CHAPTER 2—RISK AND RETURN: PART I

1. The tighter the probability distribution of its expected future returns, the greater the risk of a given investment as measured by its standard deviation.
    a. True
    b. False

ANSWER:	False
POINTS:	1
DIFFICULTY:	Difficulty: Easy
LEARNING OBJECTIVES:	INTE.GENE.16.5 - LO: 2-2
NATIONAL STANDARDS:	United States - BUSPROG: Reflective Thinking
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	Standard deviation
KEYWORDS:	Bloom's: Knowledge

2. Risk-averse investors require higher rates of return on investments whose returns are highly uncertain, and most investors are risk averse.
    a. True
    b. False

ANSWER:	True
POINTS:	1
DIFFICULTY:	Difficulty: Easy
LEARNING OBJECTIVES:	INTE.GENE.16.6 - LO: 2-6
NATIONAL STANDARDS:	United States - BUSPROG: Reflective Thinking
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	Risk aversion
KEYWORDS:	Bloom's: Knowledge

3. When adding a randomly chosen new stock to an existing portfolio, the higher (or more positive) the degree of correlation between the new stock and stocks already in the portfolio, the less the additional stock will reduce the portfolio's risk.
    a. True
    b. False

ANSWER:	True
POINTS:	1
DIFFICULTY:	Difficulty: Easy
LEARNING OBJECTIVES:	INTE.GENE.16.7 - LO: 2-5
NATIONAL STANDARDS:	United States - BUSPROG: Reflective Thinking
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	Portfolio risk
KEYWORDS:	Bloom's: Knowledge

4. Diversification will normally reduce the riskiness of a portfolio of stocks.
    a. True

b. False

ANSWER:	True
POINTS:	1
DIFFICULTY:	Difficulty: Easy
LEARNING OBJECTIVES:	INTE.GENE.16.7 - LO: 2-5
NATIONAL STANDARDS:	United States - BUSPROG: Reflective Thinking
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	Portfolio risk
KEYWORDS:	Bloom's: Knowledge

5. In portfolio analysis, we often use ex post (historical) returns and standard deviations, despite the fact that we are really interested in ex ante (future) data.

a. True
b. False

ANSWER:	True
POINTS:	1
DIFFICULTY:	Difficulty: Easy
LEARNING OBJECTIVES:	INTE.GENE.16.7 - LO: 2-5
NATIONAL STANDARDS:	United States - BUSPROG: Reflective Thinking
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	Portfolio risk
KEYWORDS:	Bloom's: Knowledge

6. The underlined return on a stock portfolio is the weighted average of the expected returns on the stocks in the portfolio.

a. True
b. False

ANSWER:	False
POINTS:	1
DIFFICULTY:	Difficulty: Easy
LEARNING OBJECTIVES:	INTE.GENE.16.7 - LO: 2-5
NATIONAL STANDARDS:	United States - BUSPROG: Reflective Thinking
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	Portfolio return
KEYWORDS:	Bloom's: Knowledge

7. Market risk refers to the tendency of a stock to move with the general stock market. A stock with above-average market risk will tend to be more volatile than an average stock, and its beta will be greater than 1.0.

a. True
b. False

ANSWER:	True
POINTS:	1

DIFFICULTY:	Difficulty: Easy
LEARNING OBJECTIVES:	INTE.GENE.16.6 - LO: 2-6
NATIONAL STANDARDS:	United States - BUSPROG: Reflective Thinking
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	Market risk
KEYWORDS:	Bloom's: Knowledge

8. An individual stock's <u>diversifiable risk</u>, which is measured by its beta, can be lowered by adding more stocks to the portfolio in which the stock is held.
　　a. True
　　b. False

ANSWER:	False
POINTS:	1
DIFFICULTY:	Difficulty: Easy
LEARNING OBJECTIVES:	INTE.GENE.16.6 - LO: 2-6
NATIONAL STANDARDS:	United States - BUSPROG: Reflective Thinking
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	Market risk
KEYWORDS:	Bloom's: Knowledge

9. Managers should under no conditions take actions that increase their firm's risk relative to the market, regardless of how much those actions would increase the firm's expected rate of return.
　　a. True
　　b. False

ANSWER:	False
POINTS:	1
DIFFICULTY:	Difficulty: Easy
LEARNING OBJECTIVES:	INTE.GENE.16.8 - LO: 2-7
NATIONAL STANDARDS:	United States - BUSPROG: Reflective Thinking
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	Risk and expected returns
KEYWORDS:	Bloom's: Knowledge

10. One key conclusion of the Capital Asset Pricing Model is that the value of an asset should be measured by considering both the risk and the expected return of the asset, assuming that the asset is held in a well-diversified portfolio. The risk of the asset held in isolation is not relevant under the CAPM.
　　a. True
　　b. False

ANSWER:	True
POINTS:	1
DIFFICULTY:	Difficulty: Easy
LEARNING OBJECTIVES:	INTE.GENE.16.8 - LO: 2-7

CHAPTER 2—RISK AND RETURN: PART I

NATIONAL STANDARDS:	United States - BUSPROG: Reflective Thinking
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	CAPM and risk
KEYWORDS:	Bloom's: Knowledge

11. According to the Capital Asset Pricing Model, investors are primarily concerned with portfolio risk, not the risks of individual stocks held in isolation. Thus, the relevant risk of a stock is the stock's contribution to the riskiness of a well-diversified portfolio.
    a. True
    b. False

ANSWER:	True
POINTS:	1
DIFFICULTY:	Difficulty: Easy
LEARNING OBJECTIVES:	INTE.GENE.16.6 - LO: 2-6
NATIONAL STANDARDS:	United States - BUSPROG: Reflective Thinking
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	CAPM and risk
KEYWORDS:	Bloom's: Knowledge

12. If investors become <u>less</u> averse to risk, the slope of the Security Market Line (SML) will <u>increase</u>.
    a. True
    b. False

ANSWER:	False
POINTS:	1
DIFFICULTY:	Difficulty: Easy
LEARNING OBJECTIVES:	INTE.GENE.16.8 - LO: 2-7
NATIONAL STANDARDS:	United States - BUSPROG: Reflective Thinking
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	SML and risk aversion
KEYWORDS:	Bloom's: Knowledge

13. If a stock's expected return as seen by the marginal investor exceeds this investor's required return, then the investor will buy the stock until its price has risen enough to bring the expected return down to equal the required return.
    a. True
    b. False

ANSWER:	True
POINTS:	1
DIFFICULTY:	Difficulty: Easy
LEARNING OBJECTIVES:	INTE.GENE.16.8 - LO: 2-7
NATIONAL STANDARDS:	United States - BUSPROG: Reflective Thinking
STATE STANDARDS:	United States - AK - DISC: Stocks and Bonds

CHAPTER 2—RISK AND RETURN: PART I

LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	Stock market equilibrium
KEYWORDS:	Bloom's: Knowledge

14. If a stock's market price exceeds its intrinsic value as seen by the marginal investor, then the investor will sell the stock until its price has fallen down to the level of the investor's estimate of the intrinsic value.
    a. True
    b. False

ANSWER:	True
POINTS:	1
DIFFICULTY:	Difficulty: Easy
LEARNING OBJECTIVES:	INTE.GENE.16.8 - LO: 2-7
NATIONAL STANDARDS:	United States - BUSPROG: Reflective Thinking
STATE STANDARDS:	United States - AK - DISC: Stocks and Bonds
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	Stock market equilibrium
KEYWORDS:	Bloom's: Knowledge

15. For a stock to be in equilibrium, two conditions are necessary: (1) The stock's market price must equal its intrinsic value as seen by the marginal investor and (2) the expected return as seen by the marginal investor must equal this investor's required return.
    a. True
    b. False

ANSWER:	True
POINTS:	1
DIFFICULTY:	Difficulty: Easy
LEARNING OBJECTIVES:	INTE.GENE.16.8 - LO: 2-7
NATIONAL STANDARDS:	United States - BUSPROG: Reflective Thinking
STATE STANDARDS:	United States - AK - DISC: Stocks and Bonds
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	Stock market equilibrium
KEYWORDS:	Bloom's: Knowledge

16. Two conditions are used to determine whether or not a stock is in equilibrium: (1) Does the stock's market price equal its intrinsic value as seen by the marginal investor, and (2) does the expected return on the stock as seen by the marginal investor equal this investor's required return? If either of these conditions, but not necessarily both, holds, then the stock is said to be in equilibrium.
    a. True
    b. False

ANSWER:	False
RATIONALE:	If one condition holds, then the other must also hold.
POINTS:	1
DIFFICULTY:	Difficulty: Easy
LEARNING OBJECTIVES:	INTE.GENE.16.8 - LO: 2-7
NATIONAL STANDARDS:	United States - BUSPROG: Reflective Thinking

CHAPTER 2—RISK AND RETURN: PART I

STATE STANDARDS:	United States - AK - DISC: Stocks and Bonds
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	Stock market equilibrium
KEYWORDS:	Bloom's: Knowledge

17. Variance is a measure of the variability of returns, and since it involves squaring the deviation of each actual return from the expected return, it is always larger than its square root, its standard deviation.
    a. True
    b. False

ANSWER:	True
POINTS:	1
DIFFICULTY:	Difficulty: Moderate
LEARNING OBJECTIVES:	INTE.GENE.16.5 - LO: 2-2
NATIONAL STANDARDS:	United States - BUSPROG: Reflective Thinking
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	Variance
KEYWORDS:	Bloom's: Comprehension

18. "Risk aversion" implies that investors require higher expected returns on riskier than on less risky securities.
    a. True
    b. False

ANSWER:	True
POINTS:	1
DIFFICULTY:	Difficulty: Moderate
LEARNING OBJECTIVES:	INTE.GENE.16.6 - LO: 2-6
NATIONAL STANDARDS:	United States - BUSPROG: Reflective Thinking
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	Risk aversion
KEYWORDS:	Bloom's: Comprehension

19. If investors are risk averse and hold only one stock, we can conclude that the required rate of return on a stock whose standard deviation is 0.21 will be greater than the required return on a stock whose standard deviation is 0.10. However, if stocks are held in portfolios, it is possible that the required return could be higher on the stock with the low standard deviation.
    a. True
    b. False

ANSWER:	True
POINTS:	1
DIFFICULTY:	Difficulty: Moderate
LEARNING OBJECTIVES:	INTE.GENE.16.8 - LO: 2-7
NATIONAL STANDARDS:	United States - BUSPROG: Reflective Thinking
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA

CHAPTER 2—RISK AND RETURN: PART I

TOPICS:	Risk aversion
KEYWORDS:	Bloom's: Comprehension

20. Someone who is risk averse has a general dislike for risk and a preference for certainty. If risk aversion exists in the market, then investors in general are willing to accept somewhat lower returns on less risky securities. Different investors have different degrees of risk aversion, and the end result is that investors with greater risk aversion tend to hold securities with lower risk (and therefore a lower expected return) than investors who have more tolerance for risk.
    a. True
    b. False

ANSWER:	True
POINTS:	1
DIFFICULTY:	Difficulty: Moderate
LEARNING OBJECTIVES:	INTE.GENE.16.6 - LO: 2-6
NATIONAL STANDARDS:	United States - BUSPROG: Reflective Thinking
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	Risk prem. and risk aversion
KEYWORDS:	Bloom's: Comprehension

21. A stock's beta measures its diversifiable risk relative to the diversifiable risks of other firms.
    a. True
    b. False

ANSWER:	False
POINTS:	1
DIFFICULTY:	Difficulty: Moderate
LEARNING OBJECTIVES:	INTE.GENE.16.6 - LO: 2-6
NATIONAL STANDARDS:	United States - BUSPROG: Reflective Thinking
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	Beta coefficients
KEYWORDS:	Bloom's: Comprehension

22. A stock's beta is more relevant as a measure of risk to an investor who holds only one stock than to an investor who holds a well-diversified portfolio.
    a. True
    b. False

ANSWER:	False
POINTS:	1
DIFFICULTY:	Difficulty: Moderate
LEARNING OBJECTIVES:	INTE.GENE.16.6 - LO: 2-6
NATIONAL STANDARDS:	United States - BUSPROG: Reflective Thinking
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	Beta coefficients
KEYWORDS:	Bloom's: Comprehension

23. If the returns of two firms are negatively correlated, then one of them must have a negative beta.
    a. True
    b. False

ANSWER:	True
POINTS:	1
DIFFICULTY:	Difficulty: Moderate
LEARNING OBJECTIVES:	INTE.GENE.16.6 - LO: 2-6
NATIONAL STANDARDS:	United States - BUSPROG: Reflective Thinking
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	Beta coefficients
KEYWORDS:	Bloom's: Comprehension

24. A stock with a beta equal to −1.0 has zero systematic (or market) risk.
    a. True
    b. False

ANSWER:	False
POINTS:	1
DIFFICULTY:	Difficulty: Moderate
LEARNING OBJECTIVES:	INTE.GENE.16.6 - LO: 2-6
NATIONAL STANDARDS:	United States - BUSPROG: Reflective Thinking
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	Beta coefficients
KEYWORDS:	Bloom's: Comprehension

25. It is possible for a firm to have a positive beta, even if the correlation between its returns and those of another firm is negative.
    a. True
    b. False

ANSWER:	True
POINTS:	1
DIFFICULTY:	Difficulty: Moderate
LEARNING OBJECTIVES:	INTE.GENE.16.6 - LO: 2-6
NATIONAL STANDARDS:	United States - BUSPROG: Reflective Thinking
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	Beta coefficients
KEYWORDS:	Bloom's: Comprehension

26. Portfolio A has but one security, while Portfolio B has 100 securities. Because of diversification effects, we would expect Portfolio B to have the lower risk. However, it is possible for Portfolio A to be less risky.
    a. True
    b. False

CHAPTER 2—RISK AND RETURN: PART I

ANSWER:	True
POINTS:	1
DIFFICULTY:	Difficulty: Moderate
LEARNING OBJECTIVES:	INTE.GENE.16.8 - LO: 2-7
NATIONAL STANDARDS:	United States - BUSPROG: Reflective Thinking
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	Portfolio risk
KEYWORDS:	Bloom's: Comprehension

27. Portfolio A has but one stock, while Portfolio B consists of all stocks that trade in the market, each held in proportion to its market value. Because of its diversification, Portfolio B will by definition be riskless.
    a. True
    b. False

ANSWER:	False
POINTS:	1
DIFFICULTY:	Difficulty: Moderate
LEARNING OBJECTIVES:	INTE.GENE.16.6 - LO: 2-6
NATIONAL STANDARDS:	United States - BUSPROG: Reflective Thinking
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	Portfolio risk
KEYWORDS:	Bloom's: Comprehension

28. A portfolio's risk is measured by the weighted average of the standard deviations of the securities in the portfolio. It is this aspect of portfolios that allows investors to combine stocks and thus reduce the riskiness of their portfolios.
    a. True
    b. False

ANSWER:	False
POINTS:	1
DIFFICULTY:	Difficulty: Moderate
LEARNING OBJECTIVES:	INTE.GENE.16.6 - LO: 2-6
NATIONAL STANDARDS:	United States - BUSPROG: Reflective Thinking
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	Portfolio risk
KEYWORDS:	Bloom's: Comprehension

29. The distributions of rates of return for Companies AA and BB are given below:

State of the Economy	Probability of This State Occurring	AA	BB
Boom	0.2	30%	−10%
Normal	0.6	10%	5%
Recession	0.2	−5%	50%

CHAPTER 2—RISK AND RETURN: PART I

We can conclude from the above information that any rational, risk-averse investor would be better off adding Security AA to a well-diversified portfolio over Security BB.

    a. True
    b. False

ANSWER:	False
RATIONALE:	The stocks have the same expected returns, but BB does badly in booms and well in recessions. Therefore, it would do more to reduce risk.
POINTS:	1
DIFFICULTY:	Difficulty: Moderate
LEARNING OBJECTIVES:	INTE.GENE.16.5 - LO: 2-2
NATIONAL STANDARDS:	United States - BUSPROG: Reflective Thinking
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	Portfolio risk and return
KEYWORDS:	Bloom's: Comprehension

30. Even if the correlation between the returns on two securities is +1.0, if the securities are combined in the correct proportions, the resulting 2-asset portfolio will have less risk than either security held alone.

