Level 1 Mock Exam - Part 2_2008

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1	*Guidance for Standards I-VII, Standards of Practice Handbook* 2008 Modular Level I, Vol. 1, p. 67 Study Session 1-1-c explain the ethical responsibilities required by the Code and Standards, including the multiple subsections of each Standard According to Standard III(E), members must keep information about current, former, and prospective clients confidential unless the information concerns illegal activities on the part of the client.
2	*Guidance for Standards I-VII, Standards of Practice Handbook* 2008 Modular Level I, Vol. 1, pp. 60-62 Study Session 1-2-b distinguish between conduct that conforms to the Code and Standards and conduct that violates the Code and the Standards According to Standard III(C), members who are responsible for managing a portfolio to a specific mandate, strategy, or style, must only make investment recommendations or take investment actions that are consistent with the stated objectives and constraints of the portfolio.
3	*Guidance for Standards I-VII, Standards of Practice Handbook* 2008 Modular Level I, Vol. 1, p. 97 Study Session 1-2-c recommend practices and procedures designed to prevent violations of the Code of Ethics and Standards of Professional Conduct Banning employee investments is *not* recommended. According to Standard VI(B), investment transactions for clients and employers must have priority over investment transactions in which a member or candidate is the beneficial owner. Recommended procedures for compliance with this Standard include establishing reporting procedures for investment personnel. Recommended reporting requirements include disclosure of holdings; preclearance procedures; and duplicate confirmations of employee transactions. These reporting requirements are recommended for monitoring and enforcing procedures established to eliminate conflicts of interest relating to personal trading.

4	*Introduction to the Global Investment Performance Standards* (GIPS) 2008 Modular Level I, Vol. 1, p. 120 Study Session 1-3-a explain why the GIPS standards were created, what parties the GIPS standards apply to, and who is served by the standards Only investment management firms that actually manage assets can claim compliance with the standards. Compliance is a firm-wide process that cannot be achieved on a single product, portfolio, or composite.
5	*Introduction to the Global Investment Performance Standards* (GIPS) 2008 Modular Level I, Vol. 1, pp. 119-120 Study Session 1-3-a explain why the GIPS standards were created, what parties the GIPS standards apply to, and who is served by the standards In the past, the investment community had great difficulty making meaningful comparisons on the basis of accurate investment performance data. The GIPS standards ensure fair representation and full disclosure of performance information.
6	*Guidance for Standards I-VII, Standards of Practice Handbook* 2008 Modular Level I, Vol. 1, p. 90 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 Members are not required to disclose their responsibilities as CFA charterholders to clients. They are, however, required to disclose all matters that could reasonably be expected to impair their independence and objectivity or interfere with respective duties to their clients, prospective clients, and employer. Service as a director, market-making activities, and beneficial ownership of stock are three examples of such matters.
7	*Guidance for Standards I-VII, Standards of Practice Handbook* 2008 Modular Level I, Vol. 1, pp. 76-78 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 Members with supervisory responsibility must make reasonable efforts to detect violations of laws, rules, regulations, and the Code and Standards. They exercise reasonable supervision by establishing and implementing written compliance procedures.

8	*Standards of Practice Handbook*, 9th edition (CFA Institute, 2005), pp. 15-16, 83, 91, 113 Standards I-VII 2008 Modular Level I, Vol. 1, pp. 21-22, 69, 75, 89 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 The Standards require that members not accept gifts or compensation that might reasonably compete with their employer's interest unless they obtain written consent from all parties involved. Arrangements such as that offered to Pederson may cause a conflict of interest or result in partiality that could impede Pederson's independence and objectivity.
9	*Standards of Practice Handbook*, 9th edition (CFA Institute, 2005), pp. 93-94 Standards I-VII 2008 Modular Level I, Vol. 1, pp. 76-77 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 The Standards require that members make reasonable efforts to detect and prevent violations of applicable laws, rules, and regulations. Supervisors exercise reasonable supervision by establishing and implementing written compliance procedures and ensuring the procedures are followed through periodic review. Once a supervisor learns of a possible violation, the supervisor must promptly initiate an investigation. Warning the employee to cease the activity, as Abel has done, is not enough. Pending the outcome of the investigation, Abel may need to place limits on the employee's activities to ensure the violations will not be repeated.
10	*Guidance for Standards I-VII, Standards of Practice Handbook* 2008 Modular Level I, Vol. 1, pp. 50-53, 69-70, 80-81 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 Takada's use of astrology as a research methodology violates the Standards relating to Loyalty, Prudence, and Care as well as Diligence and Reasonable Basis. His research methodology and blog may also reflect poorly on his employer and cause the employer harm. Takada is least likely to violate the Standard relating to Fair Dealing because the blog is a method of mass communication that makes Takada's investment recommendations available to all readers simultaneously.

