #29 of 87

Question ID: 1458937

Which of the following statements about the efficient frontier is *least accurate*?

A) A portfolio that plots above efficient frontier is not attainable, while a portfolio that plots below the efficient frontier is inefficient.



B) The efficient frontier is the set of portfolios with the greatest expected return for a given level of risk.



C) The slope of the efficient frontier increases steadily as risk increases.



Explanation

The slope of the efficient frontier *decreases* steadily as risk and return increase.

The efficient frontier is the set of portfolios with the greatest expected return for a given level of risk as measured by standard deviation of returns. That is, for a given level of risk, an expected return greater than that of the portfolio on the efficient frontier is not attainable, and a portfolio with a lower expected return is inefficient.

(Module 62.4, LOS 62.i)

Question #30 of 87

Question ID: 1458902

An analyst gathered the following data for Stock A and Stock B:

Time Period	Stock A Returns	Stock B Returns
1	10%	15%
2	6%	9%
3	8%	12%

What is the covariance for this portfolio?

A) 3.



B) 12.



C) 6.



Explanation

The formula for the covariance for historical data is:

$$\text{cov}_{1,2} = \{\sum[(R_{\text{stock A}} - \text{Mean } R_A)(R_{\text{stock B}} - \text{Mean } R_B)]\} / (n - 1)$$

$$\text{Mean } R_A = (10 + 6 + 8) / 3 = 8, \text{Mean } R_B = (15 + 9 + 12) / 3 = 12$$

$$\text{Here, } \text{cov}_{1,2} = [(10 - 8)(15 - 12) + (6 - 8)(9 - 12) + (8 - 8)(12 - 12)] / 2 = 6$$

(Module 62.3, LOS 62.f)

Question #31 of 87

Question ID: 1458928

Kendra Jackson, CFA, is given the following information on two stocks, Rockaway and Bridgeport.

- Covariance between the two stocks = 0.0325
- Standard Deviation of Rockaway's returns = 0.25
- Standard Deviation of Bridgeport's returns = 0.13

Assuming that Jackson must construct a portfolio using only these two stocks, which of the following combinations will result in the *minimum* variance portfolio?

A) 100% in Bridgeport.



B) 50% in Bridgeport, 50% in Rockaway.



C) 80% in Bridgeport, 20% in Rockaway.



Explanation

First, calculate the correlation coefficient to check whether diversification will provide any benefit.

$$r_{\text{Bridgeport, Rockaway}} = \text{COV}_{\text{Bridgeport, Rockaway}} / [(\sigma_{\text{Bridgeport}}) \times (\sigma_{\text{Rockaway}})] = 0.0325 / (0.13 \times 0.25) = 1.00$$

Since the stocks are perfectly positively correlated, there are no diversification benefits and we select the stock with the lowest risk (as measured by variance or standard deviation), which is Bridgeport.

(Module 62.4, LOS 62.i)

Question #32 of 87

Question ID: 1458939

An investor has identified the following possible portfolios. Which portfolio *cannot* be on the efficient frontier?

Portfolio	Expected Return	Standard Deviation
V	18%	35%
W	12%	16%
X	10%	10%
Y	14%	20%
Z	13%	24%

A) Z.



B) Y.



C) X.



Explanation

Portfolio Z must be inefficient because its risk is higher than Portfolio Y and its expected return is lower than Portfolio Y.

(Module 62.4, LOS 62.i)

Question #33 of 87

Question ID: 1458898

If the standard deviation of asset A is 12.2%, the standard deviation of asset B is 8.9%, and the correlation coefficient is 0.20, what is the covariance between A and B?

A) 0.0001.



B) 0.0022.



C) 0.0031.



Explanation

The formula is: (correlation)(standard deviation of A)(standard deviation of B) = (0.20)(0.122)(0.089) = 0.0022.

(Module 62.3, LOS 62.f)

Question #34 of 87

Question ID: 1458878

Over the long term, the annual returns and standard deviations of returns for major asset classes have shown:

A) a negative relationship.



B) a positive relationship.



C) no clear relationship.



Explanation

In most markets and for most asset classes, higher average returns have historically been associated with higher risk (standard deviation of returns).

(Module 62.1, LOS 62.c)



Question #35 of 87

Question ID: 1458904

Which of the following statements regarding the covariance of rates of return is *least* accurate?

A) Covariance is not a very useful measure of the strength of the relationship between rates of return.



- B) Covariance is positive if two variables tend to both be above their mean values in the same time periods. 
- C) If the covariance is negative, the rates of return on two investments will always move in different directions relative to their means. 

Explanation

Negative covariance means rates of return for one security will tend to be above its mean return in periods when the other is below its mean return, and vice versa. Positive covariance means that returns on both securities will tend to be above (or below) their mean returns in the same time periods. For the returns to *always* move in opposite directions, they would have to be perfectly negatively correlated. Negative covariance by itself does not imply anything about the strength of the negative correlation, it must be standardized by dividing by the product of the securities' standard deviations of return.

(Module 62.3, LOS 62.f)

Question #36 of 87

Question ID: 1458899

Stock 1 has a standard deviation of 10. Stock 2 also has a standard deviation of 10. If the correlation coefficient between these stocks is -1 , what is the covariance between these two stocks?