    a. True
    b. False

ANSWER:	False
POINTS:	1
DIFFICULTY:	Difficulty: Moderate
LEARNING OBJECTIVES:	INTE.GENE.16.6 - LO: 2-6
NATIONAL STANDARDS:	United States - BUSPROG: Reflective Thinking
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	Cor. coefficient and risk
KEYWORDS:	Bloom's: Comprehension

31. Bad managerial judgments or unforeseen negative events that happen to a firm are defined as "company-specific," or "unsystematic," events, and their effects on investment risk can in theory be diversified away.

    a. True
    b. False

ANSWER:	True
POINTS:	1
DIFFICULTY:	Difficulty: Moderate
LEARNING OBJECTIVES:	INTE.GENE.16.7 - LO: 2-5
NATIONAL STANDARDS:	United States - BUSPROG: Reflective Thinking
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	Company-specific risk
KEYWORDS:	Bloom's: Comprehension

32. We would generally find that the beta of a single security is more stable over time than the beta of a diversified

portfolio.
    a. True
    b. False

ANSWER:	False
POINTS:	1
DIFFICULTY:	Difficulty: Moderate
LEARNING OBJECTIVES:	INTE.GENE.16.6 - LO: 2-6
NATIONAL STANDARDS:	United States - BUSPROG: Reflective Thinking
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	Portfolio beta
KEYWORDS:	Bloom's: Comprehension

33. We would almost always find that the beta of a diversified portfolio is less stable over time than the beta of a single security.
    a. True
    b. False

ANSWER:	False
POINTS:	1
DIFFICULTY:	Difficulty: Moderate
LEARNING OBJECTIVES:	INTE.GENE.16.6 - LO: 2-6
NATIONAL STANDARDS:	United States - BUSPROG: Reflective Thinking
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	Portfolio beta
KEYWORDS:	Bloom's: Comprehension

34. If an investor buys enough stocks, he or she can, through diversification, eliminate all of the market risk inherent in owning stocks, but as a general rule it will not be possible to eliminate all diversifiable risk.
    a. True
    b. False

ANSWER:	False
POINTS:	1
DIFFICULTY:	Difficulty: Moderate
LEARNING OBJECTIVES:	INTE.GENE.16.7 - LO: 2-5
NATIONAL STANDARDS:	United States - BUSPROG: Reflective Thinking
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	Diversification effects
KEYWORDS:	Bloom's: Comprehension

35. The CAPM is built on historic conditions, although in most cases we use expected future data in applying it. Because betas used in the CAPM are calculated using expected future data, they are not subject to changes in future volatility. This is one of the strengths of the CAPM.
    a. True

CHAPTER 2—RISK AND RETURN: PART I

b. False

ANSWER:	False
POINTS:	1
DIFFICULTY:	Difficulty: Moderate
LEARNING OBJECTIVES:	INTE.GENE.16.9 - LO: 2-11
NATIONAL STANDARDS:	United States - BUSPROG: Reflective Thinking
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	CAPM
KEYWORDS:	Bloom's: Comprehension

36. Under the CAPM, the required rate of return on a firm's common stock is determined only by the firm's market risk. If its market risk is known, and if that risk is expected to remain constant, then analysts have all the information they need to calculate the firm's required rate of return.
    a. True
    b. False

ANSWER:	False
POINTS:	1
DIFFICULTY:	Difficulty: Moderate
LEARNING OBJECTIVES:	INTE.GENE.16.8 - LO: 2-7
NATIONAL STANDARDS:	United States - BUSPROG: Reflective Thinking
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	Required return
KEYWORDS:	Bloom's: Comprehension

37. A firm can change its beta through managerial decisions, including capital budgeting and capital structure decisions.
    a. True
    b. False

ANSWER:	True
POINTS:	1
DIFFICULTY:	Difficulty: Moderate
LEARNING OBJECTIVES:	INTE.GENE.16.8 - LO: 2-7
NATIONAL STANDARDS:	United States - BUSPROG: Reflective Thinking
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	Changes in beta
KEYWORDS:	Bloom's: Comprehension

38. Any change in its beta is likely to affect the required rate of return on a stock, which implies that a change in beta will likely have an impact on the stock's price, other things held constant.
    a. True
    b. False

ANSWER:	True

CHAPTER 2—RISK AND RETURN: PART I

POINTS:	1
DIFFICULTY:	Difficulty: Moderate
LEARNING OBJECTIVES:	INTE.GENE.16.8 - LO: 2-7
NATIONAL STANDARDS:	United States - BUSPROG: Reflective Thinking
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	Changes in beta
KEYWORDS:	Bloom's: Comprehension

39. The slope of the SML is determined by the value of beta.
    a. True
    b. False

ANSWER:	False
POINTS:	1
DIFFICULTY:	Difficulty: Moderate
LEARNING OBJECTIVES:	INTE.GENE.16.8 - LO: 2-7
NATIONAL STANDARDS:	United States - BUSPROG: Reflective Thinking
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	SML
KEYWORDS:	Bloom's: Comprehension

40. The slope of the SML is determined by investors' aversion to risk. The greater the average investor's risk aversion, the steeper the SML.
    a. True
    b. False

ANSWER:	True
POINTS:	1
DIFFICULTY:	Difficulty: Moderate
LEARNING OBJECTIVES:	INTE.GENE.16.8 - LO: 2-7
NATIONAL STANDARDS:	United States - BUSPROG: Reflective Thinking
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	SML
KEYWORDS:	Bloom's: Comprehension

41. If you plotted the returns of a company against those of the market and found that the slope of your line was negative, the CAPM would indicate that the required rate of return on the stock should be less than the risk-free rate for a well-diversified investor, assuming that the observed relationship is expected to continue in the future.
    a. True
    b. False

ANSWER:	True
POINTS:	1
DIFFICULTY:	Difficulty: Moderate

CHAPTER 2—RISK AND RETURN: PART I

LEARNING OBJECTIVES: INTE.GENE.16.6 - LO: 2-6
NATIONAL STANDARDS: United States - BUSPROG: Reflective Thinking
STATE STANDARDS: United States - AK - DISC: Risk and return
LOCAL STANDARDS: United States - OH - Default City - TBA
TOPICS: SML
KEYWORDS: Bloom's: Comprehension

42. If you plotted the returns on a given stock against those of the market, and if you found that the slope of the regression line was <u>negative</u>, the CAPM would indicate that the required rate of return on the stock should be greater than the risk-free rate for a well-diversified investor, assuming that the observed relationship is expected to continue into the future.
    a. True
    b. False

ANSWER: False
POINTS: 1
DIFFICULTY: Difficulty: Moderate
LEARNING OBJECTIVES: INTE.GENE.16.6 - LO: 2-6
NATIONAL STANDARDS: United States - BUSPROG: Reflective Thinking
STATE STANDARDS: United States - AK - DISC: Risk and return
LOCAL STANDARDS: United States - OH - Default City - TBA
TOPICS: SML
KEYWORDS: Bloom's: Comprehension

43. The Y-axis intercept of the SML represents the required return of a portfolio with a beta of zero, which is the risk-free rate.
    a. True
    b. False

ANSWER: True
POINTS: 1
DIFFICULTY: Difficulty: Moderate
LEARNING OBJECTIVES: INTE.GENE.16.8 - LO: 2-7
NATIONAL STANDARDS: United States - BUSPROG: Reflective Thinking
STATE STANDARDS: United States - AK - DISC: Risk and return
LOCAL STANDARDS: United States - OH - Default City - TBA
TOPICS: SML
KEYWORDS: Bloom's: Comprehension

44. The SML relates required returns to firms' systematic (or market) risk. The slope and intercept of this line can be influenced by a manager's actions.
    a. True
    b. False

ANSWER: False
RATIONALE: The slope and intercept of the SML are determined by the market, generally not the actions of a single firm. However, managers can influence their firms' beta, and thus their firms' required returns.
POINTS: 1

DIFFICULTY:	Difficulty: Moderate
LEARNING OBJECTIVES:	INTE.GENE.16.8 - LO: 2-7
NATIONAL STANDARDS:	United States - BUSPROG: Reflective Thinking
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	SML
KEYWORDS:	Bloom's: Comprehension

45. The Y-axis intercept of the SML indicates the required return on an individual asset whenever the realized return on an average (b = 1) stock is zero.
    a. True
    b. False

ANSWER:	False
POINTS:	1
DIFFICULTY:	Difficulty: Moderate
LEARNING OBJECTIVES:	INTE.GENE.16.8 - LO: 2-7
NATIONAL STANDARDS:	United States - BUSPROG: Reflective Thinking
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	SML
KEYWORDS:	Bloom's: Comprehension

46. If the price of money (e.g., interest rates and equity capital costs) increases due to an increase in anticipated inflation, the risk-free rate will also increase. If there is no change in investors' risk aversion, then the market risk premium ($r_M - r_{RF}$) will remain constant. Also, if there is no change in stocks' betas, then the required rate of return on each stock as measured by the CAPM will increase by the same amount as the increase in expected inflation.
    a. True
    b. False

ANSWER:	True
POINTS:	1
DIFFICULTY:	Difficulty: Moderate
LEARNING OBJECTIVES:	INTE.GENE.16.8 - LO: 2-7
NATIONAL STANDARDS:	United States - BUSPROG: Reflective Thinking
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	CAPM and inflation
KEYWORDS:	Bloom's: Comprehension

47. Since the market return represents the expected return on an average stock, the market return reflects a certain amount of risk. As a result, there exists a market risk premium, which is the amount over and above the risk-free rate, that is required to compensate stock investors for assuming an average amount of risk.
    a. True
    b. False

ANSWER:	True
POINTS:	1

CHAPTER 2—RISK AND RETURN: PART I

DIFFICULTY:	Difficulty: Moderate
LEARNING OBJECTIVES:	INTE.GENE.16.8 - LO: 2-7
NATIONAL STANDARDS:	United States - BUSPROG: Reflective Thinking
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	Market risk premium
KEYWORDS:	Bloom's: Comprehension

48. Assume that two investors each hold a portfolio, and that portfolio is their only asset. Investor A's portfolio has a beta of <u>minus</u> 2.0, while Investor B's portfolio has a beta of <u>plus</u> 2.0. Assuming that the unsystematic risks of the stocks in the two portfolios are the same, then the two investors face the same amount of risk. However, the holders of either portfolio could lower their risks, and by exactly the same amount, by adding some "normal" stocks with beta = 1.0.
    a. True
    b. False

ANSWER:	True
RATIONALE:	Both portfolios would be twice as risky as a portfolio of average stocks. Their risks would decline if they added b = 1.0 stocks, as those stocks would move the portfolios' betas toward 1.0.
POINTS:	1
DIFFICULTY:	Difficulty: Challenging
LEARNING OBJECTIVES:	INTE.GENE.16.8 - LO: 2-7
NATIONAL STANDARDS:	United States - BUSPROG: Reflective Thinking
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	Beta coefficients
KEYWORDS:	Bloom's: Comprehension

49. The CAPM is a multi-period model that takes account of differences in securities' maturities, and it can be used to determine the required rate of return for any given level of systematic risk.
    a. True
    b. False

ANSWER:	False
RATIONALE:	The CAPM is a single-period model, and it does not take account of securities' maturities.
POINTS:	1
DIFFICULTY:	Difficulty: Challenging
LEARNING OBJECTIVES:	INTE.GENE.16.8 - LO: 2-7
NATIONAL STANDARDS:	United States - BUSPROG: Reflective Thinking
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	CAPM
KEYWORDS:	Bloom's: Comprehension

50. If markets are in equilibrium, which of the following conditions will exist?
    a. Each stock's expected return should equal its required return as seen by the marginal investor.
    b. All stocks should have the same expected return as seen by the marginal investor.

c. The expected and required returns on stocks and bonds should be equal.

d. All stocks should have the same realized return during the coming year.

e. Each stock's expected return should equal its realized return as seen by the marginal investor.

ANSWER:	a
RATIONALE:	Statement a is true, because if the expected return does not equal the required return, then markets are not in equilibrium.
POINTS:	1
DIFFICULTY:	Difficulty: Easy
LEARNING OBJECTIVES:	INTE.GENE.16.8 - LO: 2-7
NATIONAL STANDARDS:	United States - BUSPROG: Analytic
STATE STANDARDS:	United States - AK - DISC: Stocks and Bonds
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	Market equilibrium
KEYWORDS:	Bloom's: Comprehension
OTHER:	TYPE: Multiple Choice: Conceptual
NOTES:	Question may require calculations to find the correct answer.

51. You are considering investing in one of the these three stocks:

Stock	Standard Deviation	Beta
A	20%	0.59
B	10%	0.61
C	12%	1.29

If you are a strict risk minimizer, you would choose Stock _____ if it is to be held in isolation and Stock _____ if it is to be held as part of a well-diversified portfolio.

a. A; B.

b. B; A.

c. C; A.

d. C; B.

e. A; A.

ANSWER:	b
POINTS:	1
DIFFICULTY:	Difficulty: Moderate
LEARNING OBJECTIVES:	INTE.GENE.16.6 - LO: 2-6
NATIONAL STANDARDS:	United States - BUSPROG: Analytic
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	Risk aversion
KEYWORDS:	Bloom's: Analysis
OTHER:	TYPE: Multiple Choice: Conceptual

52. Your friend is considering adding one additional stock to a 3-stock portfolio, to form a 4-stock portfolio. She is highly risk averse and has asked for your advice. The three stocks currently held all have b = 1.0, and they are perfectly positively correlated with the market. Potential new Stocks A and B both have expected returns of 15%, are in equilibrium, and are equally correlated with the market, with r = 0.75. However, Stock A's standard deviation of returns is 12% versus 8% for Stock B. Which stock should this investor add to his or her portfolio, or does the choice not matter?

a. Stock A.

b. Stock B.

c. Neither A nor B, as neither has a return sufficient to compensate for risk.

d. Add A, since its beta must be lower.

e. Either A or B, i.e., the investor should be indifferent between the two.

ANSWER:	b
RATIONALE:	With only 4 stocks in the portfolio, unsystematic risk matters, and B has less.
POINTS:	1
DIFFICULTY:	Difficulty: Moderate
LEARNING OBJECTIVES:	INTE.GENE.16.6 - LO: 2-6
NATIONAL STANDARDS:	United States - BUSPROG: Analytic
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	Standard deviation
KEYWORDS:	Bloom's: Analysis
OTHER:	TYPE: Multiple Choice: Conceptual

53. Which of the following is <u>NOT</u> a potential problem when estimating and using betas, i.e., which statement is <u>FALSE</u>?

a. Sometimes, during a period when the company is undergoing a change such as toward more leverage or riskier assets, the calculated beta will be drastically different from the "true" or "expected future" beta.

b. The beta of an "average stock," or "the market," can change over time, sometimes drastically.

c. Sometimes the past data used to calculate beta do not reflect the likely risk of the firm for the future because conditions have changed.

d. All of the statements above are true.

e. The fact that a security or project may not have a past history that can be used as the basis for calculating beta.

ANSWER:	b
POINTS:	1
DIFFICULTY:	Difficulty: Moderate
LEARNING OBJECTIVES:	INTE.GENE.16.6 - LO: 2-6
NATIONAL STANDARDS:	United States - BUSPROG: Analytic
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	Beta coefficients
KEYWORDS:	Bloom's: Analysis
OTHER:	TYPE: Multiple Choice: Conceptual

54. Stock A's beta is 1.7 and Stock B's beta is 0.7. Which of the following statements must be true about these securities? (Assume market equilibrium.)

a. Stock B must be a more desirable addition to a portfolio than A.

b. Stock A must be a more desirable addition to a portfolio than B.

c. The expected return on Stock A should be greater than that on B.

d. The expected return on Stock B should be greater than that on A.

e. When held in isolation, Stock A has more risk than Stock B.