11	*Standards of Practice Handbook*, 9th edition (CFA Institute, 2005), pp. 105-107 Standards I-VII 2008 Modular Level I, Vol. 1, pp. 84-85 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 According to the Standards, members must promptly disclose to clients any changes to their investment process. Alvarez should notify his clients promptly of the change in his investment process and strategy.
12	*Standards of Practice Handbook*, 9th edition (CFA Institute, 2005), pp. 83-89, 111 Standards I-VII 2008 Modular Level I, Vol. 1, pp. 70-74, 88 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 The Standards do not impose a prohibition on the use of experience or knowledge gained at one employer from being used at another employer. Because records created on behalf of an employer are the property of the firm and not the member, Campbell must take care not to use the property or records of his former employer when creating a model for his new employer.
13	*Standards of Practice Handbook*, 9th edition (CFA Institute, 2005), pp. 113-115 Standards I-VII 2008 Modular Level I, Vol. 1, pp. 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 The Standards require members to put client interests ahead of member and employer interests. Because Brockman's compensation is dependent upon investment banking revenues, Brockman may not be objective. When issuing the report, he is in jeopardy of violating Standards relating to Independence and Objectivity; Loyalty, Prudence, and Care; and Disclosure of Conflicts.

14	*Standards of Practice Handbook*, 9th edition (CFA Institute, 2005), pp. 121-122 Standards I-VII 2008 Modular Level I, Vol. 1, pp. 36, 70, 81, 94-95 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 Pantoja least likely violates the Standard relating to Diligence and Reasonable Care because he is taking investment actions on his own behalf rather than on behalf of clients. His actions violate the Standards relating to Priority of Transactions (he trades ahead of his employer and its clients), Loyalty to Employer (his actions cause harm to his employer), and Misconduct (his actions reflect adversely on his professional integrity).
15	*Standards of Practice Handbook*, 9th edition (CFA Institute, 2005), pp. 127 Standards I-VII 2008 Modular Level I, Vol. 1, pp. 99 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 Compensation or other benefits received for the recommendation of products or services represents a conflict of interest. According to the Standards, Brubacher must disclose the referral fee arrangement.
16	*Standards of Practice Handbook*, 9th edition (CFA Institute, 2005), p. 131 Standards I-VII 2008 Modular Level I, Vol. 1, pp. 101-102 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 Candidates must not participate in any conduct which compromises the reputation or integrity of the CFA Examination.

17	*Standards of Practice Handbook*, 9th edition (CFA Institute, 2005), pp. 25-27, 33, 69-71 Standards I-VII 2008 Modular Level I, Vol. 1, pp. 29-30, 35, 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 Unger exercised diligence in her research; had a reasonable basis for the investment; and confirmed the suitability of the investment for her clients. Her actions were consistent with the Standards of Professional Conduct.
18	*Standards of Practice Handbook*, 9th edition (CFA Institute, 2005), p. 49 Standards I-VII 2008 Modular Level I, Vol. 1, pp. 31, 36, 47, 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 Guzdar least likely violates the Standard relating to Loyalty, Prudence, and Care as he attempted to provide liquidity to his clients. However, Guzdar's actions inflate trading volumes and distort prices and thus violate the Standard relating to Market Manipulation. Guzdar violates the Standard relating to Misconduct because market manipulation reflects adversely on his professional integrity. Guzdar may also violate the Standard relating to Misrepresentation if he misrepresents the actual liquidity and value of the stocks held in the portfolios.
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. 179-183 Study Session 2-5-c calculate and interpret the effective annual rate, given the stated annual interest rate and the frequency of compounding, and solve time value of money problems when compounding periods are other than annual The effective annual rate (EAR) and interest earned on the alternative investments is: Quarterly: EAR = $(1.02)^4 - 1 = 1.082432 - 1 = 0.082432 = 8.2432\%$ Interest = \$1,000,000 x 8.2432% = \$82,432 Continuous: EAR = $e^{0.0795 \times 1} = 1.082746 = 8.2746\%$ Interest = \$1,000,000 x 8.2746% = \$82,746 Therefore, the CD paying 7.95% compounded continuously offers the highest effective annual rate. Note that the EAR is the same concept as the effective annual yield (EAY) presented in Reading 6.

