Level 1 Mock Exam - Part 1_2008

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1	*Global Investment Performance Standards* (GIPS) 2008 Modular Level I, Vol. 1, pp. 127-128 Study Session 1-4-a describe the key characteristics of the GIPS standards and the fundamentals of compliance A key characteristic of the Standards is that the Standards rely on the integrity of input data. The accuracy of input data is critical to the accuracy of the performance presentation.
2	*Guidance for Standards I-VII, Standards of Practice Handbook* 2008 Modular Level I, Vol. 1, p. 50 Study Session 1-2-a demonstrate a thorough knowledge of the Code of Ethics and Standards of Professional Conduct by applying the Code and Standards to specific situations presenting multiple issues of questionable professional conduct A fiduciary who votes blindly with management on non-routine governance issues may breach their duty to clients by violating the standard that relates to loyalty, prudence, and care.
3	*Guidance for Standards I-VII, Standards of Practice Handbook* 2008 Modular Level I, Vol. 1, pp. 50-55, 94-95, 98, Example 3 Study Session 1-2-a demonstrate a thorough knowledge of the Code of Ethics and Standards of Professional Conduct by applying the Code and Standards to specific situations presenting multiple issues of questionable professional conduct B is correct because Scott's method of allocating oversubscribed IPOs discriminates against her uncle, who is a fee-paying client; she violates the Standard related to Fair Dealing. Family accounts that are fee-paying client accounts should be treated like any other firm account. They should neither receive special treatment nor be disadvantaged because of an existing family relationship.
4	*Guidance for Standards I-VII, Standards of Practice Handbook* 2008 Modular Level I, Vol. 1, pp. 76-79 Study Session 1-2-a demonstrate a thorough knowledge of the Code of Ethics and Standards of Professional Conduct by applying the Code and Standards to specific situations presenting multiple issues of questionable professional conduct A supervisor may delegate supervisory responsibilities, but such delegation does not relieve them of their supervisory responsibility; Li must immediately begin an investigation of the matter to ascertain the extent of the wrongdoing. Relying on assurances from the employee or simply reporting the misconduct up the chain of command are not enough.

5	*Guidance for Standards I-VII, Standards of Practice Handbook* 2008 Modular Level I, Vol. I, pp. 21-23, 29-31, 80-82 Study Session 1-2-b distinguish between conduct that conforms to the Code and Standards and conduct that violates the Code and the Standards Takeda may rely on and issue reports based on third-party research providers if he has no reason to question the soundness or reliability of their research and he appropriately references his sources. He also appropriately discloses his interest in the company.
6	*Guidance for Standards I-VII, Standards of Practice Handbook* 2008 Modular Level I, Vol. 1, pp. 48-51, 53-58, 80-82 Study Session 1-2-b distinguish between conduct that conforms to the Code and Standards and conduct that violates the Code and the Standards By communicating this information to his father prior to release of the report, Gunard failed to put the firm's clients' interests above his own. Nothing in the question indicates that he did not have a reasonable basis for his recommendation; he conducted a thorough fundamental analysis and his report was approved. The fact that Gunard's father had already disposed of the shares does not negate the fact that Gunard violated a duty to the firm's clients.
7	*Guidance for Standards I-VII, Standards of Practice Handbook* 2008 Modular Level I, Vol. 1, pp. 36-39 Study Sessions 1-1-c, 1-2-b explain the ethical responsibilities required by the Code and Standards, including the multiple subsections of each Standard; distinguish between conduct that conforms to the Code and Standards and conduct that violates the Code and the Standards A member in possession of material nonpublic information that could affect the value of an investment may not act or cause others to act on the information.
8	*Guidance for Standards I-VII, Standards of Practice Handbook* 2008 Modular Level I, Vol. 1, p. 101 Study Sessions 1-1-c, 1-2-b explain the ethical responsibilities required by the Code and Standards, including the multiple subsections of each Standard; distinguish between conduct that conforms to the Code and Standards and conduct that violates the Code and the Standards Conduct covered and prohibited under Standard VII (A) includes cheating on the CFA examination or any other examination.

9	*Guidance for Standards I-VII, Standards of Practice Handbook* 2008 Modular Level I, Vol. 1, p. 71 Study Sessions 1-1-c, 1-2-b explain the ethical responsibilities required by the Code and Standards, including the multiple subsections of each Standard; distinguish between conduct that conforms to the Code and Standards and conduct that violates the Code and the Standards Activities that would normally violate a member's duty to his employer (such as copying employer records) may be justified. Such action would be permitted only if the intent is clearly aimed at protecting clients or the integrity of the market and not for personal gain.
10	*Standards of Practice Handbook*, 9th edition (CFA Institute, 2005), pp. 83-85, 91 Standards I-VII 2008 Modular Level I, Vol. 1, pp. 69-71, 75 Study Session 1-2-a demonstrate a thorough knowledge of the Code of Ethics and Standards of Professional Conduct by applying the Code and Standards to specific situations presenting multiple issues of questionable professional conduct Members who plan to engage in independent practice for compensation should not render services until receiving written consent from their employer.
11	*Standards of Practice Handbook*, 9th edition (CFA Institute, 2005), pp. 75-76 2008 Modular Level I, Vol. 1, pp. 64-65 Study Session 1-2-a demonstrate a thorough knowledge of the Code of Ethics and Standards of Professional Conduct by applying the Code and Standards to specific situations presenting multiple issues of questionable professional conduct Members must not knowingly make statements of assurances or guarantees regarding an investment.
12	*Standards of Practice Handbook*, 9th edition (CFA Institute, 2005), p. 33 Standards I-VII 2008 Modular Level I, Vol. 1, p. 35 Study Session 1-2-a demonstrate a thorough knowledge of the Code of Ethics and Standards of Professional Conduct by applying the Code and Standards to specific situations presenting multiple issues of questionable professional conduct Members who are involved in a personal bankruptcy filing are not automatically assumed to be in violation of the standards because bankruptcy may not reflect poorly on the integrity or trustworthiness of the person involved.
13	*Standards of Practice Handbook*, 9th edition (CFA Institute, 2005), pp. 37-40 Standards I-VII 2008 Modular Level I, Vol. 1, pp. 36-39 Study Session 1-2-a demonstrate a thorough knowledge of the Code of Ethics and Standards of Professional Conduct by applying the Code and Standards to specific situations presenting multiple issues of questionable professional conduct Lewis must investigate the reliability of the information before making an investment recommendation based on the information.

14	*Standards of Practice Handbook*, 9th edition (CFA Institute, 2005), pp. 61-63 Standards I-VII 2008 Modular Level I, Vol. 1, pp. 53-55 Study Session 1-2-a demonstrate a thorough knowledge of the Code of Ethics and Standards of Professional Conduct by applying the Code and Standards to specific situations presenting multiple issues of questionable professional conduct Members must deal fairly and objectively with clients when taking investment actions for them. By treating the mutual funds more favorably than the individual portfolios, Owens violates the standard relating to fair dealing.
15	*Standards of Practice Handbook*, 9th edition (CFA Institute, 2005), pp. 69-71 Standards I-VII 2008 Modular Level I, Vol. 1, pp. 60-62 Study Session 1-2-a demonstrate a thorough knowledge of the Code of Ethics and Standards of Professional Conduct by applying the Code and Standards to specific situations presenting multiple issues of questionable professional conduct Members must consider the needs, circumstances and objectives of clients when taking investment action for their accounts. By treating all accounts as if they were the same, Rhasta failed to consider the uniqueness of each client's circumstances.
16	*Standards of Practice Handbook*, 9th edition (CFA Institute, 2005), pp. 79-80 Standards I-VII 2008 Modular Level I, Vol. 1, pp. 67-68 Study Session 1-2-a demonstrate a thorough knowledge of the Code of Ethics and Standards of Professional Conduct by applying the Code and Standards to specific situations presenting multiple issues of questionable professional conduct Members must keep client information confidential and must comply with applicable law. If applicable law requires disclosure of client information in certain circumstances, members and candidates must comply with the law. If applicable law requires members to maintain confidentiality, even if the information concerns illegal activities on the part of the client, members should not disclose such information. Lee's best course of action would be to consult with outside counsel to determine applicable law.
17	*Standards of Practice Handbook*, 9th edition (CFA Institute, 2005), pp. 83-85 Standards I-VII 2008 Modular Level I, Vol. 1, pp. 69-71 Study Session 1-2-a demonstrate a thorough knowledge of the Code of Ethics and Standards of Professional Conduct by applying the Code and Standards to specific situations presenting multiple issues of questionable professional conduct A member's duties within an independent contractor relationship are governed by the oral or written agreement between the member and the client. Members should take care to define clearly the scope of the responsibilities and the expectations of each client within the context of each relationship. Members have a duty to abide by the terms of the agreement.