ANSWER:	c

CHAPTER 2—RISK AND RETURN: PART I

55. Which of the following statements is CORRECT?

    a. If you found a stock with a zero historical beta and held it as the only stock in your portfolio, you would by definition have a riskless portfolio.

    b. The beta coefficient of a stock is normally found by regressing past returns on a stock against past market returns. One could also construct a scatter diagram of returns on the stock versus those on the market, estimate the slope of the line of best fit, and use it as beta. However, this historical beta may differ from the beta that exists in the future.

    c. The beta of a portfolio of stocks is always larger than the betas of any of the individual stocks.

    d. It is theoretically possible for a stock to have a beta of 1.0. If a stock did have a beta of 1.0, then, at least in theory, its required rate of return would be equal to the risk-free (default-free) rate of return, r_{RF}.

    e. The beta of a portfolio of stocks is always smaller than the betas of any of the individual stocks.

56. Which of the following statements is CORRECT?

    a. Suppose the returns on two stocks are negatively correlated. One has a beta of 1.2 as determined in a regression analysis using data for the last 5 years, while the other has a beta of −0.6. The returns on the stock with the negative beta must have been negatively correlated with returns on most other stocks during that 5-year period.

    b. Suppose you are managing a stock portfolio, and you have information that leads you to believe the stock market is likely to be very strong in the immediate future. That is, you are convinced that the market is about to rise sharply. You should sell your high-beta stocks and buy low-beta stocks in order to take advantage of the expected market move.

    c. You think that investor sentiment is about to change, and investors are about to become more risk averse. This suggests that you should re-balance your portfolio to include more high-beta stocks.

    d. If the market risk premium remains constant, but the risk-free rate declines, then the required returns on low-beta stocks will rise while those on high-beta stocks will decline.

    e. Paid-in-Full Inc. is in the business of collecting past-due accounts for other companies, i.e., it is a collection

agency. Paid-in-Full's revenues, profits, and stock price tend to rise during recessions. This suggests that Paid-in-Full Inc.'s beta should be quite high, say 2.0, because it does so much better than most other companies when the economy is weak.

ANSWER:	a
POINTS:	1
DIFFICULTY:	Difficulty: Moderate
LEARNING OBJECTIVES:	INTE.GENE.16.8 - LO: 2-7
NATIONAL STANDARDS:	United States - BUSPROG: Analytic
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	Beta coefficients
KEYWORDS:	Bloom's: Analysis
OTHER:	TYPE: Multiple Choice: Conceptual

57. Which of the following statements is CORRECT?
   a. Logically, it is easier to estimate the betas associated with capital budgeting projects than the betas associated with stocks, especially if the projects are closely associated with research and development activities.
   b. The beta of an "average stock," which is also "the market beta," can change over time, sometimes drastically.
   c. If a newly issued stock does not have a past history that can be used for calculating beta, then we should always estimate that its beta will turn out to be 1.0. This is especially true if the company finances with more debt than the average firm.
   d. During a period when a company is undergoing a change such as increasing its use of leverage or taking on riskier projects, the calculated historical beta may be drastically different from the beta that will exist in the future.
   e. If a company with a high beta merges with a low-beta company, the best estimate of the new merged company's beta is 1.0.

ANSWER:	d
POINTS:	1
DIFFICULTY:	Difficulty: Moderate
LEARNING OBJECTIVES:	INTE.GENE.16.8 - LO: 2-7
NATIONAL STANDARDS:	United States - BUSPROG: Analytic
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	Beta coefficients
KEYWORDS:	Bloom's: Analysis
OTHER:	TYPE: Multiple Choice: Conceptual

58. Stock A's beta is 1.7 and Stock B's beta is 0.7. Which of the following statements <u>must</u> be true, assuming the CAPM is correct.
   a. In equilibrium, the expected return on Stock B will be greater than that on Stock A.
   b. When held in isolation, Stock A has more risk than Stock B.
   c. Stock B would be a more desirable addition to a portfolio than A.
   d. In equilibrium, the expected return on Stock A will be greater than that on B.
   e. Stock A would be a more desirable addition to a portfolio then Stock B.

ANSWER:	d

CHAPTER 2—RISK AND RETURN: PART I

59. Stock X has a beta of 0.7 and Stock Y has a beta of 1.7. Which of the following statements <u>must</u> be true, according to the CAPM?

    a. Stock Y's realized return during the coming year will be higher than Stock X's return.

    b. If the expected rate of inflation increases but the market risk premium is unchanged, the required returns on the two stocks should increase by the same amount.

    c. Stock Y's return has a higher standard deviation than Stock X.

    d. If the market risk premium declines, but the risk-free rate is unchanged, Stock X will have a larger decline in its required return than will Stock Y.

    e. If you invest $50,000 in Stock X and $50,000 in Stock Y, your 2-stock portfolio would have a beta significantly lower than 1.0, provided the returns on the two stocks are not perfectly correlated.

60. Consider the following average annual returns for Stocks A and B and the Market. Which of the possible answers best describes the historical betas for A and B?

Years	Market	Stock A	Stock B
1	0.03	0.16	0.05
2	−0.05	0.20	0.05
3	0.01	0.18	0.05
4	−0.10	0.25	0.05
5	0.06	0.14	0.05

    a. $b_A > +1$; $b_B = 0$.

    b. $b_A = 0$; $b_B = -1$.

    c. $b_A < 0$; $b_B = 0$.

    d. $b_A < -1$; $b_B = 1$.

    e. $b_A > 0$; $b_B = 1$.

ANSWER:	c
RATIONALE:	First, note that B's beta must be zero, so either a or c must be correct. Second, note that A's returns are highest when the market's returns are negative and lowest when the market's returns are positive. This indicates that A's beta is negative. Thus, c must be correct.
POINTS:	1
DIFFICULTY:	Difficulty: Moderate
LEARNING OBJECTIVES:	INTE.GENE.16.8 - LO: 2-7
NATIONAL STANDARDS:	United States - BUSPROG: Analytic
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	Beta coefficients
KEYWORDS:	Bloom's: Analysis
OTHER:	TYPE: Multiple Choice: Conceptual

61.
Which of the following statements is CORRECT?

a. The higher the correlation between the stocks in a portfolio, the lower the risk inherent in the portfolio.

b. An investor can eliminate almost all risk if he or she holds a very large and well diversified portfolio of stocks.

c. Once a portfolio has about 40 stocks, adding additional stocks will not reduce its risk by even a small amount.

d. An investor can eliminate almost all diversifiable risk if he or she holds a very large, well-diversified portfolio of stocks.

e. An investor can eliminate almost all market risk if he or she holds a very large and well diversified portfolio of stocks.

ANSWER:	d
POINTS:	1
DIFFICULTY:	Difficulty: Moderate
LEARNING OBJECTIVES:	INTE.GENE.16.7 - LO: 2-5
NATIONAL STANDARDS:	United States - BUSPROG: Analytic
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	Portfolio risk
KEYWORDS:	Bloom's: Analysis
OTHER:	TYPE: Multiple Choice: Conceptual

62. Which of the following statements is CORRECT?

a. If you were restricted to investing in publicly traded common stocks, yet you wanted to minimize the riskiness of your portfolio as measured by its beta, then according to the CAPM theory you should invest an equal amount of money in each stock in the market. That is, if there were 10,000 traded stocks in the world, the least risky possible portfolio would include some shares of each one.

b. If you formed a portfolio that consisted of all stocks with betas less than 1.0, which is about half of all stocks, the portfolio would itself have a beta coefficient that is equal to the weighted average beta of the stocks in the portfolio, and that portfolio would have less risk than a portfolio that consisted of all stocks in the market.

c. Market risk can be eliminated by forming a large portfolio, and if some Treasury bonds are held in the portfolio, the portfolio can be made to be completely riskless.

d. A portfolio that consists of all stocks in the market would have a required return that is equal to the riskless rate.

e. If you add enough randomly selected stocks to a portfolio, you can completely eliminate all of the <u>market</u> risk from the portfolio.

ANSWER: b
POINTS: 1
DIFFICULTY: Difficulty: Moderate
LEARNING OBJECTIVES: INTE.GENE.16.7 - LO: 2-5
NATIONAL STANDARDS: United States - BUSPROG: Analytic
STATE STANDARDS: United States - AK - DISC: Risk and return
LOCAL STANDARDS: United States - OH - Default City - TBA
TOPICS: Portfolio risk and beta
KEYWORDS: Bloom's: Analysis
OTHER: TYPE: Multiple Choice: Conceptual

63. Recession, inflation, and high interest rates are economic events that are best characterized as being
    a. company-specific risk factors that can be diversified away.
    b. among the factors that are responsible for market risk.
    c. risks that are beyond the control of investors and thus should not be considered by security analysts or portfolio managers.
    d. irrelevant except to governmental authorities like the Federal Reserve.
    e. systematic risk factors that can be diversified away.

ANSWER: b
POINTS: 1
DIFFICULTY: Difficulty: Moderate
LEARNING OBJECTIVES: INTE.GENE.16.7 - LO: 2-5
NATIONAL STANDARDS: United States - BUSPROG: Analytic
STATE STANDARDS: United States - AK - DISC: Risk and return
LOCAL STANDARDS: United States - OH - Default City - TBA
TOPICS: Market risk
KEYWORDS: Bloom's: Analysis
OTHER: TYPE: Multiple Choice: Conceptual

64. Which of the following statements is CORRECT?
    a. If an investor buys enough stocks, he or she can, through diversification, eliminate all of the diversifiable risk inherent in owning stocks. Therefore, if a portfolio contained all publicly traded stocks, it would be essentially riskless.
    b. The required return on a firm's common stock is, in theory, determined solely by its market risk. If the market risk is known, and if that risk is expected to remain constant, then no other information is required to specify the firm's required return.
    c. Portfolio diversification reduces the variability of returns (as measured by the standard deviation) of each individual stock held in a portfolio.
    d. A security's beta measures its non-diversifiable, or market, risk relative to that of an average stock.
    e. A stock's beta is less relevant as a measure of risk to an investor with a well-diversified portfolio than to an investor who holds only that one stock.

ANSWER: d
POINTS: 1

CHAPTER 2—RISK AND RETURN: PART I

65. Which of the following statements is CORRECT?

    a. Diversifiable risk can be reduced by forming a large portfolio, but normally even highly-diversified portfolios are subject to market (or systematic) risk.

    b. A large portfolio of randomly selected stocks will have a standard deviation of returns that is greater than the standard deviation of a 1-stock portfolio if that one stock has a beta less than 1.0.

    c. A large portfolio of stocks whose betas are greater than 1.0 will have less <u>market</u> risk than a single stock with a beta = 0.8.

    d. If you add enough randomly selected stocks to a portfolio, you can completely eliminate all of the <u>market</u> risk from the portfolio.

    e. A large portfolio of randomly selected stocks will always have a standard deviation of returns that is less than the standard deviation of a portfolio with fewer stocks, regardless of how the stocks in the smaller portfolio are selected.

66. Which of the following statements is CORRECT?

    a. A portfolio that consists of 40 stocks that are not highly correlated with "the market" will probably be less risky than a portfolio of 40 stocks that are highly correlated with the market, assuming the stocks all have the same standard deviations.

    b. A two-stock portfolio will always have a lower beta than a one-stock portfolio.

    c. If portfolios are formed by randomly selecting stocks, a 10-stock portfolio will always have a lower beta than a one-stock portfolio.

    d. A stock with an above-average standard deviation must also have an above-average beta.

    e. A two-stock portfolio will always have a lower standard deviation than a one-stock portfolio.

CHAPTER 2—RISK AND RETURN: PART I

67. Consider the following information for three stocks, A, B, and C. The stocks' returns are positively but not perfectly positively correlated with one another, i.e., the correlations are all between 0 and 1.

Stock	Expected Return	Standard Deviation	Beta
A	10%	20%	1.0
B	10%	10%	1.0
C	12%	12%	1.4

Portfolio AB has half of its funds invested in Stock A and half in Stock B. Portfolio ABC has one third of its funds invested in each of the three stocks. The risk-free rate is 5%, and the market is in equilibrium, so required returns equal expected returns. Which of the following statements is CORRECT?

    a. Portfolio AB's coefficient of variation is greater than 2.0.

    b. Portfolio AB's required return is greater than the required return on Stock A.

    c. Portfolio ABC's expected return is 10.66667%.

    d. Portfolio ABC has a standard deviation of 20%.

    e. Portfolio AB has a standard deviation of 20%.

68. Which of the following statements is CORRECT?

    a. A portfolio with a large number of randomly selected stocks would have more market risk than a single stock that has a beta of 0.5, assuming that the stock's beta was correctly calculated and is stable.

    b. If a stock has a negative beta, its expected return must be negative.

    c. A portfolio with a large number of randomly selected stocks would have less market risk than a single stock that has a beta of 0.5.

    d. According to the CAPM, stocks with higher standard deviations of returns must also have higher expected returns.

    e. If the returns on two stocks are perfectly positively correlated (i.e., the correlation coefficient is +1.0) and these stocks have identical standard deviations, an equally weighted portfolio of the two stocks will have a standard deviation that is <u>less than</u> that of the individual stocks.

CHAPTER 2—RISK AND RETURN: PART I

POINTS:	1
DIFFICULTY:	Difficulty: Moderate
LEARNING OBJECTIVES:	INTE.GENE.16.8 - LO: 2-7
NATIONAL STANDARDS:	United States - BUSPROG: Analytic
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	Port. return, CAPM, and beta
KEYWORDS:	Bloom's: Analysis
OTHER:	TYPE: Multiple Choice: Conceptual

69. Which of the following is most likely to be true for a portfolio of 40 randomly selected stocks?

    a. The riskiness of the portfolio is the same as the riskiness of each stock if it was held in isolation.

    b. The beta of the portfolio is less than the average of the betas of the individual stocks.

    c. The beta of the portfolio is equal to the average of the betas of the individual stocks.

    d. The beta of the portfolio is larger than the average of the betas of the individual stocks.

    e. The riskiness of the portfolio is greater than the riskiness of each of the stocks if each was held in isolation.

ANSWER:	c
POINTS:	1
DIFFICULTY:	Difficulty: Moderate
LEARNING OBJECTIVES:	INTE.GENE.16.6 - LO: 2-6
NATIONAL STANDARDS:	United States - BUSPROG: Analytic
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	Portfolio risk and return
KEYWORDS:	Bloom's: Analysis
OTHER:	TYPE: Multiple Choice: Conceptual

70. If you <u>randomly</u> select stocks and add them to your portfolio, which of the following statements best describes what you should expect?

    a. Adding more such stocks will increase the portfolio's expected rate of return.

    b. Adding more such stocks will reduce the portfolio's beta coefficient and thus its systematic risk.

    c. Adding more such stocks will have no effect on the portfolio's risk.

    d. Adding more such stocks will reduce the portfolio's market risk but not its unsystematic risk.

    e. Adding more such stocks will reduce the portfolio's unsystematic, or diversifiable, risk.

ANSWER:	e
POINTS:	1
DIFFICULTY:	Difficulty: Moderate
LEARNING OBJECTIVES:	INTE.GENE.16.8 - LO: 2-7
NATIONAL STANDARDS:	United States - BUSPROG: Analytic
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	Portfolio risk and return
KEYWORDS:	Bloom's: Analysis
OTHER:	TYPE: Multiple Choice: Conceptual

71. Charlie and Lucinda each have $50,000 invested in stock portfolios. Charlie's has a beta of 1.2, an expected return of 10.8%, and a standard deviation of 25%. Lucinda's has a beta of 0.8, an expected return of 9.2%, and a standard deviation that is also 25%. The correlation coefficient, r, between Charlie's and Lucinda's portfolios is zero. If Charlie and Lucinda marry and combine their portfolios, which of the following best describes their combined $100,000 portfolio?

    a. The combined portfolio's beta will be <u>equal to</u> a simple weighted average of the betas of the two individual portfolios, 1.0; its expected return will be <u>equal to</u> a simple weighted average of the expected returns of the two individual portfolios, 10.0%; and its standard deviation will be <u>less than</u> the simple average of the two portfolios' standard deviations, 25%.

    b. The combined portfolio's expected return will be <u>greater than</u> the simple weighted average of the expected returns of the two individual portfolios, 10.0%.

    c. The combined portfolio's standard deviation will be <u>greater than</u> the simple average of the two portfolios' standard deviations, 25%.

    d. The combined portfolio's standard deviation will be <u>equal to</u> a simple average of the two portfolios' standard deviations, 25%.

    e. The combined portfolio's expected return will be <u>less than</u> the simple weighted average of the expected returns of the two individual portfolios, 10.0%.