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) MacDonald's budget will support a monthly payment of $1,300. Given a 30-year mortgage at 7.2%, the loan amount will be $191,517.76 (N = 360, %I = 0.6, PMT = 1,300, solve for PV). If MacDonald makes a 10% down payment, then the most he can pay for his new home = $191,517.76 / (1 - 0.10) = $212,797.51 ≈ $212,800.
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. 219-221 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 IRR rule should not be used to differentiate between mutually exclusive projects if the scale of the projects differs or if the timing of the projects' cash flows differs.
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. 222-225 Study Session 2-6-c calculate, interpret, and distinguish between the money-weighted and time-weighted rates of return of a portfolio and appraise the performance of portfolios based on these measures The money-weighted rate of return is the IRR based on the cash flows related to the investment. In this case, a cash outflow of €86 occurs at t=0, another outflow of €94 occurs at t=1, and an inflow of €212 occurs at t=2. Using a financial calculator, the IRR of these cash flows is 11.60%. The time-weighted rate of return is the geometric mean of the annual rates of return in the stock irrespective of the amounts invested in the various time periods. The rate of return for the first period is (94 - 86) / 86 = 9.3023% and for the second period is (106 - 94) / 94 = 12.7660%. The geometric mean is $(1.093023 \times 1.127660)^{0.5} - 1 = 11.02\%$.

23	"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. 242-243 Study Session 2-7-a differentiate between descriptive statistics and inferential statistics, between a population and a sample, and among the types of measurement scales The analyst is using an ordinal scale which involves sorting data into categories based on some characteristic, such as the firms' P/E ratios.
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. 289-291 Study Session 2-7-g calculate and interpret the proportion of observations falling within a specified number of standard deviations of the mean, using Chebyshev's inequality Chebyshev's inequality holds for any distribution, regardless of shape, and states that the minimum proportion of observations located within k standard deviations of the mean is equal to $1 - 1/k^2$. In this case, $k = 2$ and $1 - 1/4 = 0.75$ or 75%.
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. 297-302 Study Session 2-7-i define and interpret skewness, explain the meaning of a positively or negatively skewed return distribution, and describe the relative locations of the mean, median, and mode for a nonsymmetrical distribution A positively skewed distribution has a long tail to the right with a large frequency of observations occurring in the left part of the distribution. For a distribution of returns, this means frequent small losses and a few extreme gains. The result is that the extreme gains pull the mean to the right while the mode resides on the left with the bulk of the observations. The median falls between the mean and the mode.

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"Probability Concepts," Richard A. Defusco, Dennis W. McLeavey, Jerald E. Pinto, and David E. Runkel
2008 Modular Level I, Vol. 1, pp. 325-326
Study Session 2-8-e
calculate and interpret 1) the joint probability of two events, 2) the probability that at least one of two events will occur, given the probability of each and the joint probability of the two events, and 3) a joint probability of any number of independent events
The probability that at least one of two events will occur is the sum of the probabilities of the separate events less the joint probability of the two events.

P(*A* or *B*) = P(*A*) + P(*B*) - P(*AB*)

95% = 85% + 40% - P(*AB*); therefore P(*AB*) = 30%

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"Common Probability Distributions," Richard A. Defusco, Dennis W. McLeavey, Jerald E. Pinto, and David E. Runkel
2008 Modular Level I, Vol. 1, pp. 389-390
Study Session 2-9-f
explain the key properties of the normal distribution, distinguish between a univariate and a multivariate distribution, and explain the role of correlation in the multivariate normal distribution
A normal distribution has a kurtosis of 3. Its excess kurtosis (kurtosis - 3.0) equals zero.