18	*Standards of Practice Handbook*, 9th edition (CFA Institute, 2005), pp 83-85, 113-115 Standards I-VII 2008 Modular Level I, Vol. 1, pp. 69-71, 89-91 Study Session 1-2-a demonstrate a thorough knowledge of the Code of Ethics and Standards of Professional Conduct by applying the Code and Standards to specific situations presenting multiple issues of questionable professional conduct Members must make full and fair disclosure of all matters that could reasonably be expected to impair their independence and objectivity or interfere with respective duties. Draper should discuss his outside activities with his employer and come to mutual agreement regarding how to manage his personal commitments with his responsibilities to his employer.
19	"The Time Value of Money," Richard A. Defusco, Dennis W. McLeavey, Jerald E. Pinto, and David E. Runkel 2008 Modular Level I, Vol. 1, pp. 172-174 Study Session 2-5-b explain an interest rate as the sum of a real risk-free rate, expected inflation, and premiums that compensate investors for distinct types of risk The difference in yield on otherwise identical U.S Treasury and corporate bonds is attributed to default risk.
20	"The Time Value of Money," Richard A. Defusco, Dennis W. McLeavey, Jerald E. Pinto, and David E. Runkel 2008 Modular Level I, Vol. 1, pp. 190-208 Study Session 2-5-d, e calculate and interpret the future value (FV) and present value (PV) of a single sum of money, an ordinary annuity, an annuity due, a perpetuity (PV only), and a series of unequal cash flows; draw a time line, specify a time index, and solve time value of money applications (for example, mortgages and savings for college tuition or retirement) Kelly expects her consumption spending (currently $30,000 annually) to increase with the rate of inflation (3%) over the next 44 years until she retires. Her annual consumption spending at the time she retires will be $110,143.57 (PV = 30,000, %I = 3, N = 44, solve for FV). To support that level of spending for 25 years of retirement, assuming an 8% return on her retirement account, she must accumulate $1,175,756 by her retirement date (PMT = 110,143.57, N = 25, %I = 8, solve for PV).
21	"Discounted Cash Flow Applications," Richard A. Defusco, Dennis W. McLeavey, Jerald E. Pinto, and David E. Runkel 2008 Modular Level I, Vol. 1, pp. 214-216 Study Session 2-6-a calculate and interpret the net present value (NPV) and the internal rate of return (IRR) of an investment, contrast the NPV rule to the IRR rule, and identify problems associated with the IRR rule The NPV equals the present value (at time = 0) of the future cash flows discounted at the opportunity cost of capital (12%) minus the initial investment, or $10,558 ($CF_0$ = -500,000, CF_1 = 100,000, CF_2 = 200,000, CF_3 = 100,000, CF_4 = 300,000, I = 12, solve for NPV = 10,557.94 ≈ 10,558).

22	"Discounted Cash Flow Applications," Richard A. Defusco, Dennis W. McLeavey, Jerald E. Pinto, and David E. Runkel 2008 Modular Level I, Vol. 1, pp. 221-222 Study Session 2-6-b define, calculate, and interpret a holding period return (total return) The holding period return (HPR) is calculated as follows: HPR = $(P_1 - P_0 + D_1) / P_0$, where P_0 is the initial investment, P_1 is the price received at the end of the holding period, and D_1 is the cash paid by the investment at the end of the holding period. In this case: HPR = (54 - 48 + 4) / 48 = 20.8%. The HPR is not annualized for holding periods shorter than a year.
23	"Discounted Cash Flow Applications," Richard A. Defusco, Dennis W. McLeavey, Jerald E. Pinto, and David E. Runkel 2008 Modular Level I, Vol. 1, pp. 229-233 Study Session 2-6-d calculate and interpret the bank discount yield, holding period yield, effective annual yield, and money market yield for a U.S. Treasury bill; and convert among holding period yields, money market yields, effective annual yields, and bond equivalent yields The money market yield is computed by annualizing the holding period yield (HPY) assuming a 360-day year. In this case, the HPY is (100,000 - 96,500) / 96,500 = 3.627% and the money market yield = 3.627% x (360 / 270) = 4.836%. The effective annual yield (EAY) compounds the HYP forward to one year (assuming a 365-day year). In this case, the EAY = $(1 + 0.03627)^{365 / 270} - 1 = 4.934\%$.
24	"Statistical Concepts and Market Returns," Richard A. Defusco, Dennis W. McLeavey, Jerald E. Pinto, and David E. Runkel 2008 Modular Level I, Vol. 1, pp. 243-250 Study Session 2-7-c calculate and interpret relative frequencies and cumulative relative frequencies, given a frequency distribution, and describe the properties of a dataset presented as a histogram or a frequency polygon The relative frequency is the number of observations in an interval divided by the total number of observations. For Interval III, relative frequency = 22 / 110 = 20%. The cumulative relative frequency is the sum of the relative frequencies of the relevant class and all the classes before it. For Interval III, the cumulative relative frequency = (24 + 48 + 22) / 110 = 85.45% ≈ 85%.
25	"Statistical Concepts and Market Returns," Richard A. Defusco, Dennis W. McLeavey, Jerald E. Pinto, and David E. Runkel 2008 Modular Level I, Vol. 1, pp. 279-284 Study Session 2-7-f define, calculate, and interpret 1) a range and a mean absolute deviation, and 2) the variance and standard deviation of a population and of a sample First, compute the mean portfolio return = (8.6 + 11.2 + 12.9 + 15.1 - 9.4) / 5 = 7.68% Mean absolute deviation = (|8.6 - 7.68| + |11.2 - 7.68| + |12.9 - 7.68| + |15.1 - 7.68| + |-9.4 - 7.68|) / 5 = 6.83% Variance = $[(8.6 - 7.68)^2 + (11.2 - 7.68)^2 + (12.9 - 7.68)^2 + (15.1 - 7.68)^2 + (-9.4 - 7.68)^2 / 5 = 77.4536 \approx 77.5$ The population variance calculation is appropriate because the analyst is analyzing all the annual returns on the portfolio since its inception.

<table>
<tr><td>26</td><td>“Statistical Concepts and Market Returns,” Richard A. Defusco, Dennis W. McLeavey, Jerald E. Pinto, and David E. Runkel
2008 Modular Level I, Vol. 1, pp. 291-297
Study Session 2-7-h
define, calculate, and interpret the coefficient of variation and the Sharpe ratio

<table><tr><td>Coefficient of variation</td><td>= standard deviation / arithmetic mean return</td></tr><tr><td></td><td>= $380^{0.5}$ / 14.3 = 19.49 / 14.3 = 1.36</td></tr><tr><td>Sharpe ratio</td><td>= (mean return - risk free rate) / standard deviation of returns</td></tr><tr><td></td><td>= (14.3 - 4.25) / 19.49 = 0.52</td></tr></table></td></tr>
<tr><td>27</td><td>“Probability Concepts,” Richard A. Defusco, Dennis W. McLeavey, Jerald E. Pinto, and David E. Runkel
2008 Modular Level I, Vol. 1, pp. 319-320
Study Session 2-8-b
explain the two defining properties of probability, and distinguish among empirical, subjective, and a priori probabilities
An empirical probability cannot be calculated for an event not in the historical record. In this case, the analyst can make a personal assessment of the probability of the event without reference to any particular data. This is a subjective probability.</td></tr>
<tr><td>28</td><td>“Probability Concepts,” Richard A. Defusco, Dennis W. McLeavey, Jerald E. Pinto, and David E. Runkel
2008 Modular Level I, Vol. 1, pp. 342-347
Study Session 2-8-j
calculate and interpret covariance and correlation
The correlation between two random variables is equal to the covariance between the variables divided by the product of the variables’ standard deviations.</td></tr>
<tr><td>29</td><td>“Common Probability Distributions,” Richard A. Defusco, Dennis W. McLeavey, Jerald E. Pinto, and David E. Runkel
2008 Modular Level I, Vol. 1, pp. 373-374
Study Session 2-9-d
define a discrete uniform random variable and a binomial random variable, calculate and interpret probabilities given the discrete uniform and the binomial distribution functions, and construct a binomial tree to describe stock price movement
The discrete uniform distribution is known as the simplest of all probability distributions. It is made up of a finite number of specified outcomes and each outcome is equally likely.</td></tr>
</table>