- A) 0.00. 
- B) 1.00. 
- C) -100.00 . 

Explanation

Covariance = correlation coefficient \times standard deviation_{Stock 1} \times standard deviation_{Stock 2}
 $= (-1.00)(10.00)(10.00) = -100.00$.

(Module 62.3, LOS 62.f)

Question #37 of 87

Question ID: 1458883

A stock has an expected return of 4% with a standard deviation of returns of 6%. A bond has an expected return of 4% with a standard deviation of 7%. An investor who prefers to invest in the stock rather than the bond is *best* described as:

- A) risk averse. 

B) risk neutral.



C) risk seeking.



Explanation

Given two investments with the same expected return, a risk averse investor will prefer the investment with less risk. A risk neutral investor will be indifferent between the two investments. A risk seeking investor will prefer the investment with more risk.

(Module 62.2, LOS 62.d)

Question #38 of 87

Question ID: 1458914

What is the variance of a two-stock portfolio if 15% is invested in stock A (variance of 0.0071) and 85% in stock B (variance of 0.0008) and the correlation coefficient between the stocks is -0.04?

A) 0.0007.



B) 0.0020.



C) 0.0026.



Explanation

The *variance* of the portfolio is found by:

$$[W_1^2 \sigma_1^2 + W_2^2 \sigma_2^2 + 2W_1W_2\sigma_1\sigma_2r_{1,2}], \text{ or } [(0.15)^2(0.0071) + (0.85)^2(0.0008) + (2)(0.15)(0.85)(0.0843)(0.0283)(-0.04)] = 0.0007.$$

(Module 62.4, LOS 62.g)

Question #39 of 87

Question ID: 1458863

If an investor bought a stock for \$32 and sold it nine months later for \$37.50 after receiving \$2 in dividends, what was the holding period return on this investment?

A) 17.19%.



B) 32.42%.



C) 23.44%.



Explanation

$HPR = [\text{ending value} - \text{beginning value}] / \text{beginning value}$

$HPR = [(2 + 37.50) - 32] / 32 = 0.2344.$

(Module 62.1, LOS 62.a)

Question #40 of 87

Question ID: 1458862

A bond was purchased exactly one year ago for \$910 and was sold today for \$1,020. During the year, the bond made two semi-annual coupon payments of \$30. What is the holding period return?

A) 12.1%.



B) 18.7%.



C) 6.0%.



Explanation

$HPY = (1,020 + 30 + 30 - 910) / 910 = 0.1868$ or 18.7%.

(Module 62.1, LOS 62.a)

Question #41 of 87

Question ID: 1458859

A security portfolio earns a gross return of 7.0% and a net return of 6.5%. The difference of 0.5% *most likely* results from:

A) taxes.



B) fees.



C) inflation.



Explanation

The net return on a portfolio is its gross return minus management and administrative fees. A return adjusted for taxes is called an after-tax return. A return adjusted for inflation is called a real return.

(Module 62.1, LOS 62.a)

Question #42 of 87

Question ID: 1458884

Three portfolios have the following expected returns and risk:

Portfolio	Expected return	Standard deviation
Jones	4%	4%
Kelly	5%	6%
Lewis	6%	5%

A risk-averse investor choosing from these portfolios could rationally select:

A) Jones or Lewis, but not Kelly.



B) Lewis, but not Kelly or Jones.



C) Jones, but not Kelly or Lewis.

**Explanation**

Risk aversion means that to accept greater risk, an investor must be compensated with a higher expected return. A risk-averse investor will not select a portfolio if another portfolio offers a higher expected return with the same risk, or lower risk with the same expected return. Thus a rational investor would always choose Lewis over Kelly, because Lewis has both a higher expected return and lower risk than Kelly. Neither Lewis nor Kelly is necessarily preferable to Jones, because although Jones has a lower expected return, it also has lower risk. Therefore, either Jones or Lewis might be selected by a rational investor, but Kelly would not be.

(Module 62.2, LOS 62.d)

Question #43 of 87

Question ID: 1458869

Time-weighted returns are used by the investment management industry because they:

A) are not affected by the timing of cash flows.



B) result in higher returns versus the money-weighted return calculation.



C) take all cash inflows and outflows into account using the internal rate of return.

**Explanation**




Time-weighted returns are not affected by the timing of cash flows. Money-weighted returns, by contrast, will be higher when funds are added at a favorable investment period or will be lower when funds are added during an unfavorable period. Thus, time-weighted returns offer a better performance measure because they are not affected by the timing of flows into and out of the account.

(Module 62.1, LOS 62.b)

Question #44 of 87

Question ID: 1458925

There are benefits to diversification as long as:

- A) there must be perfect negative correlation between the assets. 
- B) there is perfect positive correlation between the assets. 
- C) the correlation coefficient between the assets is less than 1. 

Explanation

There are benefits to diversification as long as the correlation coefficient between the assets is less than 1.

(Module 62.4, LOS 62.h)

Question #45 of 87

Question ID: 1458903

The covariance of the market's returns with the stock's returns is 0.008. The standard deviation of the market's returns is 0.1 and the standard deviation of the stock's returns is 0.2. What is the correlation coefficient between the stock and market returns?

- A) 0.00016. 
- B) 0.40. 
- C) 0.91. 