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"Common Probability Distributions," Richard A. Defusco, Dennis W. McLeavey, Jerald E. Pinto, and David E. Runkel
2008 Modular Level I, Vol. 1, pp. 397-399
Study Session 2-9-i
define shortfall risk, calculate the safety-first ratio, and select an optimal portfolio using Roy's safety-first criterion
Roy's safety-first ratio = $[E(R_p) - R_L] / \sigma_p$
with the optimal portfolio having the highest ratio. The safety-first ratios for the four allocations are:

Allocation	Safety-first ratio
A	0.83
B	1.21
C	0.59
D	1.20

29	"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-e calculate and interpret the standard error of the sample mean The standard error of the sample mean is the sample standard deviation (or the population standard deviation if known) divided by the square root of the sample size. In this case, the standard error of the sample mean = $32^{0.5} / 50^{0.5} = 0.80\%$
30	"Sampling and Estimation," Richard A. Defusco, Dennis W. McLeavey, Jerald E. Pinto, and David E. Runkel 2008 Modular Level I, Vol. 1, pp. 436-438 Study Session 2-10-i describe the properties of Student's *t*-distribution, and calculate and interpret its degrees of freedom The Student's *t*-distribution has fatter tails and is less peeked compared to the normal distribution.
31	"Sampling and Estimation," Richard A. Defusco, Dennis W. McLeavey, Jerald E. Pinto, and David E. Runkel 2008 Modular Level I, Vol. 1, pp. 436-438 Study Session 2-10-j calculate and interpret a confidence interval for a population mean, given a normal distribution with 1) a known population variance, 2) an unknown population variance, or 3) with an unknown variance and the sample size is large The width of a confidence interval depends on the size of the standard error. The standard error will be smaller if the sample variance (standard deviation) is smaller and the sample size *n* is larger.
32	"Hypothesis Testing," Richard A. Defusco, Dennis W. McLeavey, Jerald E. Pinto, and David E. Runkel 2008 Modular Level I, Vol. 1, pp. 456-466 Study Session 2-11-a define a hypothesis, describe the steps of hypothesis testing, interpret and discuss the choice of the null hypothesis and alternative hypothesis, and distinguish between one-tailed and two-tailed tests of hypotheses The seven steps in hypothesis testing are: 1) Stating the hypothesis. 2) Identifying the appropriate test statistic and its probability distribution. 3) Specifying the significance level. 4) Stating the decision rule. 5) Collecting the data and calculating the test statistic. 6) Making the statistical decision. 7) Making the economic or investment decision.

33	"Output and Costs," Michael Parkin 2008 Modular Level I, Vol. 2, pp. 129-130 Study Session 4-17-d explain the firm's production function, its properties of diminishing returns and diminishing marginal product of capital, the relation between short-run and long-run costs, and how economies and diseconomies of scale affect long-run costs Marginal cost decreases at low outputs because of economies from greater specialization. At higher levels of production, it eventually increases because of the law of diminishing returns.
34	"Output and Costs," Michael Parkin 2008 Modular Level I, Vol. 2, pp. 136-138 Study Session 4-17-d explain the firm's production function, its properties of diminishing returns and diminishing marginal product of capital, the relation between short-run and long-run costs, and how economies and diseconomies of scale affect long-run costs When a firm is producing a given output at the least possible cost, it is said to be operating on its long-run average cost curve.
35	"Monitoring Cycles, Jobs, and the Price Level," Michael Parkin 2008 Modular Level I, Vol. 2, pp. 297-299 Study Session 5-22-c explain the types of unemployment, full employment, the natural rate of unemployment, and the relation between unemployment and real GDP Structural unemployment refers to the unemployment due to changes in technology, changes in skills needed to perform jobs or changes in the location of jobs. Frictional unemployment, on the other hand, is influenced by unemployment compensation.
36	"Fiscal Policy," Michael Parkin 2008 Modular Level I, Vol. 2, pp. 441-443 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 The quantity of investment that firms plan to undertake depends only on how productive capital is and what it costs - its real interest rate. Therefore, a tax on interest income has no effect on investment demand. On the other hand, a tax on interest income weakens the incentive to save as savers look at the after-tax real interest rate they receive. The interest rates would rise as a result of the decrease in saving supply.