ANSWER:	a
POINTS:	1
DIFFICULTY:	Difficulty: Moderate
LEARNING OBJECTIVES:	INTE.GENE.16.8 - LO: 2-7
NATIONAL STANDARDS:	United States - BUSPROG: Analytic
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	Portfolio risk and return
KEYWORDS:	Bloom's: Analysis
OTHER:	TYPE: Multiple Choice: Conceptual

72. The two stocks in your portfolio, X and Y, have independent returns, so the correlation between them, r_{XY} is zero. Your portfolio consists of $50,000 invested in Stock X and $50,000 invested in Stock Y. Both stocks have an expected return of 15%, betas of 1.6, and standard deviations of 30%. Which of the following statements best describes the characteristics of your 2-stock portfolio?

    a. Your portfolio has a standard deviation less than 30%, and its beta is greater than 1.6.

    b. Your portfolio has a beta equal to 1.6, and its expected return is 15%.

    c. Your portfolio has a beta greater than 1.6, and its expected return is greater than 15%.

    d. Your portfolio has a standard deviation greater than 30% and a beta equal to 1.6.

    e. Your portfolio has a standard deviation of 30%, and its expected return is 15%.

ANSWER:	b
POINTS:	1
DIFFICULTY:	Difficulty: Moderate
LEARNING OBJECTIVES:	INTE.GENE.16.8 - LO: 2-7
NATIONAL STANDARDS:	United States - BUSPROG: Analytic
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	Portfolio risk and return
KEYWORDS:	Bloom's: Analysis

73. Which of the following is most likely to occur as you add randomly selected stocks to your portfolio, which currently consists of 3 average stocks?
  a. The expected return of your portfolio is likely to decline.
  b. The diversifiable risk will remain the same, but the market risk will likely decline.
  c. Both the diversifiable risk and the market risk of your portfolio are likely to decline.
  d. The total risk of your portfolio should decline, and as a result, the expected rate of return on the portfolio should also decline.
  e. The diversifiable risk of your portfolio will likely decline, but the expected market risk should not change.

ANSWER: e
POINTS: 1
DIFFICULTY: Difficulty: Moderate
LEARNING OBJECTIVES: INTE.GENE.16.8 - LO: 2-7
NATIONAL STANDARDS: United States - BUSPROG: Analytic
STATE STANDARDS: United States - AK - DISC: Risk and return
LOCAL STANDARDS: United States - OH - Default City - TBA
TOPICS: Portfolio risk and return
KEYWORDS: Bloom's: Analysis
OTHER: TYPE: Multiple Choice: Conceptual

74. Ann has a portfolio of 20 average stocks, and Tom has a portfolio of 2 average stocks. Assuming the market is in equilibrium, which of the following statements is CORRECT?
  a. The required return on Ann's portfolio will be lower than that on Tom's portfolio because Ann's portfolio will have less total risk.
  b. Tom's portfolio will have more diversifiable risk, the same market risk, and thus more total risk than Ann's portfolio, but the required (and expected) returns will be the same on both portfolios.
  c. If the two portfolios have the same beta, their required returns will be the same, but Ann's portfolio will have less market risk than Tom's.
  d. The expected return on Jane's portfolio must be lower than the expected return on Dick's portfolio because Jane is more diversified.
  e. Ann's portfolio will have less diversifiable risk and also less market risk than Tom's portfolio.

ANSWER: b
POINTS: 1
DIFFICULTY: Difficulty: Moderate
LEARNING OBJECTIVES: INTE.GENE.16.8 - LO: 2-7
NATIONAL STANDARDS: United States - BUSPROG: Analytic
STATE STANDARDS: United States - AK - DISC: Risk and return
LOCAL STANDARDS: United States - OH - Default City - TBA
TOPICS: Portfolio risk and return
KEYWORDS: Bloom's: Analysis
OTHER: TYPE: Multiple Choice: Conceptual

75. Stocks A and B are quite similar: Each has an expected return of 12%, a beta of 1.2, and a standard deviation of 25%. The returns on the two stocks have a correlation of 0.6. Portfolio P has 50% in Stock A and 50% in Stock B. Which of the following statements is CORRECT?

a. Portfolio P has a standard deviation that is greater than 25%.

b. Portfolio P has an expected return that is less than 12%.

c. Portfolio P has a standard deviation that is less than 25%.

d. Portfolio P has a beta that is less than 1.2.

e. Portfolio P has a beta that is greater than 1.2.

ANSWER:	c
POINTS:	1
DIFFICULTY:	Difficulty: Moderate
LEARNING OBJECTIVES:	INTE.GENE.16.8 - LO: 2-7
NATIONAL STANDARDS:	United States - BUSPROG: Analytic
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	Portfolio risk and return
KEYWORDS:	Bloom's: Analysis
OTHER:	TYPE: Multiple Choice: Conceptual

76. Stocks A, B, and C are similar in some respects: Each has an expected return of 10% and a standard deviation of 25%. Stocks A and B have returns that are independent of one another; i.e., their correlation coefficient, r, equals zero. Stocks A and C have returns that are negatively correlated with one another; i.e., r is less than 0. Portfolio AB is a portfolio with half of its money invested in Stock A and half in Stock B. Portfolio AC is a portfolio with half of its money invested in Stock A and half invested in Stock C. Which of the following statements is CORRECT?

a. Portfolio AC has an expected return that is greater than 25%.

b. Portfolio AB has a standard deviation that is greater than 25%.

c. Portfolio AB has a standard deviation that is equal to 25%.

d. Portfolio AC has a standard deviation that is less than 25%.

e. Portfolio AC has an expected return that is less than 10%.

ANSWER:	d
POINTS:	1
DIFFICULTY:	Difficulty: Moderate
LEARNING OBJECTIVES:	INTE.GENE.16.8 - LO: 2-7
NATIONAL STANDARDS:	United States - BUSPROG: Analytic
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	Portfolio risk and return
KEYWORDS:	Bloom's: Analysis
OTHER:	TYPE: Multiple Choice: Conceptual

77. Stocks A and B each have an expected return of 15%, a standard deviation of 20%, and a beta of 1.2. The returns on the two stocks have a correlation coefficient of +0.6. Your portfolio consists of 50% A and 50% B. Which of the following statements is CORRECT?

a. The portfolio's expected return is 15%.

b. The portfolio's standard deviation is greater than 20%.

c. The portfolio's beta is greater than 1.2.

d. The portfolio's standard deviation is 20%.

e. The portfolio's beta is less than 1.2.

CHAPTER 2—RISK AND RETURN: PART I

78. Stock A has a beta of 0.8, Stock B has a beta of 1.0, and Stock C has a beta of 1.2. Portfolio P has 1/3 of its value invested in each stock. Each stock has a standard deviation of 25%, and their returns are independent of one another, i.e., the correlation coefficients between each pair of stocks is zero. Assuming the market is in equilibrium, which of the following statements is CORRECT?

    a. Portfolio P's expected return is equal to the expected return on Stock A.

    b. Portfolio P's expected return is less than the expected return on Stock B.

    c. Portfolio P's expected return is equal to the expected return on Stock B.

    d. Portfolio P's expected return is greater than the expected return on Stock C.

    e. Portfolio P's expected return is greater than the expected return on Stock B.

79. In a portfolio of three randomly selected stocks, which of the following could <u>NOT</u> be true; i.e., which statement is <u>false</u>?

    a. The standard deviation of the portfolio is greater than the standard deviation of one or two of the stocks.

    b. The beta of the portfolio is lower than the lowest of the three betas.

    c. The beta of the portfolio is equal to one of the three stock's betas.

    d. The beta of the portfolio is equal to 1.

    e. The standard deviation of the portfolio is less than the standard deviation of each of the stocks if they were held in isolation.

80. Stock A has a beta = 0.8, while Stock B has a beta = 1.6. Which of the following statements is CORRECT?
   a. If the marginal investor becomes more risk averse, the required return on Stock B will increase by more than the required return on Stock A.
   b. An equally weighted portfolio of Stocks A and B will have a beta lower than 1.2.
   c. If the marginal investor becomes more risk averse, the required return on Stock A will increase by more than the required return on Stock B.
   d. If the risk-free rate increases but the market risk premium remains constant, the required return on Stock A will increase by more than that on Stock B.
   e. Stock B's required return is double that of Stock A's.

ANSWER:	a
POINTS:	1
DIFFICULTY:	Difficulty: Moderate
LEARNING OBJECTIVES:	INTE.GENE.16.8 - LO: 2-7
NATIONAL STANDARDS:	United States - BUSPROG: Analytic
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	Port. risk & ret. relationships
KEYWORDS:	Bloom's: Analysis
OTHER:	TYPE: Multiple Choice: Conceptual

81. Stock A has an expected return of 12%, a beta of 1.2, and a standard deviation of 20%. Stock B also has a beta of 1.2, but its expected return is 10% and its standard deviation is 15%. Portfolio AB has $300,000 invested in Stock A and $100,000 invested in Stock B. The correlation between the two stocks' returns is zero (that is, $r_{A,B} = 0$). Which of the following statements is CORRECT?
   a. The stocks are not in equilibrium based on the CAPM; if A is valued correctly, then B is overvalued.
   b. The stocks are not in equilibrium based on the CAPM; if A is valued correctly, then B is undervalued.
   c. Portfolio AB's expected return is 11.0%.
   d. Portfolio AB's beta is less than 1.2.
   e. Portfolio AB's standard deviation is 17.5%.

ANSWER:	a
POINTS:	1
DIFFICULTY:	Difficulty: Moderate
LEARNING OBJECTIVES:	INTE.GENE.16.8 - LO: 2-7
NATIONAL STANDARDS:	United States - BUSPROG: Analytic
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	Port. risk & ret. relationships
KEYWORDS:	Bloom's: Analysis

CHAPTER 2—RISK AND RETURN: PART I

82. You have a portfolio P that consists of 50% Stock X and 50% Stock Y. Stock X has a beta of 0.7 and Stock Y has a beta of 1.3. The standard deviation of each stock's returns is 20%. The stocks' returns are independent of each other, i.e., the correlation coefficient, r, between them is zero. Given this information, which of the following statements is CORRECT?

   a. The required return on Portfolio P is equal to the market risk premium ($r_M - r_{RF}$).

   b. Portfolio P has a beta of 0.7.

   c. Portfolio P has a beta of 1.0 and a required return that is equal to the riskless rate, r_{RF}.

   d. Portfolio P has the same required return as the market (r_M).

   e. Portfolio P has a standard deviation of 20%.

ANSWER: d
POINTS: 1
DIFFICULTY: Difficulty: Moderate
LEARNING OBJECTIVES: INTE.GENE.16.8 - LO: 2-7
NATIONAL STANDARDS: United States - BUSPROG: Analytic
STATE STANDARDS: United States - AK - DISC: Risk and return
LOCAL STANDARDS: United States - OH - Default City - TBA
TOPICS: Port. risk & ret. relationships
KEYWORDS: Bloom's: Analysis
OTHER: TYPE: Multiple Choice: Conceptual

83. Which of the following statements is CORRECT? (Assume that the risk-free rate is a constant.)

   a. The effect of a change in the market risk premium depends on the slope of the yield curve.

   b. If the market risk premium increases by 1%, then the required return on all stocks will rise by 1%.

   c. If the market risk premium increases by 1%, then the required return will increase by 1% for a stock that has a beta of 1.0.

   d. The effect of a change in the market risk premium depends on the level of the risk-free rate.

   e. If the market risk premium increases by 1%, then the required return will increase for stocks that have a beta greater than 1.0, but it will decrease for stocks that have a beta less than 1.0.

ANSWER: c
POINTS: 1
DIFFICULTY: Difficulty: Moderate
LEARNING OBJECTIVES: INTE.GENE.16.8 - LO: 2-7
NATIONAL STANDARDS: United States - BUSPROG: Analytic
STATE STANDARDS: United States - AK - DISC: Risk and return
LOCAL STANDARDS: United States - OH - Default City - TBA
TOPICS: Market risk premium
KEYWORDS: Bloom's: Analysis
OTHER: TYPE: Multiple Choice: Conceptual

84. In historical data, we see that investments with the highest average annual returns also tend to have the highest standard deviations of annual returns. This observation supports the notion that there is a positive correlation between risk and return. Which of the following answers correctly ranks investments from <u>highest to lowest</u> risk (and return), where the security with the highest risk is shown first, the one with the lowest risk last?

a. Large-company stocks, small-company stocks, long-term corporate bonds, U.S. Treasury bills, long-term government bonds.

b. Small-company stocks, large-company stocks, long-term corporate bonds, long-term government bonds, U.S. Treasury bills.

c. U.S. Treasury bills, long-term government bonds, long-term corporate bonds, small-company stocks, large-company stocks.

d. Large-company stocks, small-company stocks, long-term corporate bonds, long-term government bonds, U.S. Treasury bills.

e. Small-company stocks, long-term corporate bonds, large-company stocks, long-term government bonds, U.S. Treasury bills.

ANSWER:	b
POINTS:	1
DIFFICULTY:	Difficulty: Moderate
LEARNING OBJECTIVES:	INTE.GENE.16.8 - LO: 2-7
NATIONAL STANDARDS:	United States - BUSPROG: Analytic
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	Risk & ret. relationships
KEYWORDS:	Bloom's: Analysis
OTHER:	TYPE: Multiple Choice: Conceptual

85. Suppose that during the coming year, the risk free rate, r_{RF}, is expected to remain the same, while the market risk premium ($r_M - r_{RF}$), is expected to fall. Given this forecast, which of the following statements is CORRECT?

a. The required return on all stocks will remain unchanged.

b. The required return will fall for all stocks, but it will fall <u>more</u> for stocks with higher betas.

c. The required return for all stocks will fall by the same amount.

d. The required return will fall for all stocks, but it will fall <u>less</u> for stocks with higher betas.

e. The required return will increase for stocks with a beta less than 1.0 and will decrease for stocks with a beta greater than 1.0.

ANSWER:	b
POINTS:	1
DIFFICULTY:	Difficulty: Moderate
LEARNING OBJECTIVES:	INTE.GENE.16.8 - LO: 2-7
NATIONAL STANDARDS:	United States - BUSPROG: Analytic
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	Required return
KEYWORDS:	Bloom's: Analysis
OTHER:	TYPE: Multiple Choice: Conceptual

86. The risk-free rate is 6%; Stock A has a beta of 1.0; Stock B has a beta of 2.0; and the market risk premium, $r_M - r_{RF}$, is positive. Which of the following statements is CORRECT?

a. Stock B's required rate of return is twice that of Stock A.

b. If Stock A's required return is 11%, then the market risk premium is 5%.

    c. If Stock B's required return is 11%, then the market risk premium is 5%.

    d. If the risk-free rate remains constant but the market risk premium increases, Stock A's required return will increase by more than Stock B's.

    e. If the risk-free rate increases but the market risk premium stays unchanged, Stock B's required return will increase by more than Stock A's.

ANSWER:	b
POINTS:	1
DIFFICULTY:	Difficulty: Moderate
LEARNING OBJECTIVES:	INTE.GENE.16.8 - LO: 2-7
NATIONAL STANDARDS:	United States - BUSPROG: Analytic
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	CAPM
KEYWORDS:	Bloom's: Analysis
OTHER:	TYPE: Multiple Choice: Conceptual

87. Assume that in recent years both expected inflation and the market risk premium ($r_M - r_{RF}$) have declined. Assume also that all stocks have positive betas. Which of the following would be most likely to have occurred as a result of these changes?

    a. The required returns on all stocks have fallen, but the fall has been greater for stocks with higher betas.

    b. The average required return on the market, r_M, has remained constant, but the required returns have fallen for stocks that have betas greater than 1.0.

    c. Required returns have increased for stocks with betas greater than 1.0 but have declined for stocks with betas less than 1.0.

    d. The required returns on all stocks have fallen by the same amount.

    e. The required returns on all stocks have fallen, but the decline has been greater for stocks with lower betas.