Explanation

$\text{Cov}_{A,B} = (r_{A,B})(SD_A)(SD_B)$, where r = correlation coefficient and SD_x = standard deviation of stock x

Then, $(r_{A,B}) = \text{Cov}_{A,B} / (SD_A \times SD_B) = 0.008 / (0.100 \times 0.200) = 0.40$

Remember: The correlation coefficient must be between -1 and 1.

(Module 62.3, LOS 62.f)

Question #46 of 87

Question ID: 1458938

Which of the following portfolios falls below the Markowitz efficient frontier?

Portfolio	Expected Return	Expected Standard Deviation
A	7%	14%
B	9%	26%
C	15%	30%
D	12%	22%

A) B.



B) C.



C) D.



Explanation

Portfolio B is not on the efficient frontier because it has a lower return, but higher risk, than Portfolio D.

(Module 62.4, LOS 62.i)

Question #47 of 87

Question ID: 1458858

The *most appropriate* measure of the increase in the purchasing power of a portfolio's value over a given span of time is a(n):

A) after-tax return.



B) real return.



C) holding period return.



Explanation

A real return is adjusted for the effects of inflation and is used to measure the increase in purchasing power over time.

(Module 62.1, LOS 62.a)

Question #48 of 87

Question ID: 1458923

Stock A has a standard deviation of 4.1% and Stock B has a standard deviation of 5.8%. If the stocks are perfectly positively correlated, which portfolio weights minimize the portfolio's standard deviation?

	<u>Stock A</u>	<u>Stock B</u>
A) 0%	100%	
B) 100%	0%	
C) 63%	37%	



Explanation

Because there is a perfectly positive correlation, there is no benefit to diversification. Therefore, the investor should put all his money into Stock A (with the lowest standard deviation) to minimize the risk (standard deviation) of the portfolio.

(Module 62.4, LOS 62.h)

Question #49 of 87

Question ID: 1458907

If the standard deviation of returns for stock X is 0.60 and for stock Y is 0.40 and the covariance between the returns of the two stocks is 0.009, the correlation between stocks X and Y is *closest* to:

A) 26.6670.



B) 0.0375.



C) 0.0020.



Explanation

$\text{Cov}_{X,Y} = (r_{X,Y})(s_X)(s_Y)$, where r = correlation coefficient, s_X = standard deviation of stock X, and s_Y = standard deviation of stock Y

Then, $(r_{X,Y}) = \text{Cov}_{X,Y} / (SD_X \times SD_Y) = 0.009 / (0.600 \times 0.400) = 0.0375$

(Module 62.3, LOS 62.f)

Question #50 of 87

Question ID: 1458911

Calculating the variance of a two-asset portfolio *least likely* requires inputs for each asset's:

A) weight in the portfolio.



B) standard deviation.



C) beta.



Explanation

Beta is not an input to calculate the variance of a two-asset portfolio. The formula for calculating the variance of a two-asset portfolio is:

$$\sigma_P^2 = w_A^2 \sigma_A^2 + w_B^2 \sigma_B^2 + 2w_A w_B \text{Cov}_{AB}$$

(Module 62.4, LOS 62.g)

Question #51 of 87

Question ID: 1458872

On January 1, Jonathan Wood invests \$50,000. At the end of March, his investment is worth \$51,000. On April 1, Wood deposits \$10,000 into his account, and by the end of June, his account is worth \$60,000. Wood withdraws \$30,000 on July 1 and makes no additional deposits or withdrawals the rest of the year. By the end of the year, his account is worth \$33,000. The time-weighted return for the year is *closest to*:

A) 5.5%.



B) 10.4%.



C) 7.0%.