37	"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 quantity of land and other renewable natural resources is fixed and their supply is perfectly inelastic. On the other hand, the flow supply of a nonrenewable natural resource (e.g., oil) is perfectly elastic.
38	"Demand and Supply in Factor Markets," Michael Parkin 2008 Modular Level I, Vol. 2, pp. 275-277 Study Session 5-21-h differentiate between economic rent and opportunity costs When the supply of the factor is perfectly elastic (horizontal supply curve), the factor's entire income comprises opportunity cost. When the supply of the factor is perfectly inelastic (vertical supply curve), the factor's entire income comprises economic rent.
39	"Inflation," Michael Parkin 2008 Modular Level I, Vol. 2, pp. 414-418 Study Session 6-26-e explain the impact of inflation on unemployment, and describe the short-run and long-run Phillips curve, including the effect of changes in the natural rate of unemployment A change in the natural rate of unemployment shifts both short-run and long-run Phillips curves. Suppose the natural rate of unemployment increases from 6 to 9%, but the inflation remains constant at 10%. As a result, both short-run and long-run Phillips curves move outward adjusting to the new, higher level of natural unemployment rate. The new point of intersection between the two lines would be at 9% unemployment rate and 10% inflation rate (Figure 11, p. 418)
40	"Monetary Policy," Michael Parkin 2008 Modular Level I, Vol. 2, pp. 473-475 Study Session 6-28-c discuss the fixed-rule and feedback-rule policies to stabilize aggregate supply in response to a productivity shock and a cost-push inflation shock According to the feedback rule, when the price level rises the Fed decreases the quantity of money in order to reduce aggregate demand. As a result, the price level as well as the real GDP would remain constant.

41	"Demand and Supply in Factor Markets," Michael Parkin 2008 Modular Level I, Vol. 2, pp. 253-256 Study Session 5-21-a explain why demand for the factors of production is called derived demand, differentiate between marginal revenue and marginal revenue product (MRP), and describe how the MRP determines the demand for labor and the wage rate A change in total revenue that results from one more unit of labor is called the marginal revenue product of labor. In a perfectly competitive market, profit is maximized when, at the quantity of labor hired, marginal revenue equals marginal cost and marginal revenue product equals the wage rate. These two conditions are equivalent and the quantity of labor that maximizes profit produces the output that maximizes profit.
42	"Monopoly," Michael Parkin 2008 Modular Level I, Vol. 2, pp. 198-200 Study Session 5-19-e explain the potential gains from monopoly and the regulation of a natural monopoly The marginal cost pricing rule is efficient but it leaves the natural monopoly incurring an economic loss. Therefore, regulators almost never impose marginal cost pricing rule. Instead, they adopt the average cost pricing rule, which allows the firm to cover its costs and earn a normal profit.
43	"Inflation," Michael Parkin 2008 Modular Level I, Vol. 2, pp. 419-421 Study Session 6-26-f explain the relation among inflation, nominal interest rates, and the demand and supply of money The real interest rate equals the nominal interest rate minus the expected inflation rate, which is the same as nominal interest rate equals the real interest rate plus the expected inflation rate.
44	"Inflation," Michael Parkin 2008 Modular Level I, Vol. 2, pp. 402-405 Study Session 6-26-b describe and distinguish among the factors resulting in demand-pull and cost-push inflation, and describe the evolution of demand-pull and cost-push inflationary processes An increase in aggregate demand as a result of an increase in government purchases, an example of demand-pull inflation, leads to an increase in both price level and the real GDP (Figure 2, p. 402).