30	"Common Probability Distributions," Richard A. Defusco, Dennis W. McLeavey, Jerald E. Pinto, and David E. Runkel 2008 Modular Level I, Vol. 1, pp. 392-393 Study Session 2-9-g construct and interpret a confidence interval for a normally distributed random variable, and determine the probability that a normally distributed random variable lies inside a given confidence interval The 99% confidence interval for a normally distributed random variable is equal to the sample mean ± 2.58 x sample standard deviation. In this case, the 99% confidence interval = 42 ± (2.58 x $9^{0.5}$) = 42 ± (2.58 x 3) = 42 ± 7.74 ≈ 34.3 to 49.7.
31	"Sampling and Estimation," Richard A. Defusco, Dennis W. McLeavey, Jerald E. Pinto, and David E. Runkel 2008 Modular Level I, Vol. 1, pp. 428-429 Study Session 2-10-d interpret the central limit theorem and describe its importance According to the central limit theorem, the sample mean of a population described by *any* probability distribution can be determined if the sample size *n* is sufficiently large, e.g., equal to or greater than 30. This process is used to estimate the population mean and standard deviation, which usually are unknown.
32	"Sampling and Estimation," Richard A. Defusco, Dennis W. McLeavey, Jerald E. Pinto, and David E. Runkel 2008 Modular Level I, Vol. 1, pp. 432-433 Study Session 2-10-g identify and describe the desirable properties of an estimator The three desirable properties of an estimator are unbiasedness, efficiency, and consistency.
33	"Monopolistic Competition and Oligopoly," Michael Parkin 2008 Modular Level I, Vol. 2, pp. 225-228 Study Session 5-20-a, d describe the characteristics of monopolistic competition and oligopoly; explain the kinked demand curve model and the dominant firm model, and describe oligopoly games including the Prisoners' Dilemma The game of Prisoners' Dilemma applies to oligopoly and the solution from Nash equilibrium is that both prisoners would confess to the crime.
34	"Markets in Action," Michael Parkin 2008 Modular Level I, Vol. 2, pp. 74-75 Study Session 4-15-c explain the impact of taxes on supply, demand, and market equilibrium, and describe tax incidence and its relation to demand and supply elasticity In the extreme cases of products with perfectly elastic and perfectly inelastic demand, the sellers and buyers, respectively, pay the entire tax.

<table>
<tr><td>35</td><td>“Efficiency and Equity,” Michael Parkin
2008 Modular Level I, Vol. 2, pp. 38-41
Study Session 4-14-b
distinguish between the price and the value of a product and explain the demand curve and consumer surplus
The consumer surplus is the value of the good minus the price paid for it (10-4) = 6, summed over the quantity bought. The total consumer surplus is the consumer surplus on each mango that Reddy buys and added together. It is the area of the right triangle = (base x height) / 2 as in Figure 3 on p. 40, with base equal to 20 mangoes a week and the height equal to 6, the consumer surplus on each mango. Thus the total consumer surplus = (20 x 6) / 2 = Rs.60 (see example on p. 41).</td></tr>
<tr><td>36</td><td>“Fiscal Policy,” Michael Parkin
2008 Modular Level I, Vol. 2, pp. 439-440
Study Session 6-27-a
explain supply-side effects on employment, potential GDP, and aggregate supply, including the income tax and taxes on expenditure, and describe the Laffer curve and its relation to supply-side economics
The relationship between the tax rate and the amount of tax revenue collected is called the Laffer curve, named after Arthur B. Laffer, a supply-side economist and a member of President Reagan’s economic policy advisory board. They argued that tax cuts would increase tax revenues and decrease the budget deficit.</td></tr>
<tr><td>37</td><td>“Organizing Production,” Michael Parkin
2008 Modular Level I, Vol. 2, pp. 92-95
Study Session 4-16-a
explain the types of opportunity cost and their relation to economic profit, and calculate economic profit
<table><tr><td>Opportunity costs</td><td>= 100,000 + 50,000 + 40,000 = 190,000</td></tr><tr><td>Economic depreciation</td><td>= 300,000 – 280,000 = 20,000</td></tr><tr><td>Economic profit</td><td>= Total revenue – Opportunity costs – Economic depreciation</td></tr><tr><td></td><td>300,000 - 190,000 – 20,000 = 90,000</td></tr></table></td></tr>
<tr><td>38</td><td>“Markets in Action,” Michael Parkin
2008 Modular Level I, Vol. 2, pp. 79-80
Study Session 4-15-d
discuss the impact of subsidies, quotas, and markets for illegal goods on demand, supply, and market equilibrium
Upon introduction of a subsidy, the equilibrium level of supply increases and the price falls. In the new equilibrium, marginal cost (on the supply curve) exceeds marginal benefit (on the demand curve) and a deadweight loss arises due to overproduction (Figure 13 on p. 79).</td></tr>
</table>

39	"Aggregate Demand and Aggregate Supply," Michael Parkin 2008 Modular Level I, Vol. 2, pp. 327-328 Study Session 5-23-c differentiate between short-run and long-run macroeconomic equilibrium, and explain how economic growth, inflation, and changes in aggregate demand and supply influence the macroeconomic equilibrium and the business cycle A below full-employment equilibrium is a macro-economic equilibrium in which potential GDP exceeds real GDP. The amount by which potential GDP exceeds real GDP is called the Okun gap. An above full-employment equilibrium is a macro-economic equilibrium in which real GDP exceeds potential GDP. The amount by which real GDP exceeds potential GDP is called an inflationary gap.
40	"Elasticity," Michael Parkin 2008 Modular Level I, Vol. 2, pp. 24-25 Study Session 4-13-a calculate and interpret the elasticities of demand (price elasticity, cross elasticity, income elasticity) and the elasticity of supply, and discuss the factors that influence each measure The elasticity of supply equals the percent change in quantity relative to the average quantity divided by the percent change in demand relative to the average demand: The average quantity = (100 + 150) / 2 = 125, the % change in quantity = 50 / 125 = 40; The average price = (150 + 200) / 2 = 175, the % change in price = 50 / 175 = 28.6 Elasticity of supply = 40 / 28.6 = 1.40
41	"Fiscal Policy," Michael Parkin 2008 Modular Level I, Vol. 2, pp. 444-445 Study Session 6-27-b discuss the sources of investment finance and the influence of fiscal policy on capital markets, including the crowding-out effect A deficit budget leads to an increase in interest rates, a decrease in investment, and an increase in private saving.
42	"Demand and Supply in Factor Markets," Michael Parkin 2008 Modular Level I, Vol. 2, pp. 271-274 Study Session 5-21-g differentiate between renewable and non-renewable natural resources and describe the supply curve for each The Hotelling principle applies to non-renewable natural resources characterized by perfectly elastic flow supply. According to the Hotelling principle, the price of resource is expected to rise at a rate equal to the interest rate (p. 274).
43	"Elasticity," Michael Parkin 2008 Modular Level I, Vol. 2, pp. 15-16 Study Session 4-13-b calculate elasticities on a straight-line demand curve, differentiate among elastic, inelastic, and unit elastic demand and describe the relation between price elasticity of demand and total revenue When demand is elastic, a decrease in price by 1% increases the quantity sold by more than 1% and it results in an increase in total revenue. But when demand is inelastic, a decrease in price by 1% increases the quantity sold by less than 1% and it results in a decrease in total revenue.

44	"Monitoring Cycles, Jobs, and the Price Level," Michael Parkin 2008 Modular Level I, Vol. 2, pp. 288-289 Study Session 5-22-a describe the phases of the business cycle, define an unemployed person, and interpret the main labor market indicators and their relation to the business cycle The three indicators of the state of the labor market that the U.S. Census Bureau calculates are: the unemployment rate, the labor force participation rate, and the employment-to-population ratio.
45	"Financial Analysis Techniques," Thomas R. Robinson, Hennie van Greuning, Elaine Henry, and Michael A. Broihahn 2008 Modular Level I, Vol. 3, pp. 590-592 "Working Capital Management," Edgar A. Norton, Jr., Kenneth L. Parkinson, and Pamela p. Peterson 2008 Modular Level I, Vol. 4, pp. 89-92 Study Session 10-41-d, 11-46-a calculate and interpret activity, liquidity, solvency, profitability, and valuation ratios; calculate and interpret liquidity measures using selected financial ratios for a company and compare it with peer companies An increase in receivables turnover would indicate that receivables were outstanding for a shorter period of time, decreasing the cash conversion cycle.
46	"Financial Analysis Techniques," Thomas R. Robinson, Hennie van Greuning, Elaine Henry, and Michael A. Broihahn 2008 Modular Level I, Vol. 3, pp. 574-575, 590-592 "Working Capital Management," Edgar A. Norton, Jr., Kenneth L. Parkinson, and Pamela p. Peterson 2008 Modular Level I, Vol. 4, pp. 89-90 Study Session 10-41-a, d, 11-46-a evaluate and compare companies using ratio analysis, common-size financial statements, and charts in financial analysis; calculate and interpret activity, liquidity, solvency, profitability, and valuation ratios; calculate and interpret liquidity measures using selected financial ratios for a company and compare it with peer companies The current ratio includes inventory but the quick ratio does not. (Current ratio is higher than quick ratio and quick ratio is higher than cash ratio.) The quick ratio includes accounts receivable but the cash ratio does not. The denominator for all three ratios is current liabilities, which are the same proportion for both companies. The difference in ratios is therefore created by inventory and accounts receivable. Company 1 has the higher percentage of inventory because the difference between the current ratio and quick ratio is greater for that company. Company 2 had the higher percentage of accounts receivable because the difference between the quick ratio and the cash ratio is greater for Company 2.