Explanation

January – March return = $51,000 / 50,000 - 1 = 2.00\%$

April – June return = $60,000 / (51,000 + 10,000) - 1 = -1.64\%$

July – December return = $33,000 / (60,000 - 30,000) - 1 = 10.00\%$

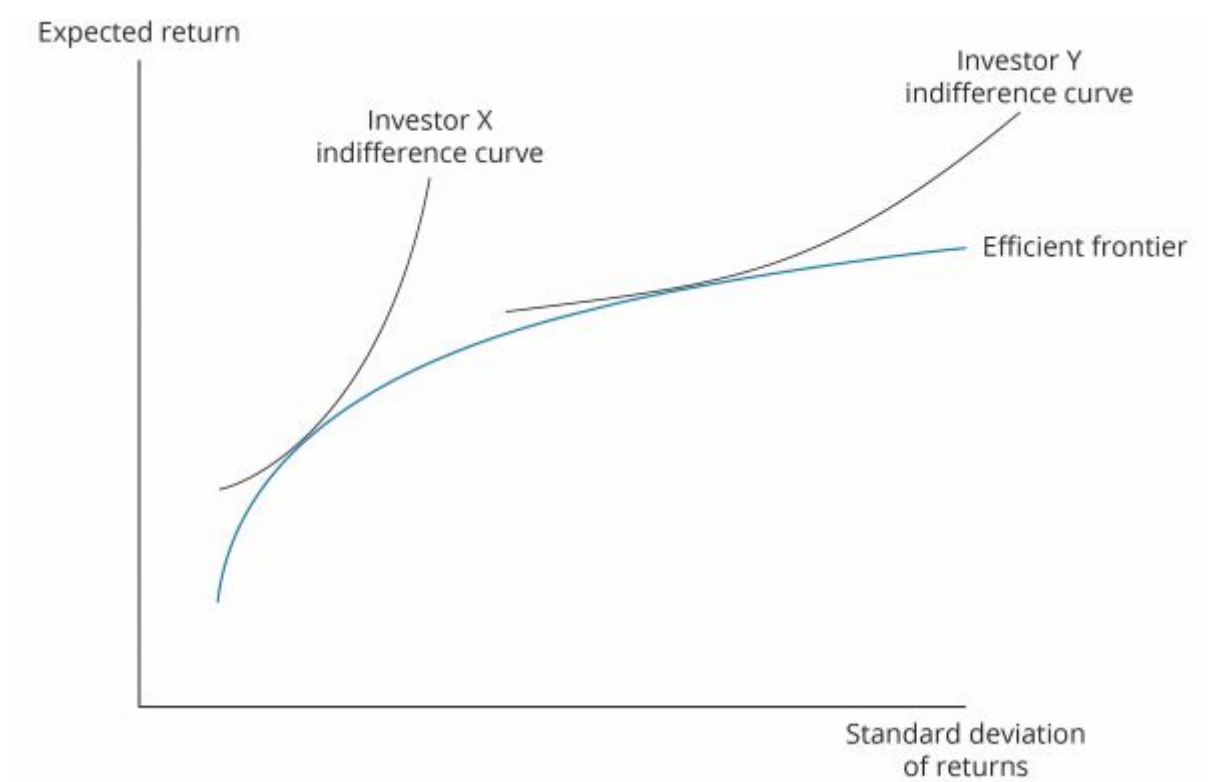
Time-weighted return = $[(1 + 0.02)(1 - 0.0164)(1 + 0.10)] - 1 = 0.1036$ or 10.36%

(Module 62.1, LOS 62.b)

Question #52 of 87

Question ID: 1480017

The graph below combines the efficient frontier with the indifference curves for two different investors, X and Y.



Which of the following statements about the above graph is *least* accurate?

A) Investor X is less risk-averse than Investor Y.



B) The efficient frontier line represents the portfolios that provide the highest return at each risk level.



C) Investor X's expected return is likely to be less than that of Investor Y.



Explanation

Investor X has a steep indifference curve, indicating that he is risk-averse. Flatter indifference curves, such as those for Investor Y, indicate a less risk-averse investor. The other choices are true. A more risk-averse investor will likely obtain lower returns than a less risk-averse investor.

(Module 62.4, LOS 62.e)

Question #53 of 87

Question ID: 1458860

An investor begins with a \$100,000 portfolio. At the end of the first period, it generates \$5,000 of income, which he does not reinvest. At the end of the second period, he contributes \$25,000 to the portfolio. At the end of the third period, the portfolio is valued at \$123,000. The portfolio's money-weighted return per period is *closest to*:

A) -0.50%.



B) 1.20%.



C) 0.94%.



Explanation

Using the financial calculator, the initial investment (CF_0) is -100,000. The income is +5,000 (CF_1), and the contribution is -25,000 (CF_2). Finally, the ending value is +123,000 (CF_3) available to the investor. Compute $IRR = 0.94$

(Module 62.1, LOS 62.a)

Question #54 of 87

Question ID: 1462963

Which of the following possible portfolios is *least likely* to lie on the efficient frontier?

Portfolio	Expected Return	Standard Deviation
X	9%	12%
Y	11%	10%
Z	13%	15%

A) Portfolio Z.



B) Portfolio X.



C) Portfolio Y.



Explanation




Portfolio X has a lower expected return and a higher standard deviation than Portfolio Y. X must be inefficient.

(Module 62.4, LOS 62.i)

Question #55 of 87

Question ID: 1458919

A portfolio currently holds Randy Co. and the portfolio manager is thinking of adding either XYZ Co. or Branton Co. to the portfolio. All three stocks offer the same expected return and total risk. The covariance of returns between Randy Co. and XYZ is +0.5 and the covariance between Randy Co. and Branton Co. is -0.5. The portfolio's risk would decrease:

- A) more if she bought Branton Co. 
- B) more if she bought XYZ Co. 
- C) most if she put half your money in XYZ Co. and half in Branton Co. 

Explanation

In portfolio composition questions, return and standard deviation are the key variables. Here you are told that both returns and standard deviations are equal. Thus, you just want to pick the companies with the lowest covariance, because that would mean you picked the ones with the lowest correlation coefficient.

$\sigma_{\text{portfolio}} = [W_1^2 \sigma_1^2 + W_2^2 \sigma_2^2 + 2W_1 W_2 \sigma_1 \sigma_2 r_{1,2}]^{1/2}$ where $\sigma_{\text{Randy}} = \sigma_{\text{Branton}} = \sigma_{\text{XYZ}}$ so you want to pick the lowest covariance which is between Randy and Branton.

(Module 62.4, LOS 62.h)

Question #56 of 87

Question ID: 1458874

An investor buys a share of stock for \$200.00 at time $t = 0$. At time $t = 1$, the investor buys an additional share for \$225.00. At time $t = 2$ the investor sells both shares for \$235.00. During both years, the stock paid a per share dividend of \$5.00. What are the *approximate* time-weighted and money-weighted returns respectively?