45	"Financial Analysis Techniques," Thomas R. Robinson, Hennie van Greuning, Elaine Henry, and Michael A. Broihahn 2008 Modular Level I, Vol. 3, pp. 590-593 "Working Capital Management," Edgar A. Norton, Jr., Kenneth L. Parkinson, and Pamela p. Peterson 2008 Modular Level I, Vol. 4, pp. 89-92 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 The cash conversion cycle is equal to inventory processing days + days in accounts receivable - payables payment period. Inventory turnover = $18.4 / $2.5 = $7.36. Inventory processing days: 365 / inventory turnover = 365 / 7.36 = 49.59 days. Days in accounts receivables: 365 / 24 = 15.21 days. Cash conversion cycle: 49.59 + 15.21 - 25 = 39.8 days.
46	"Financial Analysis Techniques," Thomas R. Robinson, Hennie van Greuning, Elaine Henry, and Michael A. Broihahn 2008 Modular Level I, Vol. 3, pp. 604-607 Study Session 10-41-f demonstrate the application of DuPont analysis (the decomposition of return on equity) The DuPont system can be used to break down return on equity (ROE) into three components: Profit margin, total asset turnover, and financial leverage multiplier. The first two components can be multiplied to calculate the return on assets (ROA). If the two companies have the same ROE, the company with the lower ROA must have a higher financial leverage multiplier (lower proportion of common equity in the capital structure).
47	"Financial Analysis Techniques," Thomas R. Robinson, Hennie van Greuning, Elaine Henry, and Michael A. Broihahn 2008 Modular Level I, Vol. 3, pp. 574-576 Study Session 10-41-a evaluate and compare companies using ratio analysis, common-size financial statements, and charts in financial analysis Interest expense is an income statement account and the common-size percentage should be computed as a percentage of sales for that company.

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. 271-273, 275-276 Study Session 8-34-f 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 Equipment sale 1 results in a gain of $20,000, sale 2 results in a gain of $30,000, and sale 3 results in a loss of $10,000. The net gain is $40,000. The amount that would be deducted from net income to determine cash flow from operations is equal to the net gain of $40,000.
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. 275-278 Study Session 8-34-f 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 change in retained earnings is $20 and dividends are paid from retained earnings. 2007 net income would equal the change in retained earnings plus any dividends paid during 2007. Depreciation expense would be added to net income and the changes in balance sheet accounts would also be considered to determine cash flow from operations. $20 + 5 (dividends) + 25 (depreciation) - 5 (increase in receivables) - 3 (increase in inventory) - 7 (decrease in payables) = $35 million.
50	"Analysis of Inventories," Gerald I. White, Ashwinpaul C. Sondhi, and Dov Fried 2008 Modular Level I, Vol. 3, pp. 312-320 Study Session 9-35-c, d, 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; compare and contrast the effects of the choice of inventory method on profitability, liquidity, activity, and solvency ratios; 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 negative change in the LIFO reserve would increase the cost of goods sold under FIFO compared to LIFO. FIFO COGS = LIFO COGS - Change in LIFO reserve. The LIFO reserve has a positive balance so that FIFO inventory would be higher than LIFO inventory. FIFO inventory = LIFO inventory + LIFO reserve.

51	"Analysis of Inventories," Gerald I. White, Ashwinpaul C. Sondhi, and Dov Fried 2008 Modular Level I, Vol. 3, pp. 320-325 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 The LIFO reserve did not change from 2006 to 2007. Without a change in the LIFO reserve, cost of goods sold would be the same under both methods. Sales are always the same for both, so gross profit margin would be the same in 2007. The FIFO inventory would be higher because the LIFO inventory and LIFO reserve are added to compute FIFO inventory. Because the inventory balances would be different under FIFO, the current ratio, inventory turnover, and net working capital would also be different under FIFO.
52	"Understanding the Income Statement," Thomas R. Robinson, Hennie van Greuning, Elaine Henry, and Michael A. Broihahn 2008 Modular Level I, Vol. 3, pp. 172-176 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 Dividends of $140,000 (0.07 x 2,000,000) should be deducted from net income to derive amount available for common shareholders: $1,360,000 = (1,500,000 - 140,000). Basic EPS would be $1,360,000 / 1,000,000 or $1.36 per share. Diluted EPS would consider the convertible bonds if they were dilutive. Interest on the bonds would be $400,000 and the after-tax add back to net income would be $400,000 (0.7) or $280,000. Diluted EPS would be $1,640,000 / 1,300,000 shares assuming conversion = $1.26 per share.
53	"Analysis of Financing Liabilities," Gerald I. White, Ashwinpaul C. Sondhi, and Dov Fried 2008 Modular Level I, Vol. 3, pp. 466-475 Study Session 9-39-b, c determine the effects of debt issuance and amortization of bond discounts and premiums on the financial statements and ratios; analyze the effect on financial statements and financial ratios of issuing zero-coupon debt When a company issues a zero-coupon bond, cash flow from operations is overstated over the life of the bond. Interest expense is recorded for income statements purposes, but is added back in the statement of cash flows as a non-cash adjustment to cash flow from operations.