47	"Financial Analysis Techniques," Thomas R. Robinson, Hennie van Greuning, Elaine Henry, and Michael A. Broihahn 2008 Modular Level I, Vol. 3, pp. 583-590 "Working Capital Management," Edgar A. Norton, Jr., Kenneth L. Parkinson, and Pamela p. Peterson 2008 Modular Level I, Vol. 4, pp. 89-90 Study Sessions 10-41-d, 11-46-a calculate and interpret activity, liquidity, solvency, profitability, and valuation ratios; calculate and interpret liquidity measures using selected financial ratios for a company and compare it with peer companies Total asset turnover increased over the period, but turnovers related to the cash conversion cycle decreased or remained relatively stable. The fixed asset turnover had to have increased to offset the decline in inventory and accounts receivable turnovers.
48	"Understanding the Cash Flow Statement," Thomas R. Robinson, Hennie van Greuning, Elaine Henry, and Michael A. Broihahn 2008 Modular Level I, Vol. 3, pp. 251-252 "Financial Analysis Techniques," Thomas R. Robinson, Hennie van Greuning, Elaine Henry, and Michael A. Broihahn 2008 Modular Level I, Vol. 3, p. 591 Study Sessions 8-34-a, 10-41-d compare and contrast cash flows from operating, investing, and financing activities, and classify cash flow items as relating to one of these three categories, given a description of the items; calculate and interpret activity, liquidity, solvency, profitability, and valuation ratios The current ratio is above 1.0, so the payment of short-term borrowing would increase the current ratio; it would reduce both the numerator and denominator by the same amount. The repayment of short-term debt would reduce cash flow from financing, not cash flow from operations.
49	"Understanding the Cash Flow Statement," Thomas R. Robinson, Hennie van Greuning, Elaine Henry, and Michael A. Broihahn 2008 Modular Level I, Vol. 3, pp. 251-252, 271-272, 275-276 Study Session 8-34-a, f compare and contrast cash flows from operating, investing, and financing activities, and classify cash flow items as relating to one of these three categories, given a description of the items; demonstrate the steps in the preparation of direct and indirect cash flow statements, including how cash flows can be computed using income statement and balance sheet data The book value of the equipment would have been $110,000 - $70,000 = $40,000 at the time of sale, so a loss of $10,000 for financial statement purposes would be realized. The net loss would reduce net income and would be adjusted in the statement of cash flows by adding the net loss to net income. The total amount of the proceeds ($30,000) would be shown as a cash inflow from investing activities.
50	"Understanding the Cash Flow Statement," Thomas R. Robinson, Hennie van Greuning, Elaine Henry, and Michael A. Broihahn 2008 Modular Level I, Vol. 3, pp. 267-271, 276-277 Study Session 8-34-h analyze and interpret a cash flow statement using both total currency amounts and common-size cash flow statements The increase in inventory (working capital investment) would reduce cash flow from operations relative to net income.

51	"Understanding the Cash Flow Statement," Thomas R. Robinson, Hennie van Greuning, Elaine Henry, and Michael A. Broihahn 2008 Modular Level I, Vol. 3, pp. 275-278, 287-288 Study Session 8-34-i explain and calculate free cash flow to the firm, free cash flow to equity, and other cash flow ratios Free cash flow to equity in a company without any debt is equal to cash flow from operations (CFO) less capital expenditures. CFO = net income + depreciation + loss on sale of equipment + decrease in accounts receivable - increase in inventories + increase in accounts payable. (The loss on sale of equipment is added back when calculating CFO. It would have been deducted in the calculation of net income but the loss is not the cash impact of the transaction (the proceeds received, if any, would be the cash effect) and cash flows related to equipment transactions are investing activities, not operating activities.) CFO = 45.8 + 18.2 + 1.6 + 4.2 - 3.4 + 2.5 = $68.9 million $68.9 - $7.3 = $61.6 million free cash flow to equity.
52	"Financial Statement Analysis: An Introduction," Thomas R. Robinson, Jan Hennie van Greuning, Elaine Henry, and Michael A. Broihahn 2008 Modular Level I, Vol. 3, p. 21 Study Session 7-29-d discuss the objective of audits of financial statements, the types of audit reports, and the importance of effective internal controls Audits provide reasonable assurance that the financial statements are fairly presented, meaning that there is a high degree of probability that they are free of material error, fraud or illegal acts.
53	"Financial Statement Analysis: An Introduction," Thomas R. Robinson, Jan Hennie van Greuning, Elaine Henry, and Michael A. Broihahn 2008 Modular Level I, Vol. 3, pp. 26-30 Study Session 7-29-f describe the steps in the financial statement analysis framework Making any adjustments is part of the processing data step. Commonly used data bases (part of the collection phase) do not make adjustments for differences in accounting choices.
54	"Understanding the Income Statement," Thomas R. Robinson, Jan Hennie van Greuning, Elaine Henry, and Michael A. Broihahn 2008 Modular Level I, Vol. 3, pp. 169-171 Study Session 8-32-f distinguish between the operating and nonoperating components of the income statement The loss on the disposal of fixed assets is an unusual or infrequent item but it is still part of normal operating activities. The interest expense is the result of financing activities and would be classified as a nonoperating expense by nonfinancial service companies.

55	"Understanding the Balance Sheet," Thomas R. Robinson, Jan Hennie van Greuning, Elaine Henry, and Michael A. Broihahn 2008 Modular Level I, Vol. 3, pp. 201-207 Study Session 8-33-a, d illustrate and interpret the components of the assets, liabilities, and equity sections of the balance sheet, and discuss the uses of the balance sheet in financial analysis; compare and contrast current and noncurrent assets and liabilities Working capital = current assets - current liabilities. Current Assets Cashw $12,500 Accounts receivable 82,000 Inventory 47,400 $141,900 Current Liabilities Bank loan, due on demand $44,000 Accounts payable 20,000 Income tax payable 5,000 Deposits from customers for deliveries in 2008 8,000 $77,000 Working capital: $141,900 – 77,000 = $64,900 The Investments accounted for by the equity method and the Loan payable due June 2009 are non-current assets and liabilities, respectively.
56	"Understanding the Balance Sheet," Thomas R. Robinson, Jan Hennie van Greuning, Elaine Henry, and Michael A. Broihahn 2008 Modular Level I, Vol. 3, pp. 218-220 "Analysis of Long-Lived Assets: Part I – The Capitalization Decision," Gerald I. White, Ashwinpaul C. Sondhi, and Dov Fried 2008 Modular Level I, Vol. 3, pp. 354-355 Study Sessions 8-33-e, 9-36-b explain the measurement bases (e.g., historical cost and fair value) of assets and liabilities, including current assets, current liabilities, tangible assets, and intangible assets; determine which intangible assets, including software development costs and research and development costs, should be capitalized, according to U.S. GAAP and international accounting standards The purchased customer list is an identifiable intangible because it can be sold separately from the company and it would be recorded at its fair market value, the amount paid for it in the acquisition, $50,000. The amount spent by Popular on its own lists, $15,000, would have to be expensed because internally generated intangibles are not capitalized.