- A) 10.8%; 9.4%. 
- B) 7.7%; 7.7%. 

C) 9.0%; 15.0%.



Explanation

Time-weighted return = $(225 + 5 - 200) / 200 = 15\%$; $(470 + 10 - 450) / 450 = 6.67\%$; $[(1.15)(1.0667)]^{1/2} - 1 = 10.8\%$

Money-weighted return: $200 + [225 / (1 + \text{return})] = [5 / (1 + \text{return})] + [480 / (1 + \text{return})^2]$; money return = approximately 9.4%

Note that the easiest way to solve for the money-weighted return is to set up the equation and **plug in the answer choices** to find the discount rate that makes outflows equal to inflows.

Using the financial calculators to calculate the money-weighted return: (The following keystrokes assume that the financial memory registers are cleared of prior work.)

TI Business Analyst II Plus®

- Enter CF₀: 200, +/-, Enter, down arrow
- Enter CF₁: 220, +/-, Enter, down arrow, down arrow
- Enter CF₂: 480, Enter, down arrow, down arrow,
- Compute IRR: IRR, CPT
- Result: 9.39

HP 12C®

- Enter CF₀: 200, CHS, g, CF₀
- Enter CF₁: 220, CHS, g, CF_j
- Enter CF₂: 480, g, CF_j
- Compute IRR: f, IRR
- Result: 9.39

(Module 62.1, LOS 62.b)

Question #57 of 87

Question ID: 1458926

Stock A has a standard deviation of 0.5 and Stock B has a standard deviation of 0.3. Stock A and Stock B are perfectly positively correlated. According to Markowitz portfolio theory how much should be invested in each stock to minimize the portfolio's standard deviation?

- A) 100% in Stock B.
- B) 30% in Stock A and 70% in Stock B.
- C) 50% in Stock A and 50% in Stock B.



Explanation

Since the stocks are perfectly correlated, there is no benefit from diversification. So, invest in the stock with the lowest risk.

(Module 62.4, LOS 62.h)

Question #58 of 87

Question ID: 1458936

Which of the following portfolios falls below the Markowitz efficient frontier?

Portfolio	Expected Return	Expected Standard Deviation
A	12.1%	8.5%
B	14.2%	8.7%
C	15.1%	8.7%

A) Portfolio A.



B) Portfolio B.



C) Portfolio C.



Explanation

Portfolio B is inefficient (falls below the efficient frontier) because for the same risk level (8.7%), you could have portfolio C with a higher expected return (15.1% versus 14.2%).

(Module 62.4, LOS 62.i)

Question #59 of 87

Question ID: 1458897

If the standard deviation of returns for stock A is 0.40 and for stock B is 0.30 and the covariance between the returns of the two stocks is 0.007 what is the correlation between stocks A and B?

A) 0.00084.



B) 17.14300.



C) 0.05830.



Explanation

$\text{Cov}_{A,B} = (r_{A,B})(SD_A)(SD_B)$, where r = correlation coefficient and SD_x = standard deviation of stock x




Then, $(r_{A,B}) = \text{Cov}_{A,B} / (SD_A \times SD_B) = 0.007 / (0.400 \times 0.300) = 0.0583$

(Module 62.3, LOS 62.f)

Question #60 of 87

Question ID: 1458892

Which of the following statements about the optimal portfolio is NOT correct? The optimal portfolio:

- A) is the portfolio that gives the investor the maximum level of return. 
- B) may be different for different investors. 
- C) lies at the point of tangency between the efficient frontier and the indifference curve with the highest possible utility. 

Explanation

This statement is incorrect because it does not specify that risk must also be considered.

(Module 62.4, LOS 62.e)

Question #61 of 87

Question ID: 1458867

A 10% coupon bond was purchased for \$1,000. One year later the bond was sold for \$915 to yield 11%. The investor's holding period yield on this bond is *closest* to:

- A) 18.5%. 
- B) 9.0%. 
- C) 1.5%. 

Explanation

$\text{HPY} = [(\text{interest} + \text{ending value}) / \text{beginning value}] - 1$

$= [(100 + 915) / 1,000] - 1$

$= 1.015 - 1 = 1.5\%$

(Module 62.1, LOS 62.a)

Question #62 of 87

Question ID: 1458909

Betsy Minor is considering the diversification benefits of a two stock portfolio. The expected return of stock A is 14 percent with a standard deviation of 18 percent and the expected return of stock B is 18 percent with a standard deviation of 24 percent. Minor intends to invest 40 percent of her money in stock A, and 60 percent in stock B. The correlation coefficient between the two stocks is 0.6. What is the variance and standard deviation of the two stock portfolio?

A) Variance = 0.02206; Standard Deviation = 14.85%.



B) Variance = 0.03836; Standard Deviation = 19.59%.



C) Variance = 0.04666; Standard Deviation = 21.60%.



Explanation

$$(0.40)^2(0.18)^2 + (0.60)^2(0.24)^2 + 2(0.4)(0.6)(0.18)(0.24)(0.6) = 0.03836.$$

$$0.03836^{0.5} = 0.1959 \text{ or } 19.59\%.$$

(Module 62.4, LOS 62.g)

Question #63 of 87

Question ID: 1458880

Historically, which of the following asset classes has exhibited the smallest standard deviation of monthly returns?