ANSWER:	a
POINTS:	1
DIFFICULTY:	Difficulty: Moderate
LEARNING OBJECTIVES:	INTE.GENE.16.8 - LO: 2-7
NATIONAL STANDARDS:	United States - BUSPROG: Analytic
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	CAPM and required return
KEYWORDS:	Bloom's: Analysis
OTHER:	TYPE: Multiple Choice: Conceptual

88. Assume that the risk-free rate is 5%. Which of the following statements is CORRECT?

    a. If a stock's beta doubled, its required return under the CAPM would also double.

    b. If a stock's beta doubled, its required return under the CAPM would more than double.

    c. If a stock's beta were 1.0, its required return under the CAPM would be 5%.

    d. If a stock's beta were less than 1.0, its required return under the CAPM would be less than 5%.

    e. If a stock has a negative beta, its required return under the CAPM would be less than 5%.

ANSWER:	e

CHAPTER 2—RISK AND RETURN: PART I

89. Stock LB has a beta of 0.5 and Stock HB has a beta of 1.5. The market is in equilibrium, with required returns equaling expected returns. Which of the following statements is CORRECT?

   a. If both expected inflation and the market risk premium ($r_M - r_{RF}$) increase, the required return on Stock HB will increase by more than that on Stock LB.

   b. If both expected inflation and the market risk premium ($r_M - r_{RF}$) increase, the required returns of both stocks will increase by the same amount.

   c. Since the market is in equilibrium, the required returns of the two stocks should be the same.

   d. If expected inflation remains constant but the market risk premium ($r_M - r_{RF}$) declines, the required return of Stock HB will decline but the required return of Stock LB will increase.

   e. If expected inflation remains constant but the market risk premium ($r_M - r_{RF}$) declines, the required return of Stock LB will decline but the required return of Stock HB will increase.

90. Portfolio P has equal amounts invested in each of the three stocks, A, B, and C. Stock A has a beta of 0.8, Stock B has a beta of 1.0, and Stock C has a beta of 1.2. Each of the stocks has a standard deviation of 25%. The returns on the three stocks are independent of one another (i.e., the correlation coefficients all equal zero). Assume that there is an increase in the market risk premium, but the risk-free rate remains unchanged. Which of the following statements is CORRECT?

   a. The required return on Stock A will increase by less than the increase in the market risk premium, while the required return on Stock C will increase by more than the increase in the market risk premium.

   b. The required return on the average stock will remain unchanged, but the returns of riskier stocks (such as Stock C) will increase while the returns of safer stocks (such as Stock A) will decrease.

   c. The required returns on all three stocks will increase by the amount of the increase in the market risk premium.

   d. The required return on the average stock will remain unchanged, but the returns on riskier stocks (such as Stock C) will decrease while the returns on safer stocks (such as Stock A) will increase.

   e. The required return of all stocks will remain unchanged since there was no change in their betas.

ANSWER: a

CHAPTER 2—RISK AND RETURN: PART I

POINTS: 1
DIFFICULTY: Difficulty: Moderate
LEARNING OBJECTIVES: INTE.GENE.16.8 - LO: 2-7
NATIONAL STANDARDS: United States - BUSPROG: Analytic
STATE STANDARDS: United States - AK - DISC: Risk and return
LOCAL STANDARDS: United States - OH - Default City - TBA
TOPICS: CAPM and required return
KEYWORDS: Bloom's: Analysis
OTHER: TYPE: Multiple Choice: Conceptual

91. Which of the following statements is CORRECT?
 a. Other things held constant, if investors suddenly become convinced that there will be deflation in the economy, then the required returns on all stocks should increase.
 b. If a company's beta were cut in half, then its required rate of return would also be halved.
 c. If the risk-free rate rises by 0.5% but the market risk premium declines by that same amount, then the required rates of return on stocks with betas less than 1.0 will decline while returns on stocks with betas above 1.0 will increase.
 d. If the risk-free rate rises by 0.5% but the market risk premium declines by that same amount, then the required rate of return on an average stock will remain unchanged, but required returns on stocks with betas less than 1.0 will rise.
 e. If a company's beta doubles, then its required rate of return will also double.

ANSWER: d
POINTS: 1
DIFFICULTY: Difficulty: Moderate
LEARNING OBJECTIVES: INTE.GENE.16.8 - LO: 2-7
NATIONAL STANDARDS: United States - BUSPROG: Analytic
STATE STANDARDS: United States - AK - DISC: Risk and return
LOCAL STANDARDS: United States - OH - Default City - TBA
TOPICS: CAPM and required return
KEYWORDS: Bloom's: Analysis
OTHER: TYPE: Multiple Choice: Conceptual

92. Assume that the risk-free rate is 6% and the market risk premium is 5%. Given this information, which of the following statements is CORRECT?
 a. If a stock has a negative beta, its required return must also be negative.
 b. An index fund with beta = 1.0 should have a required return less than 11%.
 c. If a stock's beta doubles, its required return must also double.
 d. An index fund with beta = 1.0 should have a required return greater than 11%.
 e. An index fund with beta = 1.0 should have a required return of 11%.

ANSWER: e
POINTS: 1
DIFFICULTY: Difficulty: Moderate
LEARNING OBJECTIVES: INTE.GENE.16.8 - LO: 2-7
NATIONAL STANDARDS: United States - BUSPROG: Analytic
STATE STANDARDS: United States - AK - DISC: Risk and return

CHAPTER 2—RISK AND RETURN: PART I

LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	CAPM, beta, and req. return
KEYWORDS:	Bloom's: Analysis
OTHER:	TYPE: Multiple Choice: Conceptual

93. Which of the following statements is CORRECT?

   a. Lower beta stocks have higher required returns.

   b. A stock's beta indicates its diversifiable risk.

   c. Diversifiable risk cannot be completely diversified away.

   d. Two securities with the same stand-alone risk must have the same betas.

   e. The slope of the security market line is equal to the market risk premium.

ANSWER:	e
POINTS:	1
DIFFICULTY:	Difficulty: Moderate
LEARNING OBJECTIVES:	INTE.GENE.16.8 - LO: 2-7
NATIONAL STANDARDS:	United States - BUSPROG: Analytic
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	SML
KEYWORDS:	Bloom's: Analysis
OTHER:	TYPE: Multiple Choice: Conceptual

94. Which of the following statements is CORRECT?

   a. If the risk-free rate rises, then the market risk premium must also rise.

   b. If a company's beta is halved, then its required return will also be halved.

   c. If a company's beta doubles, then its required return will also double.

   d. The slope of the security market line is equal to the market risk premium, $(r_M - r_{RF})$.

   e. Beta is measured by the slope of the security market line.

ANSWER:	d
POINTS:	1
DIFFICULTY:	Difficulty: Moderate
LEARNING OBJECTIVES:	INTE.GENE.16.8 - LO: 2-7
NATIONAL STANDARDS:	United States - BUSPROG: Analytic
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	SML
KEYWORDS:	Bloom's: Analysis
OTHER:	TYPE: Multiple Choice: Conceptual

95. Portfolio P has $200,000 consisting of $100,000 invested in Stock A and $100,000 in Stock B. Stock A has a beta of 1.2 and a standard deviation of 20%. Stock B has a beta of 0.8 and a standard deviation of 25%. Which of the following statements is CORRECT? (Assume that the stocks are in equilibrium.)

   a. Stock B has a higher required rate of return than Stock A.

   b. Portfolio P has a standard deviation of 22.5%.

c. More information is needed to determine the portfolio's beta.

d. Portfolio P has a beta of 1.0.

e. Stock A's returns are less highly correlated with the returns on most other stocks than are B's returns.

ANSWER: d

POINTS: 1

DIFFICULTY: Difficulty: Moderate

LEARNING OBJECTIVES: INTE.GENE.16.8 - LO: 2-7

NATIONAL STANDARDS: United States - BUSPROG: Analytic

STATE STANDARDS: United States - AK - DISC: Risk and return

LOCAL STANDARDS: United States - OH - Default City - TBA

TOPICS: SML

KEYWORDS: Bloom's: Analysis

OTHER: TYPE: Multiple Choice: Conceptual

96. Dixon Food's stock has a beta of 1.4, while Clark Café's stock has a beta of 0.7. Assume that the risk-free rate, r_{RF}, is 5.5% and the market risk premium, $(r_M - r_{RF})$, equals 4%. Which of the following statements is CORRECT?

    a. If the market risk premium <u>increases</u> but the risk-free rate remains unchanged, Dixon's required return will increase because it has a beta greater than 1.0 but Clark's required return will decline because it has a beta less than 1.0.

    b. Since Dixon's beta is twice that of Clark's, its required rate of return will also be twice that of Clark's.

    c. If the risk-free rate increases while the market risk premium remains constant, then the required return on an average stock will increase.

    d. If the market risk premium <u>decreases</u> but the risk-free rate remains unchanged, Dixon's required return will decrease because it has a beta greater than 1.0 and Clark's will also decrease, but by more than Dixon's because it has a beta less than 1.0.

    e. If the risk-free rate increases but the market risk premium remains unchanged, the required return will increase for both stocks but the increase will be larger for Dixon since it has a higher beta.

ANSWER: c

POINTS: 1

DIFFICULTY: Difficulty: Moderate

LEARNING OBJECTIVES: INTE.GENE.16.8 - LO: 2-7

NATIONAL STANDARDS: United States - BUSPROG: Analytic

STATE STANDARDS: United States - AK - DISC: Risk and return

LOCAL STANDARDS: United States - OH - Default City - TBA

TOPICS: SML

KEYWORDS: Bloom's: Analysis

OTHER: TYPE: Multiple Choice: Conceptual

97. Stock X has a beta of 0.6, while Stock Y has a beta of 1.4. Which of the following statements is CORRECT?

    a. Stock Y must have a higher expected return and a higher standard deviation than Stock X.

    b. If expected inflation increases but the market risk premium is unchanged, then the required return on both stocks will fall by the same amount.

    c. If the market risk premium declines but expected inflation is unchanged, the required return on both stocks will decrease, but the decrease will be greater for Stock Y.

    d. If expected inflation declines but the market risk premium is unchanged, then the required return on both

stocks will decrease but the decrease will be greater for Stock Y.

    e. A portfolio consisting of $50,000 invested in Stock X and $50,000 invested in Stock Y will have a required return that exceeds that of the overall market.

ANSWER:	c
POINTS:	1
DIFFICULTY:	Difficulty: Moderate
LEARNING OBJECTIVES:	INTE.GENE.16.8 - LO: 2-7
NATIONAL STANDARDS:	United States - BUSPROG: Analytic
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	SML
KEYWORDS:	Bloom's: Analysis
OTHER:	TYPE: Multiple Choice: Conceptual

98. Stock A has a beta of 0.8 and Stock B has a beta of 1.2. 50% of Portfolio P is invested in Stock A and 50% is invested in Stock B. If the market risk premium ($r_M - r_{RF}$) were to increase but the risk-free rate (r_{RF}) remained constant, which of the following would occur?

    a. The required return would decrease by the same amount for both Stock A and Stock B.

    b. The required return would increase for Stock A but decrease for Stock B.

    c. The required return on Portfolio P would remain unchanged.

    d. The required return would increase for Stock B but decrease for Stock A.

    e. The required return would increase for both stocks but the increase would be greater for Stock B than for Stock A.

ANSWER:	e
POINTS:	1
DIFFICULTY:	Difficulty: Moderate
LEARNING OBJECTIVES:	INTE.GENE.16.8 - LO: 2-7
NATIONAL STANDARDS:	United States - BUSPROG: Analytic
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	SML
KEYWORDS:	Bloom's: Analysis
OTHER:	TYPE: Multiple Choice: Conceptual

99. Stock A has a beta of 0.7, whereas Stock B has a beta of 1.3. Portfolio P has 50% invested in both A and B. Which of the following would occur if the market risk premium increased by 1% but the risk-free rate remained constant?

    a. The required return on both stocks would increase by 1%.

    b. The required return on Portfolio P would remain unchanged.

    c. The required return on Stock A would increase by more than 1%, while the return on Stock B would increase by less than 1%.

    d. The required return for Stock A would fall, but the required return for Stock B would increase.

    e. The required return on Portfolio P would increase by 1%.

ANSWER:	e
POINTS:	1

CHAPTER 2—RISK AND RETURN: PART I

DIFFICULTY:	Difficulty: Moderate
LEARNING OBJECTIVES:	INTE.GENE.16.8 - LO: 2-7
NATIONAL STANDARDS:	United States - BUSPROG: Analytic
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	SML
KEYWORDS:	Bloom's: Analysis
OTHER:	TYPE: Multiple Choice: Conceptual

100. Assume that the risk-free rate remains constant, but the market risk premium declines. Which of the following is most likely to occur?

    a. The required return on a stock with beta > 1.0 will increase.

    b. The return on "the market" will remain constant.

    c. The return on "the market" will increase.

    d. The required return on a stock with beta < 1.0 will decline.

    e. The required return on a stock with beta = 1.0 will not change.

ANSWER:	d
POINTS:	1
DIFFICULTY:	Difficulty: Moderate
LEARNING OBJECTIVES:	INTE.GENE.16.8 - LO: 2-7
NATIONAL STANDARDS:	United States - BUSPROG: Analytic
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	SML
KEYWORDS:	Bloom's: Analysis
OTHER:	TYPE: Multiple Choice: Conceptual

101. Which of the following statements is CORRECT?

    a. The SML shows the relationship between companies' required returns and their diversifiable risks. The slope and intercept of this line cannot be influenced by a firm's managers, but the position of the company on the line can be influenced by its managers.

    b. Suppose you plotted the returns of a given stock against those of the market, and you found that the slope of the regression line was negative. The CAPM would indicate that the required rate of return on the stock should be less than the risk-free rate for a well-diversified investor, assuming investors expect the observed relationship to continue on into the future.

    c. If investors become less risk averse, the slope of the Security Market Line will increase.

    d. If a company increases its use of debt, this is likely to cause the slope of its SML to increase, indicating a higher required return on the stock.

    e. The slope of the SML is determined by the value of beta.

ANSWER:	b
POINTS:	1
DIFFICULTY:	Difficulty: Moderate
LEARNING OBJECTIVES:	INTE.GENE.16.8 - LO: 2-7
NATIONAL STANDARDS:	United States - BUSPROG: Analytic
STATE STANDARDS:	United States - AK - DISC: Risk and return

CHAPTER 2—RISK AND RETURN: PART I

LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	SML
KEYWORDS:	Bloom's: Analysis
OTHER:	TYPE: Multiple Choice: Conceptual

102. How would the Security Market Line be affected, other things held constant, if the expected inflation rate <u>decreases</u> and investors also become <u>more</u> risk averse?

    a. The x-axis intercept would decline, and the slope would increase.

    b. The y-axis intercept would increase, and the slope would decline.

    c. The SML would be affected only if betas changed.

    d. Both the y-axis intercept and the slope would increase, leading to higher required returns.

    e. The y-axis intercept would decline, and the slope would increase.

ANSWER:	e
POINTS:	1
DIFFICULTY:	Difficulty: Moderate
LEARNING OBJECTIVES:	INTE.GENE.16.8 - LO: 2-7
NATIONAL STANDARDS:	United States - BUSPROG: Analytic
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	SML
KEYWORDS:	Bloom's: Analysis
OTHER:	TYPE: Multiple Choice: Conceptual

103. Assume that the risk-free rate, r_{RF}, increases but the market risk premium, $(r_M - r_{RF})$, declines, with the net effect being that the overall required return on the market, r_M, remains constant. Which of the following statements is CORRECT?

    a. The required return will decline for stocks that have a beta less than 1.0 but will increase for stocks that have a beta greater than 1.0.

    b. Since the overall return on the market stays constant, the required return on each individual stock will also remain constant.

    c. The required return will increase for stocks that have a beta less than 1.0 but decline for stocks that have a beta greater than 1.0.

    d. The required return of all stocks will fall by the amount of the decline in the market risk premium.

    e. The required return of all stocks will increase by the amount of the increase in the risk-free rate.