57	"Understanding the Income Statement," Thomas R. Robinson, Jan Hennie van Greuning, Elaine Henry, and Michael A. Broihahn 2008 Modular Level I, Vol. 3, p. 169 "Analysis of Long-Lived Assets: Part II – Analysis of Depreciation and Impairment," Gerald I. White, Ashwinpaul C. Sondhi, and Dov Fried 2008 Modular Level I, Vol. 3, pp. 403-404 Study Session 9-37-d explain and illustrate the use of impairment charges on long-lived assets, and analyze the effects of taking such impairment charges on a company's financial statements and ratios The equipment is impaired. NBV = $550,000, which is greater than the sum of the undiscounted cash flows 5 years x $80,000 = $400,000. The amount of the impairment is 550,000 – PV of the cash flows = 550,000 – 319,417 (PMT = 80,000, N = 5, i = 8%) = 230,583. The company's ROA will increase. There will be lower depreciation charges in the future, which will increase net income, and a lower carrying value of assets, which decreases total assets. Both factors would increase any future ROA.
58	"Analysis of Income Taxes," Gerald I. White, Ashwinpaul C. Sondhi, and Dov Fried 2008 Modular Level I, Vol. 3, pp. 439-440 Study Session 9-38-d explain the factors that determine whether a company's deferred tax liabilities should be treated as a liability or as equity for purposes of financial analysis The classification of deferred taxes as liabilities or equity depends on the likelihood, or expectation, of reversal. For growing firms and those using accelerated methods of depreciation, the temporary differences tend not to reverse. If the analyst determined the deferred tax liabilities were likely to reverse, and hence should be classified as liabilities, then it would be appropriate to discount them at the company's average discount rate. But the discount rate is not a factor in determining if reversal is likely.
59	"Leases and Off-Balance-Sheet Debt," Gerald I. White, Ashwinpaul C. Sondhi, and Dov Fried 2008 Modular Level I, Vol. 3, pp. 545-551. Study Session 9-40-d distinguish between sales-type leases and direct financing leases and explain the effects of these types of leases on the financial statements of lessors It is a sales type lease: the lease period covers more than 75% of its useful life (5/6) and the asset is on their books at less than the present value of the lease payments ($199,635) (PMT = $50,000, N=5, i=8%). They must have acquired or manufactured the asset if it is recorded at less than the present value of the lease payments. As a sales type lease they will recognize gross profit for the difference of the present value and the cost (199,635 - 160,000 = 39,635) and then interest income on the net investment in the lease (0.08 x 199,635 = 15,971).
60	"Financial Statement Analysis: Applications," Thomas R. Robinson, Jan Hennie van Greuning, Elaine Henry, and Michael A. Broihahn 2008 Modular Level I, Vol. 3, pp. 649-650 Study Session 10-42-c describe the role of financial statement analysis in assessing the credit quality of a potential debt investment Credit analysis is concerned with a company's debt-paying ability. Returns to creditors are normally paid in cash, so the company's ability to generate cash internally is the most important factor in credit analysis.

61	"Analysis of Long-Lived Assets: Part II - Analysis of Depreciation and Impairment," Gerald I. White, Ashwinpaul C. Sondhi, and Dov Fried 2008 Modular Level I, Vol. 3, pp. 394-397 Study Session 9-37-b demonstrate how modifying the depreciation method, the estimated useful life and/or the salvage value used in accounting for long-lived assets affect financial statements and ratios A high salvage value estimate reduces the depreciable base and thus depreciation expense; long average lives reduce the annual depreciation expense for any given depreciable base. The combination of the two would result in the lowest depreciation expense, which leads to the highest net income and profit margins.
62	"Analysis of Inventories," Gerald I. White, Ashwinpaul C. Sondhi, and Dov Fried 2008 Modular Level I, Vol. 3, pp. 312-314 Study Session 9-35-c, d compare and contrast the effect of the different methods on cost of goods sold and inventory balances, and discuss how a company's choice of inventory accounting method affects other financial items such as income cash flow, and working capital; compare and contrast the effects of the choice of inventory method on profitability, liquidity, activity, and solvency ratios COGS on a FIFO basis will equal COGS LIFO - Change in the LIFO reserve. The change in the LIFO reserve is 36.4 - 21.8 = 14.6; FIFO COGS will be 203.9 - 14.6 = 189.3. Gross profit will be 283.5 - 189.3 = 94.2. The gross margin will be 94.2 / 283.5 = 33.23%. (The gross margin for LIFO is 28.1%.)
63	"Analysis of Inventories," Gerald I. White, Ashwinpaul C. Sondhi, and Dov Fried 2008 Modular Level I, Vol. 3, pp. 315-320 Study Session 9-35-c, e compare and contrast the effect of the different methods on cost of goods sold and inventory balances, and discuss how a company's choice of inventory accounting method affects other financial items such as income cash flow, and working capital; indicate the reasons that a LIFO reserve might decline during a given period and evaluate the implications of such a decline for financial analysis The LIFO reserve increased by $30,000. If an increase in the LIFO reserve occurs, LIFO cost of goods sold will be higher than FIFO by the amount of the increase and net income would be lower than FIFO by $30,000(1 - 0.30) = $21,000. After-tax FIFO net income would be $21,000 higher.
64	"Analysis of Inventories," Gerald I. White, Ashwinpaul C. Sondhi, and Dov Fried 2008 Modular Level I, Vol. 3, p. 312 Study Session 9-35-c, d compare and contrast the effect of the different methods on cost of goods sold and inventory balances, and discuss how a company's choice of inventory accounting method affects other financial items such as income cash flow, and working capital; compare and contrast the effects of the choice of inventory method on profitability, liquidity, activity, and solvency ratios Adding the ending balance in the LIFO reserve to the LIFO inventory would equal the ending balance for inventory on a FIFO basis.

65	"Understanding the Income Statement," Thomas R. Robinson, Hennie van Greuning, Elaine Henry, and Michael A. Broihahn 2008 Modular Level I, Vol. 3, pp. 177-178 Study Session 8-32-h describe the components of earnings per share and calculate a company's earnings per share (both basic and diluted earnings per share) for both a simple and complex capital structure Diluted EPS is calculated using the treasury stock method that considers what would be the effect if the options or warrants had been exercised. Only options or warrants that are in-the-money are included, as out-of-the-money options would not be exercised. Therefore, only the warrants are dilutive; the exercise price is below the average market price of the stock. Using the treasury stock method: 20,000($30) = $600,000 in proceeds. $600,000 / $40 = 15,000 shares treasury stock. Incremental shares using the treasury stock method = 20,000 - 15,000 = 5,000.
66	"Leases and Off-Balance Sheet Debt," Gerald I. White, Ashwinpaul C. Sondhi, and Dov Fried 2008 Modular Level I, Vol. 3, pp. 521-524 Study Session 9-40-b contrast the effects of capital and operating leases on the financial statements and ratios of the lessees and lessors The present value of the lease is $360,477.62. (n = 5, I = 12%, PMT = $100,000) 12% of the original PV is $43,257.31 and represents the interest component of the payment in the first year. The difference between the annual payment and the interest is the amortization of the lease obligation and is included in cash flow from financing. $100,000 - 43,257.31 = $56,742.69. Depreciation is $360,477.62 / 5 or $72,095.52, so the total reduction in pretax income would be interest plus depreciation or $115,352.83. Cash flow from operations would be reduced by the amount of the interest only because the depreciation would be added back to determine cash flow from operations.
67	"Analysis of Income Taxes," Gerald I. White, Ashwinpaul C. Sondhi, and Dov Fried 2008 Modular Level I, Vol. 3, pp. 423-424, 427 Study Session 9-38-f calculate and interpret income tax expense, income taxes payable, deferred tax assets and deferred tax liabilities For financial statement purposes, the company overestimated the warranty expense that was actually incurred in 2007; income for tax purposes was higher than income for financial statement purposes. Tax expense on the financial statements will be less than taxes payable to the government by $100,000 (0.35) = $35,000. The $35,000 represents a deferred tax asset.
68	"Analysis of Financing Liabilities," Gerald I. White, Ashwinpaul C. Sondhi, and Dov Fried 2008 Modular Level I, Vol. 3, pp. 466-471 Study Session 9-39-b determine the effects of debt issuance and amortization of bond discounts and premiums on the financial statements and ratios The liability and interest expense recorded are both based on market rates of interest when the bond was issued, not the coupon rate on the bond. The market value of the bond at issuance was $937.68. (FV=1000, PMT=45, N=20, I/Y=5.0).

69	"Cost of Capital," Yves Courtois, Gene C. Lai, and Pamela p. Peterson 2008 Modular Level I, Vol. 4, pp. 64-67 Study Session 11-45-j describe the marginal cost of capital schedule, explain why it may be upward-sloping with respect to additional capital, and calculate and interpret its break-points The breakpoints for debt and equity are €10 million (€4.0 million / 0.40) and €8.33 million (€5.0 million / 0.60), respectively. The cost of debt and equity if the firm raises €9.5 million in new financing will be 4% and 15%, respectively, because €9.5 million is below the debt breakpoint and above the equity breakpoint. The marginal cost of capital = 0.40 x 4% + 0.60 x 15% = 10.6%.
70	"Working Capital Management," Edgar A. Norton, Jr., Kenneth L. Parkinson, and Pamela p. Peterson 2008 Modular Level I, Vol. 4, pp. 89-95 Study Session 11-46-a calculate and interpret liquidity measures using selected financial ratios for a company and compare it with peer companies The company's days sales outstanding is considerably higher than the industry's, which means the company is slower in collecting its receivables than the average firm. This is a concern because the longer receivables are outstanding, the greater the probability they will not be collected and will have to be charged off, thereby adversely affecting earnings.
71	"Working Capital Management," Edgar A. Norton, Jr., Kenneth L. Parkinson, and Pamela p. Peterson 2008 Modular Level I, Vol. 4, pp. 89-95 Study Session 11-46-a, b calculate and interpret liquidity measures using selected financial ratios for a company and compare it with peer companies; evaluate overall working capital effectiveness of a company, using the operating and cash conversion cycles, and compare its effectiveness with other peer companies Operating cycle = days inventory outstanding + days receivables outstanding Days inventory outstanding = 365 / inventory turnover = 17.63 days Days receivables outstanding = 365 / accounts receivable turnover = 29.2 days Operating cycle = 17.63 days + 29.2 days = 46.8 days
72	"Working Capital Management," Edgar A. Norton, Jr., Kenneth L. Parkinson, and Pamela p. Peterson 2008 Modular Level I, Vol. 4, pp. 120-121 Study Session 11-46-f evaluate the performance of a company's accounts receivable, inventory management, and accounts payable functions against historical figures and comparable peer company values The cost of trade credit if paid on day 45 = $(1 + 2 / 98)^{365/35} - 1 = 23.45\%$.
73	"Working Capital Management," Edgar A. Norton, Jr., Kenneth L. Parkinson, and Pamela p. Peterson 2008 Modular Level I, Vol. 4, pp. 126-128 Study Session 11-46-g evaluate the choices of short-term funding available to a company and recommend a financing method CP cost = [(interest + dealer's commissions + back-up costs) / net proceeds] x 12 Net proceeds = €2,500,000 - (0.0588 x €2,500,000 x 1/12) = €2,487,750 Interest + dealer's commissions + back-up costs = (0.0588 + 0.00125 + 0.0025) x €2,500,000 x 1/12 = 0.6255 x €2,500,000 x 1/12 = €13,031 CP cost = (13,031 / 2,487,750) x 12 = 6.29%