54	"Financial Statement Analysis: An Introduction," Thomas R. Robinson, Hennie van Greuning, Elaine Henry, and Michael A. Broihahn 2008 Modular Level I, Vol. 3, p. 20 Study Session 7-29-c discuss the importance of financial statement notes and supplementary information (including disclosures of accounting methods, estimates and assumptions) and management's discussion and analysis Management must highlight any favorable and unfavorable trends and identify significant events and uncertainties that affect the company's liquidity, capital resources and results of operations in the MD&A.
55	"Financial Statement Analysis: An Introduction," Thomas R. Robinson, 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 An adverse opinion occurs when the financial statements materially depart from accounting standards and are not fairly presented.
56	"Financial Statement Analysis: An Introduction," Thomas R. Robinson, Hennie van Greuning, Elaine Henry, and Michael A. Broihahn 2008 Modular Level I, Vol. 3, p. 25 Study Session 7-29-e identify and explain information sources other than annual financial statements and supplementary information that analysts use in financial statement analysis Proxy statements are prepared and distributed to shareholders on matters that are to be put to a vote at shareholder meetings.
57	"Financial Reporting Mechanics," Thomas R. Robinson, Hennie van Greuning, Karen O'Connor Rubsam, Elaine Henry, and Michael A. Broihahn 2008 Modular Level I, Vol. 3, pp. 37-39 Study Session 7-30-b explain the relationship of financial statement elements and accounts, and classify accounts into the financial statement elements Net income is not an element of the financial statements, but the net result of revenues less expenses. The elements are: assets, liabilities, owners' equity, revenue and expenses.

58	"Financial Reporting Mechanics," Thomas R. Robinson, Hennie van Greuning, Karen O'Connor Rubsam, Elaine Henry, and Michael A. Broihahn 2008 Modular Level I, Vol. 3, p. 66 Study Session 7-30-e explain the need for accruals and other adjustments in preparing financial statements The company should have made an adjusting entry to reduce the Unearned revenue account (a liability) by $5,000 and increase Revenue (and hence net income and retained earnings) by $5,000. As the company failed to make the adjusting entry the liabilities are overstated and owners' equity is understated.
59	"Financial Reporting Mechanics," Thomas R. Robinson, Hennie van Greuning, Karen O'Connor Rubsam, Elaine Henry, and Michael A. Broihahn 2008 Modular Level I, Vol. 3, pp. 40-42 Study Session 7-30-c, f explain the accounting equation in its basic and expanded forms; prepare financial statements, given account balances or other elements in the relevant accounting equation, and explain the relationships among the income statement, balance sheet, statement of cash flows, and statement of owners' equity Total assets = liabilities + owner's equity. Owner's equity = $5,250,000 - 2,200,000 = 3,050,000. Owners equity = contributed capital + ending retained earnings. Ending retained earnings = 3,050,000 - 1,400,000 = 1,650,000. Ending retained earnings = beginning retained earnings + net income - dividends. 1,650,000 = 800,000 + NI - 200,000. Net income = $1,050,000
60	"Financial Reporting Standards," Thomas R. Robinson, Hennie van Greuning, Karen O'Connor Rubsam, Elaine Henry, and Michael A. Broihahn 2008 Modular Level I, Vol. 3, pp. 100-101 Study Session 7-31-b explain the role of standard-setting bodies, such as the International Accounting Standards Board and the U.S. Financial Accounting Standards Board, and regulatory authorities such as the International Organization of Securities Commissions, the U.K. Financial Services Authority, and the U. S. Securities and Exchange Commission in establishing and enforcing financial reporting standards Standard-setting bodies such as FASB or IASB are responsible for making the rules and developing accounting standards, whereas regulatory authorities such as the SEC, FSA, or IOSCO have the legal authority to enforce the standards.