A) Large-capitalization stocks.



B) Long-term corporate bonds.



C) Treasury bills.



Explanation




Based on data for securities in the United States from 1926 to 2008, Treasury bills exhibited a lower standard deviation of monthly returns than both large-cap stocks and long-term corporate bonds.

(Module 62.1, LOS 62.c)

Question #64 of 87

Question ID: 1458890

According to Markowitz, an investor's optimal portfolio is determined where the:

- A) investor's highest utility curve is tangent to the efficient frontier. 
- B) investor's lowest utility curve is tangent to the efficient frontier. 
- C) investor's utility curve meets the efficient frontier. 

Explanation




The optimal portfolio for an investor is determined as the point where the investor's highest utility curve is tangent to the efficient frontier.

(Module 62.4, LOS 62.e)

Question #65 of 87

Question ID: 1458885

The basic premise of the risk-return trade-off suggests that risk-averse individuals purchasing investments with higher non-diversifiable risk should expect to earn:

- A) rates of return equal to the market. 
- B) lower rates of return. 
- C) higher rates of return. 

Explanation



Investors are *risk averse*. Given a choice between two assets with equal rates of return, the investor will always select the asset with the lowest level of risk. **This means that there is a positive relationship between expected returns (ER) and expected risk (Eσ)** and the risk return line (capital market line [CML] and security market line [SML]) is upward sweeping.

(Module 62.4, LOS 62.e)

Question #66 of 87

Question ID: 1458905

If the standard deviation of stock A is 10.6%, the standard deviation of stock B is 14.6%, and the covariance between the two is 0.015476, what is the correlation coefficient?

- A) 0.0002. 
- B) 0. 

C) +1.



Explanation

The formula is: $(\text{Covariance of A and B}) / [(\text{Standard deviation of A})(\text{Standard Deviation of B})] = (\text{Correlation Coefficient of A and B}) = (0.015476) / [(0.106)(0.146)] = 1.$

(Module 62.3, LOS 62.f)

Question #67 of 87

Question ID: 1458891

The optimal portfolio in the Markowitz framework occurs when an investor achieves the diversified portfolio with the:

A) highest return.



B) lowest risk.



C) highest utility.



Explanation

The optimal portfolio in the Markowitz framework occurs when the investor achieves the diversified portfolio with the highest utility.

(Module 62.4, LOS 62.e)

Question #68 of 87

Question ID: 1458886

A line that represents the possible portfolios that combine a risky asset and a risk free asset is *most accurately* described as a:

A) capital allocation line.



B) capital market line.



C) characteristic line.



Explanation

The line that represents possible combinations of a risky asset and the risk-free asset is referred to as a capital allocation line (CAL). The capital market line (CML) represents possible combinations of the market portfolio with the risk-free asset. A characteristic line is the best fitting linear relationship between excess returns on an asset and excess returns on the market and is used to estimate an asset's beta.

(Module 62.4, LOS 62.e)

Question #69 of 87

Question ID: 1458908

An investment advisor is considering a portfolio that is 60% invested in a broad-based stock index fund with the remainder invested in a taxable bond fund. The stock index fund has an expected return of 7% and variance of 0.04, while the bond fund has an expected return of 3% and a variance of 0.0081. If the covariance of returns between the bond and index funds is 0.0108, the standard deviation of returns for the overall portfolio is *closest* to:

- A) 12.56%.
- B) 1.58%.
- C) 14.45%.



Explanation

The standard deviation of returns for the overall portfolio is as follows:

$$\sqrt{0.6^2 (0.04) + 0.4^2 (0.0081) + 2 (0.6) (0.4) (0.0108)} = 14.4499\%$$

(Module 62.3, LOS 62.f)

Question #70 of 87

Question ID: 1458882

Risk aversion means that an individual will choose the less risky of two assets:

- A) if they have the same expected return.
- B) even if it has a lower expected return.
- C) in all cases.



Explanation

Investors are *risk averse*. Given a choice between assets with equal rates of expected return, the investor will always select the asset with the lowest level of risk. Risk aversion does not imply that an investor will choose the less risky of two assets in all cases, or that an investor is unwilling to accept greater risk to achieve a greater expected return.

(Module 62.2, LOS 62.d)

Question #71 of 87

Question ID: 1458873

Assume an investor makes the following investments:

- Today, she purchases a share of stock in Redwood Alternatives for \$50.00.
- After one year, she purchases an additional share for \$75.00.
- After one more year, she sells both shares for \$100.00 each.

There are no transaction costs or taxes. The investor's required return is 35.0%.

During year one, the stock paid a \$5.00 per share dividend. In year two, the stock paid a \$7.50 per share dividend.

The time-weighted return is:

A) 23.2%.



B) 51.4%.



C) 51.7%.



Explanation

To calculate the *time-weighted* return:

Step 1: Separate the time periods into holding periods and calculate the return over that period:

Holding period 1: $P_0 = \$50.00$

$D_1 = \$5.00$

$P_1 = \$75.00$ (from information on second stock purchase)

$HPR_1 = (75 - 50 + 5) / 50 = 0.60$, or 60%

Holding period 2: $P_1 = \$75.00$

$D_2 = \$7.50$

$P_2 = \$100.00$

$HPR_2 = (100 - 75 + 7.50) / 75 = 0.433$, or 43.3%.