74	"The Corporate Governance of Listed Companies: A Manual for Investors" (CFA Institute, 2005) 2008 Modular Level I, Vol. 4, pp. 166-167 Study Session 11-48-d identify factors that indicate a board and its members possess the experience required to govern the company for the benefit of its shareowners Such long-term participation may enhance the individual board member's knowledge of the company, but it also may cause the board member to develop a cooperative relationship with management that could impair his/her willingness to act in the best interests of shareowners.
75	"The Corporate Governance of Listed Companies: A Manual for Investors" (CFA Institute, 2005) 2008 Modular Level I, Vol. 4, pp. 182-187 Study Session 11-48-g evaluate, from a shareowner's perspective, company policies related to voting rules, shareowner sponsored proposals, common stock classes and takeover defenses The ability to nominate one or more individuals to the board can prevent erosion of shareowner value. Shareowners may be able to force the board or management to take steps to address shareowner concerns.
76	"Capital Budgeting," John D. Stowe and Jacques R. Gagné 2008 Modular Level I, Vol. 4, pp. 10-12 Study Session 11-44-b discuss the basic principles of capital budgeting, including the choice of the proper cash flows and determining the proper discount rate The cash savings related to adopting a new production process is an incremental cash flow, not an opportunity cost.
77	"Capital Budgeting," John D. Stowe and Jacques R. Gagné 2008 Modular Level I, Vol. 4, pp. 12-19 Study Session 11-44-d calculate and interpret the results using each of the following methods to evaluate a single capital project: net present value (NPV), internal rate of return (IRR), payback period, discounted payback period, average accounting rate of return (AAR), and profitability index (PI) Using a calculator, the IRR is 19.25%. The discounted payback period is the number of years (and fractional part of a year) that it takes to recover the initial investment in terms of discounted future cash flows discounted at the project's required rate of return. The discounted cash flows for the first four years are: €26.55, €31.33, €27.72, and €18.40. The cumulative sum through year three is €85.60. The portion of year four required to recover the initial investment is €14.40 / €18.40 = 0.7828 ≈ 0.78. Therefore, the discounted payback period is 3.78 years.
78	"Capital Budgeting," John D. Stowe and Jacques R. Gagné 2008 Modular Level I, Vol. 4, pp. 19-25 Study Session 11-44-e explain the NPV profile, compare and contrast the NPV and IRR methods when evaluating independent and mutually-exclusive projects, and describe the problems that can arise when using an IRR Conflicting decision rules based on the NPV and IRR methods are related to the reinvestment rate assumption, the timing of the cash flows, or the scale of the projects. Differing required rates of return are not related to conflicting NPV and IRR decisions.

79	"Security-Market Indexes," Frank K. Reilly and Keith C. Brown 2008 Modular Level I, Vol. 5, pp. 42-46 Study Session 13-53-a compare and contrast the characteristics of, and discuss the source and direction of bias exhibited by, each of the three predominant weighting schemes used in constructing stock market indexes, and compute a price-weighted, value-weighted, and un-weighted index series for three stocks; The Value Line Index, an un-weighted index, uses the geometric mean return approach where as the Nikkei-Dow Jones Average, a price-weighted index, uses the arithmetic mean approach.
80	"Equity: Concepts and Techniques," Bruno Solnik and Dennis McLeavey 2008 Modular Level I, Vol. 5, pp. 138-139 Study Session 14-58-d, e discuss the specific advantages of both the concentration ratio and the Herfindahl index; discuss, with respect to global industry analysis, the elements related to risk, and describe the basic forces that determine industry competition Herfindahl Index = $0.5^2 + 0.25^2 + 0.15^2 + 0.1^2 = 0.25 + 0.0625 + 0.0225 + 0.01 = 0.345$ "Equivalent Number" of firms = $1 / 0.345 = 2.8986 \approx 2.90$
81	"An Introduction to Security Valuation: Part II," Frank K. Reilly and Keith C. Brown 2008 Modular Level I, Vol. 5, pp. 196-198 Study Session 14-60-e estimate the implied dividend growth rate, given the components of the required return on equity and incorporating the earnings retention rate and current stock price g = RR x ROE RR = (1 – Payout Ratio) = 1 – 0.25 = 0.75 Financial Leverage = TA / Equity Debt = TA x Debt Ratio = CNY 50 m x 0.4 = CNY 20 m Equity = CNY 50 m – CNY 20 m = CNY 30 m ROE = ROA x Financial Leverage; ROE = 10% x (50/30) = 16.67% g = 0.75 x 16.67 = 12.50%
82	"Organization and Functioning of Securities Markets," Frank K. Reilly and Keith C. Brown 2008 Modular Level I, Vol. 5, pp. 24-26 Study Session 13-52-f describe the process of selling a stock short and discuss an investor's likely motivation for selling short Short sales have no time limits. However, if the lender of shares decides to sell them, the broker must find another investor willing to lend the shares.
83	"An Introduction to Security Valuation: Part II," Frank K. Reilly and Keith C. Brown 2008 Modular Level I, Vol. 5, pp. 184-185 Study Session 14-60-f describe a process for developing estimated inputs to be used in the DDM, including the required rate of return and expected growth rate of dividends In estimating the value of total firm, the free cash flow available to both stockholders and bondholders should be used. Therefore, operating cash flow before debt related costs and after subtracting the required capital expenditures is the appropriate measure of free cash flow. As the value of the total firm includes the value of equity and the value of debt, the weighted average cost of capital is the relevant discount rate.

84	"The Time Value of Money," Richard A. DeFusco, Dennis W. McLeavy, Jerald E. Pinto, and David E. Runkle 2008 Modular Level I, Vol. 1, pp. 199-200 "Cost of Capital," Yves Courtois, Gene C. Lai, and Pamela p. Peterson 2008 Modular Level I, Vol. 4, p. 50 "An Introduction to Security Valuation: Part II," Frank K. Reilly and Keith C. Brown 2008 Modular Level I, Vol. 5, p. 176-181, 198 Study Sessions 2-5-d; 4-45-h; 14-60-b, e Calculate and interpret the future value (FV) and present value (PV) of a single sum of money, an ordinary annuity, an annuity due, a perpetuity (PV only) and a series of unequal cash flows; calculate and interpret the cost of equity capital using the capital asset pricing model approach, the dividend discount model approach, and the bond-yield-plus risk-premium approach; calculate and interpret the value both of a preferred stock and a common stock using the dividend discount model (DDM); estimate the implied dividend growth rate, given the components of the required return on equity and incorporating the earnings retention rate and current stock price g = growth rate of dividends = 7% $[(3 / 2)^{1/6}]$; k = 9 + 1.8 (17 - 9) = 23.4% V = 3(1.07) / (0.234 - 0.07) = 19.57 pesos; The stock's intrinsic value > price, so it is undervalued.
85	"Introduction to Price Multiples," John D. Stowe, Thomas R. Robinson, Jerald E. Pinto, and Dennis W. McLeavey 2008 Modular Level I, Vol. 5, pp. 208-209, 216-217 Study Session 14-61-b calculate and interpret P/E, P/BV, P/S, and P/CF In a rising costs environment, FIFO would result in higher earnings, higher ending inventory, as well as higher book value of equity. Thus, both P/E and P/BV tend to be understated relative to a comparable firm that uses LIFO method.
86	"Efficient Capital Markets," Frank K. Reilly and Keith C. Brown 2008 Modular Level I, Vol. 5, pp. 83-84 Study Session 14-54-d define behavioral finance and describe overconfidence bias, confirmation bias, and escalation bias Escalation bias refers to the investor behavior of putting more money into a failure that they feel responsible for rather than into a success. This leads to the practice of "averaging down" by viewing the additional purchase as a "bargain" rather than considering the initial purchase as a mistake and selling the stock.
87	"Cost of Capital," Yves Courtois, Gene C. Lai, and Pamela p. Peterson 2008 Modular Level I, Vol. 4, pp. 54-55 "An Introduction to Security Valuation: Part II," Frank K. Reilly and Keith C. Brown 2008 Modular Level I, Vol. 5, pp. 196-197 Study Sessions 11-45-h, 14-60-e calculate and interpret the cost of equity capital using the capital asset pricing model approach, the dividend discount model approach, and the bond-yield-plus risk-premium approach; estimate the implied dividend growth rate, given the components of the required return on equity and incorporating the earnings retention rate and current stock price $V_0 = D_1 / (k - g)$; \$40 = \$2 / (0.12 - g); g = 7%; g = ROE x RR; RR = 7 / 10 = 0.70; Payout Ratio = 1 - RR = 1 - 0.70 = 0.30 = 30%.