ANSWER:	c
POINTS:	1
DIFFICULTY:	Difficulty: Moderate
LEARNING OBJECTIVES:	INTE.GENE.16.8 - LO: 2-7
NATIONAL STANDARDS:	United States - BUSPROG: Analytic
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	SML
KEYWORDS:	Bloom's: Analysis
OTHER:	TYPE: Multiple Choice: Conceptual

104. Suppose that Federal Reserve actions have caused an increase in the risk-free rate, r_{RF}. Meanwhile, investors are afraid of a recession, so the market risk premium, $(r_M - r_{RF})$, has increased. Under these conditions, with other things held constant, which of the following statements is most correct?
   a. The required return on all stocks would increase, but the increase would be greatest for stocks with betas of less than 1.0.
   b. Stocks' required returns would change, but so would expected returns, and the result would be no change in stocks' prices.
   c. The prices of all stocks would decline, but the decline would be greatest for high-beta stocks.
   d. The prices of all stocks would increase, but the increase would be greatest for high-beta stocks.
   e. The required return on all stocks would increase by the same amount.

ANSWER: c
POINTS: 1
DIFFICULTY: Difficulty: Moderate
LEARNING OBJECTIVES: INTE.GENE.16.8 - LO: 2-7
NATIONAL STANDARDS: United States - BUSPROG: Analytic
STATE STANDARDS: United States - AK - DISC: Risk and return
LOCAL STANDARDS: United States - OH - Default City - TBA
TOPICS: SML
KEYWORDS: Bloom's: Analysis
OTHER: TYPE: Multiple Choice: Conceptual

105. Which of the following statements is CORRECT?
   a. The slope of the Security Market Line is beta.
   b. Any stock with a negative beta must in theory have a negative required rate of return, provided r_{RF} is positive.
   c. If a stock's beta doubles, its required rate of return must also double.
   d. If a stock's returns are negatively correlated with returns on most other stocks, the stock's beta will be negative.
   e. If a stock has a beta of to 1.0, its required rate of return will be unaffected by changes in the market risk premium.

ANSWER: d
POINTS: 1
DIFFICULTY: Difficulty: Moderate
LEARNING OBJECTIVES: INTE.GENE.16.8 - LO: 2-7
NATIONAL STANDARDS: United States - BUSPROG: Analytic
STATE STANDARDS: United States - AK - DISC: Risk and return
LOCAL STANDARDS: United States - OH - Default City - TBA
TOPICS: SML, CAPM, and beta
KEYWORDS: Bloom's: Analysis
OTHER: TYPE: Multiple Choice: Conceptual

106. Assume that investors have recently become more risk averse, so the market risk premium has increased. Also, assume that the risk-free rate and expected inflation have not changed. Which of the following is most likely to occur?
   a. The required rate of return will decline for stocks whose betas are less than 1.0.
   b. The required rate of return on the market, r_M, will not change as a result of these changes.

    c. The required rate of return for each individual stock in the market will increase by an amount equal to the increase in the market risk

    d. The required rate of return on a riskless bond will decline.

    e. The required rate of return for an average stock will increase by an amount equal to the increase in the market risk premium.

ANSWER:	e
POINTS:	1
DIFFICULTY:	Difficulty: Moderate
LEARNING OBJECTIVES:	INTE.GENE.16.8 - LO: 2-7
NATIONAL STANDARDS:	United States - BUSPROG: Analytic
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	SML and risk aversion
KEYWORDS:	Bloom's: Analysis
OTHER:	TYPE: Multiple Choice: Conceptual

107. Which of the following statements is CORRECT?

    a. The CAPM has been thoroughly tested, and the theory has been confirmed beyond any reasonable doubt.

    b. If two "normal" or "typical" stocks were combined to form a 2-stock portfolio, the portfolio's expected return would be a weighted average of the stocks' expected returns, but the portfolio's standard deviation would probably be greater than the average of the stocks' standard deviations.

    c. If investors become more risk averse, then (1) the slope of the SML would increase and (2) the required rate of return on low-beta stocks would increase by more than the required return on high-beta stocks.

    d. An increase in expected inflation, combined with a constant <u>real</u> risk-free rate and a constant market risk premium, would lead to identical increases in the required returns on a riskless asset and on an average stock, other things held constant.

    e. A graph of the SML as applied to individual stocks would show required rates of return on the vertical axis and standard deviations of returns on the horizontal axis.

ANSWER:	d
POINTS:	1
DIFFICULTY:	Difficulty: Moderate
LEARNING OBJECTIVES:	INTE.GENE.16.8 - LO: 2-7
NATIONAL STANDARDS:	United States - BUSPROG: Analytic
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	SML, CAPM, and port. risk
KEYWORDS:	Bloom's: Analysis
OTHER:	TYPE: Multiple Choice: Conceptual

108. For markets to be in equilibrium, that is, for there to be no strong pressure for prices to depart from their current levels,

    a. The past realized rate of return must be equal to the expected future rate of return; that is, $\bar{r} = \hat{r}$.

    b. The required rate of return must equal the past realized rate of return; that is, $r = \bar{r}$.

    c. The expected rate of return must be equal to the required rate of return; that is, $\hat{r} = r$.

    d. All of the above statements must hold for equilibrium to exist; that is $\hat{r} = r = \bar{r}$.

CHAPTER 2—RISK AND RETURN: PART I

e. None of the above statements is correct.

ANSWER:	c
POINTS:	1
DIFFICULTY:	Difficulty: Moderate
LEARNING OBJECTIVES:	INTE.GENE.16.8 - LO: 2-7
NATIONAL STANDARDS:	United States - BUSPROG: Analytic
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	Market equilibrium
KEYWORDS:	Bloom's: Analysis
OTHER:	TYPE: Multiple Choice: Conceptual

109. Which of the following statements is CORRECT?

    a. Portfolio diversification reduces the variability of returns on an individual stock.

    b. Risk refers to the chance that some unfavorable event will occur, and a probability distribution is completely described by a listing of the likelihood of unfavorable events.

    c. The SML relates a stock's required return to its market risk. The slope and intercept of this line cannot be controlled by the firms' managers, but managers can influence their firms' positions on the line by such actions as changing the firm's capital structure or the type of assets it employs.

    d. A stock with a beta of −1.0 has zero market risk if held in a 1-stock portfolio.

    e. When diversifiable risk has been diversified away, the inherent risk that remains is market risk, which is constant for all stocks in the market.

ANSWER:	c
POINTS:	1
DIFFICULTY:	Difficulty: Moderate
LEARNING OBJECTIVES:	INTE.GENE.16.8 - LO: 2-7
NATIONAL STANDARDS:	United States - BUSPROG: Analytic
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	Risk concepts
KEYWORDS:	Bloom's: Analysis
OTHER:	TYPE: Multiple Choice: Conceptual

110. You observe the following information regarding Companies X and Y:

· Company X has a higher expected return than Company Y.
· Company X has a lower standard deviation of returns than Company Y.
· Company X has a higher beta than Company Y.

Given this information, which of the following statements is CORRECT?

    a. Company X has a lower coefficient of variation than Company Y.

    b. Company X has less market risk than Company Y.

    c. Company X's returns will be negative when Y's returns are positive.

    d. Company X's stock is a better buy than Company Y's stock.

    e. Company X has more diversifiable risk than Company Y.

ANSWER:	a

CHAPTER 2—RISK AND RETURN: PART I

111. Stocks A and B both have an expected return of 10% and a standard deviation of returns of 25%. Stock A has a beta of 0.8 and Stock B has a beta of 1.2. The correlation coefficient, r, between the two stocks is 0.6. Portfolio P has 50% invested in Stock A and 50% invested in B. Which of the following statements is CORRECT?
   a. Based on the information we are given, and assuming those are the views of the marginal investor, it is apparent that the two stocks are in equilibrium.
   b. Portfolio P has more market risk than Stock A but less market risk than B.
   c. Stock A should have a higher expected return than Stock B as viewed by the marginal investor.
   d. Portfolio P has a coefficient of variation equal to 2.5.
   e. Portfolio P has a standard deviation of 25% and a beta of 1.0.

112. For a stock to be in equilibrium, that is, for there to be no long-term pressure for its price to depart from its current level, then
   a. the past realized return must be equal to the expected return during the same period.
   b. the required return must equal the realized return in all periods.
   c. the expected return must be equal to both the required future return and the past realized return.
   d. the expected future returns must be equal to the required return.
   e. the expected future return must be less than the most recent past realized return.

CHAPTER 2—RISK AND RETURN: PART I

TOPICS:	Market equilibrium
KEYWORDS:	Bloom's: Analysis
OTHER:	TYPE: Multiple Choice: Conceptual
NOTES:	Question may require calculations to find the correct answer.

113. Which of the following are the factors for the Fama-French model?

a. The excess market return, a debt factor, and a book-to-market factor.

b. The excess market return, a size factor, and a debt.

c. A debt factor, a size factor, and a book-to-market factor.

d. The excess market return, an industrial production factor, and a book-to-market factor.

e. The excess market return, a size factor, and a book-to-market factor.

ANSWER:	e
POINTS:	1
DIFFICULTY:	Difficulty: Moderate
LEARNING OBJECTIVES:	INTE.GENE.16.10 - LO: 2-8
NATIONAL STANDARDS:	United States - BUSPROG: Analytic
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	Fama-French model
KEYWORDS:	Bloom's: Analysis
OTHER:	TYPE: Multiple Choice: Conceptual

114. Gretta's portfolio consists of $700,000 invested in a stock that has a beta of 1.2 and $300,000 invested in a stock that has a beta of 0.8. The risk-free rate is 6% and the market risk premium is 5%. Which of the following statements is CORRECT?

a. The required return on the market is 10%.

b. The portfolio's required return is less than 11%.

c. If the risk-free rate remains unchanged but the market risk premium increases by 2%, Gretta's portfolio's required return will increase by more than 2%.

d. If the market risk premium remains unchanged but expected inflation increases by 2%, Gretta's portfolio's required return will increase by more than 2%.

e. If the stock market is efficient, Gretta's portfolio's expected return should equal the expected return on the market, which is 11%.

ANSWER:	c
RATIONALE:	c is correct. The portfolio's beta is 1.08. Therefore, if the market risk premium increases by 2.0% the portfolio's required return will increase by 2.16%.
POINTS:	1
DIFFICULTY:	Difficulty: Challenging
LEARNING OBJECTIVES:	INTE.GENE.16.8 - LO: 2-7
NATIONAL STANDARDS:	United States - BUSPROG: Analytic
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	Port. risk & ret. relationships
KEYWORDS:	Bloom's: Analysis
OTHER:	TYPE: Multiple Choice: Conceptual

115. Assume that the market is in equilibrium and that Portfolio AB has 50% invested in Stock A and 50% invested in Stock B. Stock A has an expected return of 10% and a standard deviation of 20%. Stock B has an expected return of 13% and a standard deviation of 30%. The risk-free rate is 5% and the market risk premium, $r_M - r_{RF}$, is 6%. The returns of Stock A and Stock B are independent of one another, i.e., the correlation coefficient between them is zero. Which of the following statements is CORRECT?

    a. Since the two stocks have zero correlation, Portfolio AB is riskless.

    b. Stock B's beta is 1.0000.

    c. Portfolio AB's required return is 11%.

    d. Portfolio AB's standard deviation is 25%.

    e. Stock A's beta is 0.8333.

ANSWER:	e
RATIONALE:	e is correct. Stock A's required return is 10% = 5% + b(6%), so b = 5%/6% = 0.83333.
POINTS:	1
DIFFICULTY:	Difficulty: Challenging
LEARNING OBJECTIVES:	INTE.GENE.16.8 - LO: 2-7
NATIONAL STANDARDS:	United States - BUSPROG: Analytic
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	Port. risk & ret. relationships
KEYWORDS:	Bloom's: Analysis
OTHER:	TYPE: Multiple Choice: Conceptual

116. Portfolio AB was created by investing in a combination of Stocks A and B. Stock A has a beta of 1.2 and a standard deviation of 25%. Stock B has a beta of 1.4 and a standard deviation of 20%. Portfolio AB has a beta of 1.25 and a standard deviation of 18%. Which of the following statements is CORRECT?

    a. Stock A has more market risk than Stock B but less stand-alone risk.

    b. Portfolio AB has more money invested in Stock A than in Stock B.

    c. Portfolio AB has the same amount of money invested in each of the two stocks.

    d. Portfolio AB has more money invested in Stock B than in Stock A.

    e. Stock A has more market risk than Portfolio AB.

ANSWER:	b
RATIONALE:	b is correct. Beta P = %A(1.2) + %B(1.4) = 1.25. If 50% is in each stock, then we would have Beta P = 0.5(1.2) + 0.5(1.4) = 1.3. But beta P < 1.3, so more money must be invested in the low beta stock, A.
POINTS:	1
DIFFICULTY:	Difficulty: Challenging
LEARNING OBJECTIVES:	INTE.GENE.16.8 - LO: 2-7
NATIONAL STANDARDS:	United States - BUSPROG: Analytic
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	Port. risk & ret. relationships
KEYWORDS:	Bloom's: Analysis
OTHER:	TYPE: Multiple Choice: Conceptual

117. Which of the following statements is CORRECT?

a. If investors become more risk averse but r_{RF} does not change, then the required rate of return on high-beta stocks will rise and the required return on low-beta stocks will decline, but the required return on an average-risk stock will not change.

b. An investor who holds just one stock will generally be exposed to more risk than an investor who holds a portfolio of stocks, assuming the stocks are all equally risky. Since the holder of the 1-stock portfolio is exposed to more risk, he or she can expect to earn a higher rate of return to compensate for the greater risk.

c. There is no reason to think that the slope of the yield curve would have any effect on the slope of the SML.

d. Assume that the required rate of return on the market, r_M, is given and fixed at 10%. If the yield curve were upward sloping, then the Security Market Line (SML) would have a steeper slope if 1-year Treasury securities were used as the risk-free rate than if 30-year Treasury bonds were used for r_{RF}.

e. If Mutual Fund A held equal amounts of 100 stocks, each of which had a beta of 1.0, and Mutual Fund B held equal amounts of 10 stocks with betas of 1.0, then the two mutual funds would both have betas of 1.0. Thus, they would be equally risky from an investor's standpoint, assuming the investor's only asset is one or the other of the mutual funds.