Step 2: Use the geometric mean to calculate the return over both periods




Return = $[(1 + HPR_1) \times (1 + HPR_2)]^{1/2} - 1 = [(1.60) \times (1.433)]^{1/2} - 1 = 0.5142$, or **51.4%**.

(Module 62.1, LOS 62.b)

Question #72 of 87

Question ID: 1458879

Over long periods of time, compared to fixed income securities, equities have tended to exhibit:

- A) higher average annual returns and lower standard deviation of returns. 
- B) lower average annual returns and higher standard deviation of returns. 
- C) higher average annual returns and higher standard deviation of returns. 

Explanation

Based on data for securities in the United States from 1926 to 2008, both small-cap stocks and large-cap stocks have exhibited higher average annual returns and higher standard deviations of returns than long-term corporate bonds and long-term government bonds. Results over long periods of time have been similar in other developed markets.

(Module 62.1, LOS 62.c)

Question #73 of 87

Question ID: 1458877

An investor buys one share of stock for \$100. At the end of year one she buys three more shares at \$89 per share. At the end of year two she sells all four shares for \$98 each. The stock paid a dividend of \$1.00 per share at the end of year one and year two. What is the investor's time-weighted rate of return?

A) 0.06%.



B) 11.24%.



C) 6.35%.



Explanation

The holding period return in year one is $(\$89.00 - \$100.00 + \$1.00) / \$100.00 = -10.00\%$.

The holding period return in year two is $(\$98.00 - \$89.00 + \$1.00) / \$89 = 11.24\%$.

The time-weighted return is $[1 + (-0.1000)]\{1 + 0.1124\}^{1/2} - 1 = 0.06\%$.

(Module 62.1, LOS 62.b)

Question #74 of 87

Question ID: 1458881

An analyst gathers the following data about the returns for two stocks.

	Stock A	Stock B
$E(R)$	0.04	0.09
σ^2	0.0025	0.0064
$\text{Cov}_{A,B}$	0.001	

The correlation between the returns of Stock A and Stock B is *closest* to:

A) 0.25.



B) 0.50.



C) 0.63.



Explanation

The correlation between the two stocks is:

$$\rho_{A,B} = \text{COV}_{A,B} / (\sigma_A \times \sigma_B) = 0.001 / (0.05 \times 0.08) = 0.001 / (0.004) = 0.25$$

Note that the formula uses the standard deviations, not the variances, of the returns on the two securities.

(Module 62.1, LOS 62.c)

Question #75 of 87

Question ID: 1458864

A stock is currently worth \$75. If the stock was purchased one year ago for \$60, and the stock paid a \$1.50 dividend during the year, what is the holding period return?

A) 27.5%.



B) 22.0%.



C) 24.0%.



Explanation

HPR = [ending value – beginning value] / beginning value

= (75 + 1.50 – 60) / 60 = 27.5%.

(Module 62.1, LOS 62.a)

Question #76 of 87

Question ID: 1458921

As the correlation between the returns of two assets becomes lower, the risk reduction potential becomes:

A) smaller.



B) greater.



C) decreased by the same level.



Explanation

Perfect positive correlation ($r = +1$) of the returns of two assets offers no risk reduction, whereas perfect negative correlation ($r = -1$) offers the greatest risk reduction.

(Module 62.4, LOS 62.h)

Question #77 of 87

Question ID: 1458912

Assets A (with a variance of 0.25) and B (with a variance of 0.40) are perfectly positively correlated. If an investor creates a portfolio using only these two assets with 40% invested in A, the portfolio standard deviation is *closest* to:

A) 0.5795.



B) 0.3400.



C) 0.3742.



Explanation

The portfolio standard deviation = $[(0.4)^2(0.25) + (0.6)^2(0.4) + 2(0.4)(0.6)(0.25)^{0.5}(0.4)^{0.5}]^{0.5}$
= 0.5795

(Module 62.4, LOS 62.g)

Question #78 of 87

Question ID: 1458906

If the standard deviation of stock X is 7.2%, the standard deviation of stock Y is 5.4%, and the covariance between the two is -0.0031, their correlation coefficient is *closest* to:

A) -0.64.



B) -0.19.



C) -0.80.



Explanation

Correlation = (covariance of X and Y) / [(standard deviation of X)(standard deviation of Y)]
= $-0.0031 / [(0.072)(0.054)] = -0.797$.

(Module 62.3, LOS 62.f)

Question #79 of 87

Question ID: 1458888

Investors who are *less* risk averse will have what type of indifference curves for risk and expected return?

A) Flatter.



B) Steeper.



C) Inverted.



Explanation

Investors who are less risk averse will have flatter indifference curves, meaning they are willing to take on more risk for a slightly higher return. Investors who are more risk averse require a much higher return to accept more risk, producing steeper indifference curves.

(Module 62.4, LOS 62.e)

Question #80 of 87

Question ID: 1458893

Which of the following statements about the efficient frontier is *least accurate*?

A) Investors will want to invest in the portfolio on the efficient frontier that offers the highest rate of return.



B) Portfolios falling on the efficient frontier are fully diversified.



C) The efficient frontier shows the relationship that exists between expected return and total risk in the absence of a risk-free asset.