88	"Organization and Functioning of Securities Markets," Frank K. Reilly and Keith C. Brown 2008 Modular Level I, Vol. 5, pp. 7-8 Study Session 13-52-a describe the characteristics of a well-functioning securities market Liquidity refers to the ability to buy or sell an asset quickly and at a known price. Price continuity is a component of liquidity which in turn requires market depth. The distracters in A, B, and D are characteristics of a good market, just as liquidity, but not most closely associated with, or as components of, liquidity.
89	"Market Efficiency and Anomalies," Vijay Singal 2008 Modular Level I, Vol. 5, pp. 100-107 Study Session 13-55-d explain why a mispricing may persist and why valid anomalies may not be profitable The persistent realization of abnormal returns is referred to as an anomaly and survivorship bias is a source of unreliability of an anomaly.
90	"An Introduction to Asset Pricing Models," Frank K. Reilly and Keith C. Brown 2008 Modular Level I, Vol. 4, pp. 263-265 "An Introduction to Security Valuation: Part II," Frank K. Reilly and Keith C. Brown 2008 Modular Level I, Vol. 5, pp. 180-181 Study Sessions 12-51-e, 14-60-b calculate, using the SML, the expected return on a security and evaluate whether the security is overvalued, undervalued, or properly valued; calculate and interpret the value both of a preferred stock and a common stock using the dividend discount model (DDM) Most recent dividend = 2.00 (0.6) = 1.20 k_s = 4.20 + 5.60(1.50) = 12.60%; V = 1.20(1.051) / (0.126 - 0.051) = $16.82
91	"Option Markets and Contracts", Don M. Chance 2008 Modular Level I, Vol. 6, pp. 90-93 Study Session 17-73-d define interest rate caps, and floors, and collars An interest rate floor is a series of put options on an interest rate, with each option expiring at the date on which the floating loan rate will be reset, and with each option having the same exercise rate.
92	"Swap Markets and Contracts," Don M. Chance 2008 Modular Level I, Vol. 6, pp. 130-141 Study Session 17-74-b define and give examples of currency swaps, plain vanilla interest rate swaps, and equity swaps and calculate and interpret the payments on each If the value of the index on which the swap is based declines, the resulting negative return would have to be paid by the party making the fixed-rate payment. This characteristic is one of the distinguishing features of equity swaps.

93	"Futures Markets and Contracts," Don M. Chance 2008 Modular Level I, Vol. 6, pp. 55-60 Study Session 17-72-c describe price limits and the process of marking to market, and compute and interpret the margin balance, given the previous day's balance and the change in the futures price The investor has a short position and will experience a margin call only if the price increases. Additional margin must be deposited to bring the ending balance up to the initial margin requirement. The investor must deposit $4; therefore, the margin balance on Day 1 is -$4, which would result if the price of the contract was $104.
94	"Forward Markets and Contracts," Don M. Chance 2008 Modular Level I, Vol. 6, pp. 32-33 Study Session 17-71-a differentiate between the positions held by the long and short parties to a forward contract in terms of delivery/settlement and default risk Given a forward contract cash settlement, only the net payment is required. The long owes the short $25,000.
95	"Forward Markets and Contracts," Don M. Chance 2008 Modular Level I, Vol. 6, pp. 39-40 Study Session 17-71-d describe the characteristics of equity forward contracts and forward contracts on zero-coupon and coupon bonds When the coupon rate of a bond is greater than the yield to maturity, the bond trades at a premium. This is accurate for bond forward contracts.
96	"Forward Markets and Contracts," Don M. Chance 2008 Modular Level I, Vol. 6, pp. 40-43 Study Session 17-71-g calculate and interpret the payoff of an FRA and explain each of the component terms The underlying of an FRA is an interest payment. The investor is long the rate and will benefit if rates increase. Since rates decreased, the investor must pay the dealer: $\$10{,}000{,}000\left[\frac{(.04-.045)(90/360)}{1+.04(90/360)}\right]=\$(12{,}376)$
97	"Understanding Yield Spreads," Frank J. Fabozzi 2008 Modular Level I, Vol. 5, pp. 357-358 Study Session 15-65-g identify how embedded options affect yield spreads Mortgage-backed securities expose an investor to prepayment risk.

98	"Understanding Yield Spreads," Frank J. Fabozzi 2008 Modular Level I, Vol. 5, p. 350 Study Session 15-65-c explain the basic theories of the term structure of interest rates and describe the implications of each theory for the shape of the yield curve The Liquidity Preference Theory asserts that market participants want to be compensated for the interest rate risk associated with holding long-term bonds. The longer the maturity, the greater the price volatility when interest rates change and investors want to be compensated for this risk. According to the Liquidity Preference Theory, the term structure of interest rates is determined by expectations about future rates and a yield premium for interest rate risk. Because interest rate risk increases with maturity, The Liquidity Preference Theory asserts that the yield premium increases with maturity.
99	"Yield Measures, Spot Rates, and Forward Rates," Frank J. Fabozzi 2008 Modular Level I, Vol. 5, p. 431 Study Session 16-68-d compute and interpret the bond equivalent yield of an annual-pay bond and the annual-pay yield of a semiannual-pay bond The bond-equivalent yield of an annual-pay bond = 2 x [(1 + yield on annual-pay bond)$^{0.5}$ - 1] = 2 x [(1 + 0.05)$^{0.5}$ - 1] = 0.0494 = 4.94%
100	"Yield Measures, Spot Rates, and Forward Rates," Frank J. Fabozzi 2008 Modular Level I, Vol. 5, pp. 440-445, 453-456 Study Session 16-68-e describe the methodology for computing the theoretical Treasury spot rate curve, and compute the value of a bond using spot rates The theoretical spot rates for Treasury securities represent the appropriate set of interest rates that should be used to value default-free cash flows. Therefore: $50,000 / (1 + 0.0392/2)$^{4} = $46,264.80 ≈ $46,265.
101	"Yield Measures, Spot Rates, and Forward Rates," Frank J. Fabozzi 2008 Modular Level I, Vol. 5, pp. 446-449 Study Session 16-68-f differentiate between the nominal spread, the zero-volatility spread, and the option-adjusted spread The zero-volatility spread is a measure of the spread that the investor would realize over the entire Treasury spot rate curve if the bond is held to maturity.
102	"Yield Measures, Spot Rates, and Forward Rates," Frank J. Fabozzi 2008 Modular Level I, Vol. 5, pp. 449-450 Study Session 16-68-f differentiate between the nominal spread, the zero-volatility spread, and the option-adjusted spread The difference between the Z-spread and the nominal spread is greater for issues in which the principal is repaid over time rather than only at maturity. In addition, the difference between the Z-spread and the nominal spread is greater in a steep yield curve environment.