ANSWER:	d
POINTS:	1
DIFFICULTY:	Difficulty: Challenging
LEARNING OBJECTIVES:	INTE.GENE.16.8 - LO: 2-7
NATIONAL STANDARDS:	United States - BUSPROG: Analytic
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	SML
KEYWORDS:	Bloom's: Analysis
OTHER:	TYPE: Multiple Choice: Conceptual

118. Freedman Flowers' stock has a 50% chance of producing a 25% return, a 30% chance of producing a 10% return, and a 20% chance of producing a −28% return. What is the firm's expected rate of return?

a. 9.41%

b. 9.65%

c. 9.90%

d. 10.15%

e. 10.40%

ANSWER: c

RATIONALE:

Conditions	Prob.	Return	Prob × Return	
Good	0.50	25.0%	12.50%	
Average	0.30	10.0%	3.00%	
Poor	0.20	−28.0%	−5.60%	
	1.00		9.90%	= Expected return

POINTS:	1
DIFFICULTY:	Difficulty: Easy
LEARNING OBJECTIVES:	INTE.GENE.16.5 - LO: 2-2
NATIONAL STANDARDS:	United States - BUSPROG: Analytic
STATE STANDARDS:	United States - AK - DISC: Risk and return

CHAPTER 2—RISK AND RETURN: PART I

119. Bloome Co.'s stock has a 25% chance of producing a 30% return, a 50% chance of producing a 12% return, and a 25% chance of producing a −18% return. What is the firm's expected rate of return?

    a. 7.72%

    b. 8.12%

    c. 8.55%

    d. 9.00%

    e. 9.50%

ANSWER: d

RATIONALE:

Conditions	Prob.	Return	Prob. × Return	
Good	0.25	30.0%	7.50%	
Average	0.50	12.0%	6.00%	
Poor	0.25	−18.0%	−4.50%	
	1.00		9.00%	= Expected return

120. Donald Gilmore has $100,000 invested in a 2-stock portfolio. $35,000 is invested in Stock X and the remainder is invested in Stock Y. X's beta is 1.50 and Y's beta is 0.70. What is the portfolio's beta?

    a. 0.65

    b. 0.72

    c. 0.80

    d. 0.89

    e. 0.98

ANSWER: e

RATIONALE:

Company	Investment	Weight	Beta	Weight × beta	
X	$ 35,000	0.35	1.50	0.53	
Y	$ 65,000	0.65	0.70	0.46	
	$100,000	1.00		0.98	= Portfolio beta

CHAPTER 2—RISK AND RETURN: PART I

121. Shirley Paul's 2-stock portfolio has a total value of $100,000. $37,500 is invested in Stock A with a beta of 0.75 and the remainder is invested in Stock B with a beta of 1.42. What is her portfolio's beta?

　　a. 1.17

　　b. 1.23

　　c. 1.29

　　d. 1.35

　　e. 1.42

ANSWER: a

RATIONALE:

Company	Investment	Port. weight	Beta	Weight × beta
Stock A	$ 37,500	0.375	0.75	0.28
Stock B	$ 62,500	0.625	1.42	0.89
	$100,000	1.00		1.17 = Portfolio beta

POINTS: 1

DIFFICULTY: Difficulty: Easy

LEARNING OBJECTIVES: INTE.GENE.16.6 - LO: 2-6

NATIONAL STANDARDS: United States - BUSPROG: Analytic

STATE STANDARDS: United States - AK - DISC: Risk and return

LOCAL STANDARDS: United States - OH - Default City - TBA

TOPICS: Portfolio beta

KEYWORDS: Bloom's: Application

OTHER: TYPE: Multiple Choice: Problem

122. Ivan Knobel holds a well-diversified portfolio that has an expected return of 11.0% and a beta of 1.20. He is in the process of buying 1,000 shares of Syngine Corp at $10 a share and adding it to his portfolio. Syngine has an expected return of 13.0% and a beta of 1.50. The total value of Ivan's current portfolio is $90,000. What will the expected return and beta on the portfolio be after the purchase of the Syngine stock?

　　a. 10.64%; 1.17

　　b. 11.20%; 1.23

　　c. 11.76%; 1.29

　　d. 12.35%; 1.36

　　e. 12.97%; 1.42

ANSWER: b

RATIONALE:

Old portfolio return	11.0%
Old portfolio beta	1.20
New stock return	13.0%
New stock beta	1.50
% of portfolio in new stock = $ in New/($ in Old + $ in New) =	

CHAPTER 2—RISK AND RETURN: PART I

$10,000/$100,000 =	10%
New expected portfolio return = r_p = 0.1 × 13% + 0.9 × 11% =	11.20%
New expected portfolio beta = b_p = 0.1 × 1.50 + 0.9 × 1.20 =	1.23

POINTS: 1
DIFFICULTY: Difficulty: Easy
LEARNING OBJECTIVES: INTE.GENE.16.8 - LO: 2-7
NATIONAL STANDARDS: United States - BUSPROG: Analytic
STATE STANDARDS: United States - AK - DISC: Risk and return
LOCAL STANDARDS: United States - OH - Default City - TBA
TOPICS: Portfolio beta
KEYWORDS: Bloom's: Application
OTHER: TYPE: Multiple Choice: Problem

123. Calculate the required rate of return for Everest Expeditions Inc., assuming that (1) investors expect a 4.0% rate of inflation in the future, (2) the real risk-free rate is 3.0%, (3) the market risk premium is 5.0%, (4) the firm has a beta of 1.00, and (5) its realized rate of return has averaged 15.0% over the last 5 years.
    a. 10.29%
    b. 10.83%
    c. 11.40%
    d. 12.00%
    e. 12.60%

ANSWER: d
RATIONALE:

Real rate (r*):	3.00%
IP:	4.00%
RP_M:	5.00%
Beta:	1.00
Required return = r_{RF} + b(RP_M) = r* + IP + b(RP_M) =	12.00%

POINTS: 1
DIFFICULTY: Difficulty: Easy
LEARNING OBJECTIVES: INTE.GENE.16.8 - LO: 2-7
NATIONAL STANDARDS: United States - BUSPROG: Analytic
STATE STANDARDS: United States - AK - DISC: Risk and return
LOCAL STANDARDS: United States - OH - Default City - TBA
TOPICS: CAPM: required rate of return
KEYWORDS: Bloom's: Application
OTHER: TYPE: Multiple Choice: Problem

124. Zacher Co.'s stock has a beta of 1.40, the risk-free rate is 4.25%, and the market risk premium is 5.50%. What is the firm's required rate of return?
    a. 11.36%
    b. 11.65%
    c. 11.95%
    d. 12.25%

e. 12.55%

ANSWER:	c	
RATIONALE:	Beta	1.40
	Risk-free rate	4.25%
	Market risk premium	5.50%
	Required return	11.95%

POINTS:	1
DIFFICULTY:	Difficulty: Easy
LEARNING OBJECTIVES:	INTE.GENE.16.8 - LO: 2-7
NATIONAL STANDARDS:	United States - BUSPROG: Analytic
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	CAPM: required rate of return
KEYWORDS:	Bloom's: Application
OTHER:	TYPE: Multiple Choice: Problem

125. Nystrand Corporation's stock has an expected return of 12.25%, a beta of 1.25, and is in equilibrium. If the risk-free rate is 5.00%, what is the market risk premium?

a. 5.80%

b. 5.95%

c. 6.09%

d. 6.25%

e. 6.40%

ANSWER:	a
RATIONALE:	Use the SML to determine the market risk premium with the given data.

$$r_S = r_{RF} + b_{Stock} \times RP_M$$
$$12.25\% = 5.00\% + 1.25 \times RP_M$$
$$7.25\% = RP_M \times 1.25$$
$$5.80\% = RP_M$$

POINTS:	1
DIFFICULTY:	Difficulty: Easy
LEARNING OBJECTIVES:	INTE.GENE.16.8 - LO: 2-7
NATIONAL STANDARDS:	United States - BUSPROG: Analytic
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	Market risk premium
KEYWORDS:	Bloom's: Application
OTHER:	TYPE: Multiple Choice: Problem

126. Martin Ortner holds a $200,000 portfolio consisting of the following stocks:

Stock	Investment	Beta
A	$50,000	0.95
B	50,000	0.80
C	50,000	1.00

D	50,000	1.20
Total	$200,000	

What is the portfolio's beta?

    a. 0.938

    b. 0.988

    c. 1.037

    d. 1.089

    e. 1.143

ANSWER: b

RATIONALE:

Stock	Investment	Percentage	Beta	Product	
A	$ 50,000	25.00%	0.95	0.238	
B	$ 50,000	25.00%	0.80	0.200	
C	$ 50,000	25.00%	1.00	0.250	
D	$ 50,000	25.00%	1.20	0.300	
Total	$200,000	100.00%		0.988	= Portfolio beta

POINTS: 1

DIFFICULTY: Difficulty: Moderate

LEARNING OBJECTIVES: INTE.GENE.16.6 - LO: 2-6

NATIONAL STANDARDS: United States - BUSPROG: Analytic

STATE STANDARDS: United States - AK - DISC: Risk and return

LOCAL STANDARDS: United States - OH - Default City - TBA

TOPICS: Portfolio beta

KEYWORDS: Bloom's: Analysis

OTHER: TYPE: Multiple Choice: Problem

127. Sherrie Hymes holds a $200,000 portfolio consisting of the following stocks. The portfolio's beta is 0.875.

Stock	Investment	Beta
A	$50,000	0.50
B	50,000	0.80
C	50,000	1.00
D	50,000	1.20
Total	$200,000	

If Sherrie replaces Stock A with another stock, E, which has a beta of 1.50, what will the portfolio's new beta be?

    a. 1.07

    b. 1.13

    c. 1.18

    d. 1.24

    e. 1.30

ANSWER: b

RATIONALE:

Stock	Investment	Original Portfolio Percentage	Beta	Product
A	$ 50,000	25.00%	0.50	0.125
B	$ 50,000	25.00%	0.80	0.200
C	$ 50,000	25.00%	1.00	0.250

D	$ 50,000	25.00%	1.20	0.300
E				
Total	$200,000	100.00%		0.875

Stock	Percentage	Beta	New Portfolio Product
A			
B	25.00%	0.80	0.200
C	25.00%	1.00	0.250
D	25.00%	1.20	0.300
E	25.00%	1.50	0.375
Total	New Portfolio beta =		1.125

Alternative solution: $(b_E - b_A)(\%A) + b_{Old} = 1.125$

POINTS:	1
DIFFICULTY:	Difficulty: Moderate
LEARNING OBJECTIVES:	INTE.GENE.16.8 - LO: 2-7
NATIONAL STANDARDS:	United States - BUSPROG: Analytic
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	Portfolio beta
KEYWORDS:	Bloom's: Analysis
OTHER:	TYPE: Multiple Choice: Problem

128. Megan Ross holds the following portfolio:

Stock	Investment	Beta
A	$150,000	1.40
B	50,000	0.80
C	100,000	1.00
D	75,000	1.20
Total	$375,000	

What is the portfolio's beta?
 a. 1.06
 b. 1.17
 c. 1.29
 d. 1.42
 e. 1.56

ANSWER:	b

RATIONALE:	Stock	Investment	Percentage	Beta	Product	
	A	$150,000	40.00%	1.40	0.56	
	B	$ 50,000	13.33%	0.80	0.11	
	C	$100,000	26.67%	1.00	0.27	
	D	$ 75,000	20.00%	1.20	0.24	
	Total	$375,000	100.00%		1.17	= Portfolio beta

POINTS:	1
DIFFICULTY:	Difficulty: Moderate

CHAPTER 2—RISK AND RETURN: PART I

129. Paul McLaren holds the following portfolio:

Stock	Investment	Beta
A	$150,000	1.40
B	50,000	0.80
C	100,000	1.00
D	75,000	1.20
Total	$375,000	

Paul plans to sell Stock A and replace it with Stock E, which has a beta of 0.75. By how much will the portfolio beta change?

a. −0.190

b. −0.211

c. −0.234

d. −0.260

e. −0.286

ANSWER: d

RATIONALE:

			Original		New	
Stock	Investment	Percentage	Beta	Product	Beta	Product
A	$150,000	40.00%	1.400	0.560	0.750	0.300
B	$ 50,000	13.33%	0.800	0.107	0.800	0.107
C	$100,000	26.67%	1.000	0.267	1.000	0.267
D	$ 75,000	20.00%	1.200	0.240	1.200	0.240
Total	$375,000	100.00%		Old b = 1.173	New b =	0.913

Change in beta = New − Old = −0.260 Alternative solution: $(b_E - b_A) \times \%A = -0.260$

130. Jenna holds a diversified $100,000 portfolio consisting of 20 stocks with $5,000 invested in each. The portfolio's beta is 1.12. Jenna plans to sell a stock with b = 0.90 and use the proceeds to buy a new stock with b = 1.80. What will the portfolio's new beta be?

a. 1.286

b. 1.255

c. 1.224

d. 1.194

e. 1.165

ANSWER:	e
RATIONALE:	

% in each stock:	5%
Old stock's beta:	0.90
New stock's beta:	1.80
Old port. beta:	1.12

New beta = $(b_{New} - b_{Old}) \times \%A + b_{Old} = 1.165$

POINTS:	1
DIFFICULTY:	Difficulty: Moderate
LEARNING OBJECTIVES:	INTE.GENE.16.8 - LO: 2-7
NATIONAL STANDARDS:	United States - BUSPROG: Analytic
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	Portfolio beta
KEYWORDS:	Bloom's: Analysis
OTHER:	TYPE: Multiple Choice: Problem

131. Porter Plumbing's stock had a required return of 11.75% last year, when the risk-free rate was 5.50% and the market risk premium was 4.75%. Then an increase in investor risk aversion caused the market risk premium to rise by 2%. The risk-free rate and the firm's beta remain unchanged. What is the company's new required rate of return? (Hint: First calculate the beta, then find the required return.)

a. 14.38%

b. 14.74%

c. 15.11%

d. 15.49%

e. 15.87%

ANSWER:	a
RATIONALE:	

Risk-free rate	5.50%
Old market risk premium	4.75%
Old required return	11.75%
b = (Old return − r_{RF})/Old RP_M	1.32
New market risk premium	6.75%
New required return = $r_{RF} + b(RP_M)$ =	14.38%

POINTS:	1
DIFFICULTY:	Difficulty: Moderate
LEARNING OBJECTIVES:	INTE.GENE.16.8 - LO: 2-7
NATIONAL STANDARDS:	United States - BUSPROG: Analytic
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	CAPM: required rate of return

CHAPTER 2—RISK AND RETURN: PART I

132. Company A has a beta of 0.70, while Company B's beta is 1.20. The required return on the stock market is 11.00%, and the risk-free rate is 4.25%. What is the difference between A's and B's required rates of return? (Hint: First find the market risk premium, then find the required returns on the stocks.)

    a. 2.75%

    b. 2.89%

    c. 3.05%

    d. 3.21%

    e. 3.38%

ANSWER:	e	
RATIONALE:	Beta: A	0.70
	Beta: B	1.20
	Market return	11.00%
	Risk-free rate	4.25%
	Market risk premium	6.75%
	Required return A = $r_{RF} + b_A(RP_M)$ =	8.98%
	Required return B = $r_{RF} + b_B(RP_M)$ =	12.35%
	Difference	3.38%

133. Stock A's stock has a beta of 1.30, and its required return is 12.00%. Stock B's beta is 0.80. If the risk-free rate is 4.75%, what is the required rate of return on B's stock? (Hint: First find the market risk premium.)

    a. 8.76%

    b. 8.98%

    c. 9.21%

    d. 9.44%

    e. 9.68%

ANSWER:	c	
RATIONALE:	Beta: A	1.30
	Beta: B	0.80
	A's required return	12.00%
	Risk-free rate	4.75%
	RP_M = (A's return − r_{RF})/$beta_A$ =	5.58%
	B's required return = $r_{RF} + b(RP_M)$ =	9.21%

CHAPTER 2—RISK AND RETURN: PART I

134. Barker Corp. has a beta of 1.10, the real risk-free rate is 2.00%, investors expect a 3.00% future inflation rate, and the market risk premium is 4.70%. What is Barker's required rate of return?

    a. 9.43%

    b. 9.67%

    c. 9.92%

    d. 10.17%

    e. 10.42%

ANSWER:	d

RATIONALE:		
	Real risk-free rate, r^*	2.00%
	Expected inflation, IP	3.00%
	Market risk premium, RP_M	4.70%
	Beta, b	1.10
	Risk-free rate = r^* + IP =	5.00%
	Required return = r_{RF} + b(RP_M) =	10.17%

135. Brodkey Shoes has a beta of 1.30, the T-bill rate is 3.00%, and the T-bond rate is 6.5%. The annual return on the stock market during the past 3 years was 15.00%, but investors expect the annual future stock market return to be 13.00%. Based on the SML, what is the firm's required return?

    a. 13.51%

    b. 13.86%

    c. 14.21%

    d. 14.58%

    e. 14.95%

ANSWER:	e
RATIONALE:	Use SML to determine the market risk premium. Note that r_{RF} is based on T-bonds, not

short-term T-bills.

$$r_s = r_{RF} + RP_M$$
$$13.00\% = 6.50\% + RP_M$$
$$6.50\% = RP_M$$

Use the SML to determine the firm's required return using the RP_M calculated above.

$$r_s = r_{RF} + RP_M \times b$$
$$= 6.50\% + 6.50\% \times 1.30$$
$$= 14.95\%$$

POINTS:	1
DIFFICULTY:	Difficulty: Moderate
LEARNING OBJECTIVES:	INTE.GENE.16.8 - LO: 2-7
NATIONAL STANDARDS:	United States - BUSPROG: Analytic
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	CAPM: required rate of return
KEYWORDS:	Bloom's: Analysis
OTHER:	TYPE: Multiple Choice: Problem

136. Gardner Electric has a beta of 0.88 and an expected dividend growth rate of 4.00% per year. The T-bill rate is 4.00%, and the T-bond rate is 5.25%. The annual return on the stock market during the past 4 years was 10.25%. Investors expect the average annual future return on the market to be 12.50%. Using the SML, what is the firm's required rate of return?

    a. 11.34%

    b. 11.63%

    c. 11.92%

    d. 12.22%

    e. 12.52%

ANSWER:	b
RATIONALE:	Use SML to determine the market risk premium. Note that r_{RF} is based on T-bonds, not short-term T-bills. Also, note that the dividend growth rate is not needed.

$$r_s = r_{RF} + RP_M$$
$$12.50\% = 5.25\% + RP_M$$
$$RP_M = 7.25\%$$

Use SML to determine the firm's required return using RP_M calculated above.

$$r_s = r_{RF} + RP_M \times b$$
$$= 5.25\% + 7.25\% \times 0.88$$
$$= 11.63\%$$

POINTS:	1
DIFFICULTY:	Difficulty: Moderate
LEARNING OBJECTIVES:	INTE.GENE.16.8 - LO: 2-7
NATIONAL STANDARDS:	United States - BUSPROG: Analytic
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	CAPM: required rate of return
KEYWORDS:	Bloom's: Analysis

CHAPTER 2—RISK AND RETURN: PART I

137. Consider the following information and then calculate the required rate of return for the Universal Investment Fund, which holds 4 stocks. The market's required rate of return is 13.25%, the risk-free rate is 7.00%, and the Fund's assets are as follows:

Stock	Investment	Beta
A	$ 200,000	1.50
B	$ 300,000	−0.50
C	$ 500,000	1.25
D	$1,000,000	0.75

a. 9.58%

b. 10.09%

c. 10.62%

d. 11.18%

e. 11.77%

ANSWER: e

RATIONALE:

r_M 13.25%

r_{RF} 7.00%

Find portfolio beta:

	Weight	Beta	Product	
$ 200,000	0.100	1.50	0.1500	
$ 300,000	0.150	−0.50	−0.0750	
$ 500,000	0.250	1.25	0.3125	
$1,000,000	0.500	0.75	0.3750	
$2,000,000	1.000		0.7625	= portfolio beta

Find $RP_M = r_M - r_{RF} = 6.25\%$ $r_s = r_{RF} + b(RP_M) = 11.77\%$

POINTS: 1

DIFFICULTY: Difficulty: Moderate

LEARNING OBJECTIVES: INTE.GENE.16.8 - LO: 2-7

NATIONAL STANDARDS: United States - BUSPROG: Analytic

STATE STANDARDS: United States - AK - DISC: Risk and return

LOCAL STANDARDS: United States - OH - Default City - TBA

TOPICS: CAPM: required rate of return

KEYWORDS: Bloom's: Analysis

OTHER: TYPE: Multiple Choice: Problem

138. Data for Atwill Corporation is shown below. Now Atwill acquires some risky assets that cause its beta to increase by 30%. In addition, expected inflation increases by 2.00%. What is the stock's new required rate of return?