Explanation

The optimal portfolio for each investor is the *highest indifference curve that is tangent to the efficient frontier*.

(Module 62.4, LOS 62.e)

Question #81 of 87

Question ID: 1462962

According to the CAPM, a rational investor would be *least likely* to choose as his optimal portfolio:

A) a 100% allocation to the risk-free asset.



B) the global minimum variance portfolio.



C) a 130% allocation to the market portfolio.



Explanation

According to the CAPM, rational, risk-averse investors will optimally choose to hold a portfolio along the capital market line. This can range from a 100% allocation to the risk-free asset to a leveraged position in the market portfolio constructed by borrowing at the risk-free rate to invest more than 100% of the portfolio equity value in the market portfolio. The global minimum variance portfolio lies below the CML and is not an efficient portfolio under the assumptions of the CAPM.

(Module 62.4, LOS 62.i)

Question #82 of 87

Question ID: 1458896

A bond analyst is looking at historical returns for two bonds, Bond 1 and Bond 2. Bond 2's returns are much more volatile than Bond 1. The variance of returns for Bond 1 is 0.012 and the variance of returns of Bond 2 is 0.308. The correlation between the returns of the two bonds is 0.79, and the covariance is 0.048. If the variance of Bond 1 increases to 0.026 while the variance of Bond 2 decreases to 0.188 and the covariance remains the same, the correlation between the two bonds will:

A) decrease.



B) increase.



C) remain the same.



Explanation

$P_{1,2} = 0.048 / (0.026^{0.5} \times 0.188^{0.5}) = 0.69$ which is lower than the original 0.79.

(Module 62.3, LOS 62.f)

Question #83 of 87

Question ID: 1458940

Which of the following inputs is *least likely* required for the Markowitz efficient frontier? The:

A) expected return of all securities.



B) level of risk aversion in the market.



C) covariation between all securities.



Explanation

The level of risk aversion in the market is not a required input. The model requires that investors know the expected return and variance of each security as well as the covariance between all securities.

(Module 62.4, LOS 62.i)

Question #84 of 87

Question ID: 1458932

Which one of the following portfolios *cannot* lie on the efficient frontier?

Portfolio	Expected Return	Standard Deviation
A	20%	35%
B	11%	13%
C	8%	10%
D	8%	9%

A) Portfolio C.



B) Portfolio A.



C) Portfolio D.



Explanation

Portfolio C cannot lie on the frontier because it has the same return as Portfolio D, but has more risk.

(Module 62.4, LOS 62.i)

Question #85 of 87

Question ID: 1458915

An investor calculates the following statistics on her two-stock (A and B) portfolio.

- $\sigma_A = 20\%$
- $\sigma_B = 15\%$
- $r_{A,B} = 0.32$
- $W_A = 70\%$
- $W_B = 30\%$

The portfolio's standard deviation is *closest* to:

A) 0.1600.



B) 0.0256.



C) 0.1832.



Explanation

The formula for the standard deviation of a 2-stock portfolio is:

$$\sigma = [W_A^2\sigma_A^2 + W_B^2\sigma_B^2 + 2W_AW_B\sigma_A\sigma_B\rho_{A,B}]^{1/2}$$

$$\sigma = [(0.7^2 \times 0.2^2) + (0.3^2 \times 0.15^2) + (2 \times 0.7 \times 0.3 \times 0.2 \times 0.15 \times 0.32)]^{1/2} = [0.0196 + 0.002025 + 0.004032]^{1/2} = 0.0256570^{1/2} = 0.1602, \text{ or approximately } \mathbf{16.0\%}.$$

(Module 62.4, LOS 62.g)

Question #86 of 87

Question ID: 1458875

An investor makes the following investments:

- She purchases a share of stock for \$50.00.
- After one year, she purchases an additional share for \$75.00.
- After one more year, she sells both shares for \$100.00 each.
- There are no transaction costs or taxes.

During year one, the stock paid a \$5.00 per share dividend. In year 2, the stock paid a \$7.50 per share dividend. The investor's required return is 35%. Her money-weighted return is *closest to*:

A) 16.1%.



B) 48.9%.



C) -7.5%.



Explanation

To determine the money weighted rate of return, use your calculator's cash flow and IRR functions. The cash flows are as follows:

CF0: initial cash outflow for purchase = \$50

CF1: dividend inflow of \$5 - cash outflow for additional purchase of \$75 = net cash outflow of -\$70

CF2: dividend inflow ($2 \times \$7.50 = \15) + cash inflow from sale ($2 \times \$100 = \200) = net cash inflow of \$215

Enter the cash flows and compute IRR:




CF0 = -50; CF1 = -70; CF2 = +215; CPT IRR = 48.8607

(Module 62.1, LOS 62.b)

Question #87 of 87

Question ID: 1458901

If two stocks have positive covariance:

- A) they are likely to be in the same industry. 
- B) their rates of return tend to change in the same direction. 
- C) they exhibit a strong correlation of returns. 

Explanation

For two stocks with positive covariance, their prices will tend to move together over time and they will tend to produce rates of return greater than their mean returns at the same time and produce rates of return less than their mean returns at the same time.

Positive covariance does not necessarily imply strong positive correlation. Two stocks need not be in the same industry to have a positive covariance.

(Module 62.3, LOS 62.f)