103	"Yield Measures, Spot Rates, and Forward Rates," Frank J. Fabozzi 2008 Modular Level I, Vol. 5, pp. 451-452 Study Session 16-68-g describe how the option-adjusted spread accounts for the option cost in a bond with an embedded option The Z-spread is the sum of the OAS and the option cost.
104	"Features of Debt Securities," Frank J. Fabozzi 2008 Modular Level I, Vol. 5, pp. 242-245 Study Session 15-62-b, e describe the basic features of a bond, the various coupon rate structures, and the structure of floating-rate securities; identify the common options embedded in a bond issue, explain the importance of embedded options, and state whether such options benefit the issuer or the bondholder Inverse floaters have a coupon formula such that the coupon rate increases when the reference rate decreases and decreases when reference rate increases. The coupon rate moves in the opposite direction from the change in the reference rate.
105	"Introduction to the Measurement of the Interest Rate Risk," Frank J. Fabozzi 2008 Modular Level I, Vol. 5, pp. 498-499 Study Session 16-69-e distinguish among the alternative definitions of duration, and explain why effective duration is the most appropriate measure of interest rate risk for bonds with embedded options; Users of this interest rate risk measure are interested in what it tells them about the price sensitivity of a bond or a portfolio to change in interest rates.
106	"Introduction to the Measurement of the Interest Rate Risk," Frank J. Fabozzi 2008 Modular Level I, Vol. 5, pp. 488-489 Study Session 16-69-d compute and interpret the effective duration of a bond, given information about how the bond's price will increase and decrease for given changes in interest rates, and compute the approximate percentage price change for a bond, given the bond's effective duration and a specified change in yield Effective duration = $(V_{\_} - V_{+}) / (2 \times Vo \times \Delta y)$ Duration for Bond A = (102.97 - 101.04) / (2 × 102.00 × 0.005) = 1.89Duration for Bond B = (94.07 - 83.81) / (2 × 88.69 × 0.005) = 11.57

107	"Understanding Yield Spread," Frank J. Fabozzi 2008 Modular Level I, Vol. 5, pp. 352-355, 359-361 Study Session 16-65-e, i compute, compare, and contrast the various yield spread measures; compute the after-tax yield of a taxable security and the tax-equivalent yield of a tax-exempt security Taxable equivalent yield = (tax-exempt yield) / (1 - marginal tax rate) = 3.86 / (1 - 0.32) = 5.68% Yield ratio = (yield on tax-exempt bond) / (yield of US Treasury) = 3.86 / (3.86 + 100bp) = 3.86 / 4.86 = 0.79
108	"Introduction to the Measurement of the Interest Rate Risk," Frank J. Fabozzi 2008 Modular Level I, Vol. 5, pp. 500-501 Study Session 16-69-f compute the duration of a portfolio, given the duration of the bonds comprising the portfolio, and explain the limitations of portfolio duration Portfolio value = (1.02 x 7 mil) + (0.94356 x 5 mil) + (0.88688 x 3 mil) = 14,518,440 Weight, Bond A = 7,140,000 / 14,518,440 = 0.492 Weight, Bond B = 4,717,800 / 14,518,440 = 0.325 Weight, Bond C = 2,660,640 / 14,518,440 = 0.183 Portfolio duration = (0.492 x 1.89) + (0.325 x 7.70) + (0.183 x 11.55) = 5.55
109	"Alternative Investments," Bruno Solnik and Dennis McLeavey 2008 Modular Level I, Vol. 6, pp. 184-185 Study Session 18-76-c explain the advantages and risks of ETFs Some sector and international ETFs have large bid-ask spreads and substantial expense ratios compared to managed portfolios, which may provide a more cost-efficient alternative to ETFs, particularly for large institutional investors.
110	"Alternative Investments," Bruno Solnik and Dennis McLeavey 2008 Modular Level I, Vol. 6, pp. 193-194 Study Session 18-76-f calculate the net operating income (NOI) from a real estate investment, the value of a property using the sales comparison and income approaches, and the after-tax cash flows, net present value, and yield of a real estate investment Using the income approach: ($1,800,000 - $1,200,000) / 0.15 = $4,000,000
111	"Alternative Investments," Bruno Solnik and Dennis McLeavey 2008 Modular Level I, Vol. 6, pp. 190-198 Study Session 18-76-e describe the various approaches to the valuation of real estate The after-tax cash flow approach requires specific information about the investor's marginal tax rate. The value of the property is dependent on the investor's marginal tax rate.

112	"Alternative Investments," Bruno Solnik and Dennis McLeavey 2008 Modular Level I, Vol. 6, pp. 209-210 Study Session 18-76-i discuss the descriptive accuracy of the term "hedge fund," define hedge fund in terms of objectives, legal structure, and fee structure, and describe the various classifications of hedge funds Hedge funds focus on absolute returns and place specific bets in the search for positive alphas. Because the fee structure includes a small base fee plus an incentive fee proportional to profits, hedge funds have an option-like fee structure.
113	"Alternative Investments," Bruno Solnik and Dennis McLeavey 2008 Modular Level I, Vol. 6, pp. 220-222 Study Session 18-76-l discuss the performance of hedge funds, the biases present in hedge fund performance measurement, and explain the effect of survivorship bias on the reported return and risk measures for a hedge fund database Survivorship bias affects both the returns and the risk (standard deviation) reported for the hedge funds. Hedge funds with low or negative returns will be excluded from the index as will funds with high volatility; those funds will not survive for eight years. If only the successful funds remain in the index, the returns are overstated and the risk is understated. Overstated returns and understated risk will tend to overstate the Sharpe ratio.
114	"Alternative Investments," Bruno Solnik and Dennis McLeavey 2008 Modular Level I, Vol. 6, pp. 205-206 Study Session 18-76-h calculate the net present value (NPV) of a venture capital project, given the project's possible payoff and conditional failure probabilities The probability that the venture will pay £6 million at the end of five years is 25%. The probability of failure is 75%. The expected NPV if the project succeeds is £2,014,296 using FV = 6,000,000, I = 19%, n = 5 for a present value of 2,514,296 - 500,000 = 2,014,296 The NPV of the project is 0.25(2,014,296) + 0.75(-500,000) = 128,574 The investment has a positive NPV and should be accepted.
115	"An Introduction to Asset Pricing Models," Frank K. Reilly and Keith C. Brown 2008 Modular Level I, Vol. 4, pp. 259-262 Study Session 12-51-c define systematic and unsystematic risk, and explain why an investor should not expect to receive additional return for assuming unsystematic risk Unsystematic risk (risk that can be diversified away) is not rewarded. Systematic risk is the risk for which investors are compensated. Systematic risk is that part of total risk that is correlated with the market and related to changes in macroeconomic variables (such as changes in interest rate volatility). Standard deviation of returns of the market portfolio is a measurement of systematic risk.

116	"An Introduction to Portfolio Management," Frank K. Reilly and Keith C. Brown 2008 Modular Level I, Vol. 4, pp. 248-249 Study Session 12-50-f describe the efficient frontier, and explain the implications for incremental returns as an investor assumes more risk The efficient frontier is curved. As an investor moves up the curve, risk increases and the slope decreases. The decreasing slope means that adding equal increments of risk provide diminishing increments of expected return.
117	"An Introduction to Portfolio Management," by Frank K. Reilly and Keith C. Brown 2008 Modular Level I, Vol. 4, pp. 232-237 Study Session 12-50-d compute and interpret the covariance of rates of return, and show how it is related to the correlation coefficient If the covariance of returns between two assets is a positive number, the correlation coefficient for those two assets cannot be negative. The correlation coefficient is equal to the covariance standardized by the product of the individual standard deviations (which are always positive).
118	"An Introduction to Asset Pricing Models," Frank K. Reilly and Keith C. Brown 2008 Modular Level I, Vol. 4, pp. 264-266 Study Session 12-51-e calculate, using the SML, the expected return on a security, and evaluate whether the security is overvalued, undervalued, or properly valued In equilibrium the estimated rate of return is equal to the required return. The CAPM required rate of return = 3% + (1.2 x 9%) = 13.8%.
119	"The Asset Allocation Decision," Frank K. Reilly and Keith C. Brown 2008 Modular Level I, Vol. 4, pp. 202-210 Study Session 12-49-a, b, c describe the steps in the portfolio management process, and explain the reasons for a policy statement; explain why investment objectives should be expressed in terms of risk and return, and list the factors that may affect an investor's risk tolerance; describe the return objectives of capital preservation, capital appreciation, current income, and total return The investment objective must be expressed in terms of both risk and return and current income from dividends and interest represents only the investor's return objective. It does not include any reference to risk tolerance or risk limits as provided in the other alternatives.

120	"An Introduction to Portfolio Management," Frank K. Reilly and Keith C. Brown 2008 Modular Level I, Vol. 4, pp. 230-232 Study Session 12-50-c compute and interpret the expected return, variance, and standard deviation for an individual investment and the expected return and standard deviation for a portfolio The expected return of an asset is the weighted average of the possible returns = (0.35 x 8) + (0.30 x 10) + (0.25 x 16) + (0.10 x 20) = 11.8%. The expected standard deviation is calculated as follows: $\sigma^2 = 0.35 \times (8 - 11.8)^2 + 0.30 \times (10 - 11.8)^2 + 0.25 \times (15 - 11.8)^2 + 0.10 \times (20 - 11.8)^2$ $= 15.31$ $s = (15.31)^{0.5} = 3.91\%$