Initial beta	1.00
Initial required return (r_s)	10.20%
Market risk premium, RP_M	6.00%
Percentage increase in beta	30.00%
Increase in inflation premium, IP	2.00%

a. 14.00%

b. 14.70%

c. 15.44%

d. 16.21%

e. 17.02%

ANSWER:	a	
RATIONALE:	Old beta	1.00
	Old $r_s = r_{RF} + b(RP_M)$	10.20%
	RP_M	6.00%
	Percentage increase in beta	30.00%
	Increase in IP	2.00%
	Find new beta after increase =	1.30
	Find old r_{RF}: Old $r_s = r_{RF} + b(RP_M)$: 10.2% = r_{RF} + 1.0(6.0%): r_{RF} =	4.20%
	10.2% − 6.0% =	4.20%
	Find new r_{RF}: Old r_{RF} + increase in IP =	6.20%
	Find new r_s = new r_{RF} + new beta(RP_M)	14.00%

POINTS:	1
DIFFICULTY:	Difficulty: Moderate
LEARNING OBJECTIVES:	INTE.GENE.16.8 - LO: 2-7
NATIONAL STANDARDS:	United States - BUSPROG: Analytic
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	CAPM: required rate of return
KEYWORDS:	Bloom's: Analysis
OTHER:	TYPE: Multiple Choice: Problem

139. Fiske Roofing Supplies' stock has a beta of 1.23, its required return is 11.75%, and the risk-free rate is 4.30%. What is the required rate of return on the market? (Hint: First find the market risk premium.)

a. 10.36%

b. 10.62%

c. 10.88%

d. 11.15%

e. 11.43%

ANSWER:	a	
RATIONALE:	Beta	1.23
	Risk-free rate	4.30%
	Required return on stock	11.75%
	$RP_M = (r_{Stock} - r_{RF})/beta$	6.06%
	Required return on market = $r_{RF} + RP_M$ =	10.36%

POINTS:	1
DIFFICULTY:	Difficulty: Moderate
LEARNING OBJECTIVES:	INTE.GENE.16.8 - LO: 2-7
NATIONAL STANDARDS:	United States - BUSPROG: Analytic

CHAPTER 2—RISK AND RETURN: PART I

140. Suppose Stan holds a portfolio consisting of a $10,000 investment in each of 8 different common stocks. The portfolio's beta is 1.25. Now suppose Stan decided to sell one of his stocks that has a beta of 1.00 and to use the proceeds to buy a replacement stock with a beta of 1.35. What would the portfolio's new beta be?

   a. 1.17

   b. 1.23

   c. 1.29

   d. 1.36

   e. 1.43

ANSWER: c

RATIONALE:		
	Number of stocks	8
	Percent in each stock = 1/number of stocks =	12.500%
	Portfolio beta	1.25
	Stock that's sold	1.00
	Stock that's bought	1.35
	Change in portfolio's beta = $0.125 \times (b_2 - b_1)$ =	0.0438
	New portfolio beta	1.29

141. Returns for the Alcoff Company over the last 3 years are shown below. What's the standard deviation of the firm's returns? (Hint: This is a sample, not a complete population, so the sample standard deviation formula should be used.)

Year	Return
2010	21.00%
2009	−12.50%
2008	25.00%

   a. 20.08%

   b. 20.59%

   c. 21.11%

   d. 21.64%

   e. 22.18%

ANSWER: b

RATIONALE: This is a relatively technical problem. It should be used only if calculations are emphasized in

class or on a take-home exam where students have time to look up formulas or to use Excel or their calculator functions.

Year	Return	Deviation from Mean	Squared Deviation	
2010	21.00%	9.83%	0.97%	
2009	−12.50%	−23.67%	5.60%	
2008	25.00%	13.83%	1.91%	
Expected return	11.17%		8.48%	Sum sqd deviations
			4.24%	Sum/(N − 1)

SQRT = α = 20.59% 20.59% with Excel

POINTS:	1
DIFFICULTY:	Difficulty: Challenging
LEARNING OBJECTIVES:	INTE.GENE.16.11 - LO: 2-4
NATIONAL STANDARDS:	United States - BUSPROG: Analytic
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	Std. dev., historical returns
KEYWORDS:	Bloom's: Analysis
OTHER:	TYPE: Multiple Choice: Problem

142. Stuart Company's manager believes that economic conditions during the next year will be strong, normal, or weak, and she thinks that the firm's returns will have the probability distribution shown below. What's the standard deviation of the estimated returns? (Hint: Use the formula for the standard deviation of a population, not a sample.)

Economic Conditions	Prob.	Return
Strong	30%	32.0%
Normal	40%	10.0%
Weak	30%	−16.0%

a. 17.69%

b. 18.62%

c. 19.55%

d. 20.52%

e. 21.55%

ANSWER: b

RATIONALE: This is a relatively technical problem. It should be used only if calculations are emphasized in class, or on a take-home exam where students have time to look up formulas or to use Excel or their calculator functions.

Economic Conditions	Prob.	Return This state	Dev. from Mean	Squared Dev.	Sqd. dev. × Prob
Strong	30%	32.0%	23.20%	10.24%	3.07%
Normal	40%	10.0%	1.20%	0.01%	0.01%
Weak	30%	−16.0%	−24.80%	6.15%	1.85%
	100%	8.8%		Variance	4.92%

α = Sqrt of variance 18.62% 18.62% by Excel

CHAPTER 2—RISK AND RETURN: PART I

POINTS: 1

DIFFICULTY: Difficulty: Challenging

LEARNING OBJECTIVES: INTE.GENE.16.5 - LO: 2-2

NATIONAL STANDARDS: United States - BUSPROG: Analytic

STATE STANDARDS: United States - AK - DISC: Risk and return

LOCAL STANDARDS: United States - OH - Default City - TBA

TOPICS: Std. dev., prob. data

KEYWORDS: Bloom's: Analysis

OTHER: TYPE: Multiple Choice: Problem

143. Assume that your cousin holds just one stock, Eastman Chemical Bonding (ECB), which he thinks has very little risk. You agree that the stock is relatively safe, but you want to demonstrate that his risk would be even lower if he were more diversified. You obtain the following returns data for Wilder's Creations and Buildings (WCB). Both companies have had less variability than most other stocks over the past 5 years. Measured by the standard deviation of returns, by how much would your cousin's risk have been reduced if he had held a portfolio consisting of 60% in ECB and the remainder in WCB? (Hint: Use the sample standard deviation formula.)

Year	ECB	WCB
2011	40.00%	40.00%
2012	−10.00%	15.00%
2013	35.00%	−5.00%
2014	−5.00%	−10.00%
2015	15.00%	35.00%

Average return =	15.00%	15.00%
Standard deviation =	22.64%	22.64%

     a. 3.29%

     b. 3.46%

     c. 3.65%

     d. 3.84%

     e. 4.03%

ANSWER: d

RATIONALE: This is a relatively technical problem. It should be used only if calculations are emphasized in class or on a take-home exam where students have time to look up formulas or to use Excel or their calculator functions.

% ECB: 60%

Year	ECB	WCB	Portfolio ECB/WCB
2011	40.00%	40.00%	40.00%
2012	−10.00%	15.00%	0.00%
2013	35.00%	−5.00%	19.00%
2014	−5.00%	−10.00%	−7.00%
2015	15.00%	35.00%	23.00%

Average return =	15.00%	15.00%	15.00%
Standard deviation =	22.64%	22.64%	18.80%

Reduction in the SD vs. ECB's SD:	3.84%

CHAPTER 2—RISK AND RETURN: PART I

144. The $10.00 million mutual fund Henry manages has a beta of 1.05 and a 9.50% required return. The risk-free rate is 4.20%. Henry now receives another $5.00 million, which he invests in stocks with an average beta of 0.65. What is the required rate of return on the new portfolio? (Hint: You must first find the market risk premium, then find the new portfolio beta.)

   a. 8.83%

   b. 9.05%

   c. 9.27%

   d. 9.51%

   e. 9.74%

ANSWER: a

RATIONALE:

		% of New Port.
Old funds (millions)	$10.00	66.67%
New funds (millions)	$5.00	33.33%
Total portfolio	$15.00	100.00%
Req'd return, old stocks	9.50%	
Risk-free rate	4.20%	
Market risk premium:		

$$r_P = r_{RF} + b(RP_M) \gg 9.5\% = 4.2\% + 1.05(RP_M)$$ 5.30%

$$RP_M = (9.5\% - 4.2\%)/1.05 = 5.05\%$$

New portfolio:	
Old portfolio's beta	1.05
New stocks' beta	0.65
New portfolio beta	0.9167
New portfolio required return = r_{RF} + New beta(RP_M) =	8.8270%

145. Hazel Morrison, a mutual fund manager, has a $40 million portfolio with a beta of 1.00. The risk-free rate is 4.25%, and the market risk premium is 6.00%. Hazel expects to receive an additional $60 million, which she plans to invest in additional stocks. After investing the additional funds, she wants the fund's required and expected return to be 13.00%. What must the average beta of the new stocks be to achieve the target required rate of return?

    a. 1.68

    b. 1.76

    c. 1.85

    d. 1.94

    e. 2.04

ANSWER:	b

RATIONALE:

Old funds (millions)	$ 40.00	40.00%
New funds (millions)	$ 60.00	60.00%
Total new funds	$100.00	100.00%
Beta on existing portfolio	1.00	
Risk-free rate	4.25%	
Market risk premium	6.00%	

Desired required return   13.00% $13\% = r_{RF} + b(RP_M)$; $b = (13\% - r_{RF})/RP_M$

Required new b_p 1.4583 beta $= (\text{Return} - \text{Risk-free})/RP_M$

Required beta, new stocks   1.76 Req. b $= (\text{Old\$/Total\$}) \times$ Old b $+ (\text{New\$/Total\$}) \times$ New b

Beta on new stocks $= (\text{Req. b} - (\text{Old\$/Total\$}) \times \text{Old b})/(\text{New\$/Total\$})$

146. Joel Foster is the portfolio manager of the SF Fund, a $3 million hedge fund that contains the following stocks. The required rate of return on the market is 11.00% and the risk-free rate is 5.00%. What rate of return should investors expect (and require) on this fund?

Stock	Amount	Beta
A	$1,075,000	1.20
B	675,000	0.50
C	750,000	1.40
D	500,000	0.75

CHAPTER 2—RISK AND RETURN: PART I

<u>$3,000,000</u>

a. 10.56%

b. 10.83%

c. 11.11%

d. 11.38%

e. 11.67%

ANSWER: c

RATIONALE:

Company	Amount	Weight	Beta	Wt × beta
Stock A	$1,075,000	0.358	1.20	0.43
Stock B	675,000	0.225	0.50	0.11
Stock C	750,000	0.250	1.40	0.35
Stock D	<u>500,000</u>	<u>0.167</u>	0.75	<u>0.13</u>
	<u>$3,000,000</u>	<u>1.000</u>	$b_{Portfolio}$ =	<u>1.02</u> Intermediate step

Required market return	11.00%
Risk free rate	<u>5.00%</u>
Market risk premium = $r_{Market} - r_{RF}$ =	6.00%
Portfolio's required return = $r_{RF} + b(RP_M)$ =	11.11%

POINTS: 1

DIFFICULTY: Difficulty: Challenging

LEARNING OBJECTIVES: INTE.GENE.16.8 - LO: 2-7

NATIONAL STANDARDS: United States - BUSPROG: Analytic

STATE STANDARDS: United States - AK - DISC: Risk and return

LOCAL STANDARDS: United States - OH - Default City - TBA

TOPICS: Port. beta and req. ret.

KEYWORDS: Bloom's: Analysis

OTHER: TYPE: Multiple Choice: Problem

147. DHF Company has a beta of 1.5 and is currently in equilibrium. The required rate of return on the stock is 12.00% versus a required return on an average stock of 10.00%. Now the required return on an average stock increases by 30.0% (not percentage points). Neither betas nor the risk-free rate change. What would DHF's new required return be?

a. 14.89%

b. 15.68%

c. 16.50%

d. 17.33%

e. 18.19%

ANSWER: c

RATIONALE: This problem requires some algebra:

CCC's beta	1.50
CCC's initial required return	12.00%

CHAPTER 2—RISK AND RETURN: PART I

Percentage increase in required market return	30.0%
Initial required return on the market	10.00%
New required return on the market	13.00%

Now for the algebra:

$r_{Stock} = r_{RF} + b(RP_M) = r_{RF} + 1.5(RP_M)$

$r_{Market} = r_{RF} + b(RP_M) = r_{RF} + 1.0(RP_M)$

Now insert known data and transpose:

$12\% = r_{RF} + 1.5(RP_M) >> 12\% - r_{RF} = 1.5(RP_M)$

$10\% = r_{RF} + (RP_M) >> 10\% - r_{RF} = 1.0(RP_M)$

Now subtract the second equation from the first. r_{RF} and one of the RP_Ms cancel, leaving: $2\% = 0.5(RP_M)$

Now solve for RP_M: $RP_M = 2\%/0.5$	4.00%
Now find the risk-free rate: r_{RF} = Initial $r_{Market} - RP_M = 10\% - 4\% =$	6.00%
New RP_M = New required return on the market $- r_{RF}$	7.00%
Now find the new return on CCC = $r_{RF} + b(\text{new } RP_M) =$	16.50%

POINTS:	1
DIFFICULTY:	Difficulty: Challenging
LEARNING OBJECTIVES:	INTE.GENE.16.8 - LO: 2-7
NATIONAL STANDARDS:	United States - BUSPROG: Analytic
STATE STANDARDS:	United States - AK - DISC: Risk and return
LOCAL STANDARDS:	United States - OH - Default City - TBA
TOPICS:	CAPM: required rate of return
KEYWORDS:	Bloom's: Analysis
OTHER:	TYPE: Multiple Choice: Problem