61	"Financial Reporting Standards," Thomas R. Robinson, Hennie van Greuning, Karen O'Connor Rubsam, Elaine Henry, and Michael A. Broihahn 2008 Modular Level I, Vol. 3, pp. 122 Study Session 7-31-g identify the characteristics of a coherent financial reporting framework and barriers to creating a coherent financial reporting network The characteristics of a coherent financial reporting network are transparency, consistency and comprehensiveness. Comparability is a qualitative characteristic of financial statements.
62	"Understanding the Income Statement," Thomas R. Robinson, Hennie van Greuning, Elaine Henry, and Michael A. Broihahn 2008 Modular Level I, Vol. 3, pp. 181-182 Study Session 8-32-j evaluate a company's financial performance using common-size income statements and financial ratios based on the income statement The gross profit for Geneva = 5,000 - 2,100 = 2,900 or 58%. The gross profit for the industry is 1-.45 = 55%. Therefore, Geneva's cost of goods sold, or product costs, are lower; they must control them better. Operating costs are $1,750 / 5000 = 35% for Geneva and 32% for the industry, hence they are not as effective at controlling their operating costs as the industry.
63	"Financial Reporting Mechanics," Thomas R. Robinson, Hennie van Greuning, Karen O'Connor Rubsam, Elaine Henry, and Michael A. Broihahn 2008 Modular Level I, Vol. 3, pp. 53, 56 "Understanding the Balance Sheet," Thomas R. Robinson, Hennie van Greuning, Elaine Henry, and Michael A. Broihahn 2008 Modular Level I, Vol. 3, p. 197 Study Session 7-30-d, 8-33-a explain the process of recording business transactions using an accounting system based on the accounting equations; 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 Revenue recognition before the cash is received will result in the creation of an accounts receivable, an asset, whereas when the cash is received before the revenue is recognized a liability, unearned revenue, is created.

64	"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. 354-356 Study Session 9-36-a, b demonstrate the effects of capitalizing versus expensing on net income, shareholders' equity, cash flow from operations, and financial ratios; 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 If all development costs had been expensed then net income would be reduced by the amount spent, and increased by the amortization of the previously capitalized amounts: 225 - 25 + 10 = 210 million. ROA = 210 / 1,875 = 11.2%. CFO would be lower by the amount spent on development 290 - 25 = 265 million. Note: The amortization of previous development costs is a non-cash expense so does not affect cash flow.
65	"Analysis of Income Taxes," Gerald I. White, Ashwinpaul C. Sondhi, and Dov Fried 2008 Modular Level I, Vol. 3, p. 423 Study Session 9-38-a explain the key terms related to income tax accounting and the origin of deferred tax liabilities and assets Taxes payable is the current liability resulting from the current period taxable income based on taxable income.
66	"Analysis of Income Taxes," Gerald I. White, Ashwinpaul C. Sondhi, and Dov Fried 2008 Modular Level I, Vol. 3, p. 486 Study Session 9-39-d classify a debt security with equity features as a debt or equity security and demonstrate the effect of issuing debt with equity features on the financial statements and ratios The portion of the proceeds attributable to the warrants would be classified as equity, thus the portion classified as a liability would be smaller (lower). The lower balance sheet value would lead to a lower interest expense when it is calculated. The interest expense is based on the liability at the beginning of the period, not the coupon payment.

67	"Financial Statement Analysis: Applications," Thomas R. Robinson, Hennie van Greuning, Elaine Henry, and Michael A. Broihahn 2008 Modular Level I, Vol. 3, pp. 641-646 Study Session 10-42-b prepare a basic projection of a company's future net income and cash flow The cost of goods sold and operating expenses are relatively constant over the two-year period and averages of them can reasonably be used to forecast 2008. Interest expense is declining as a percent of sales, implying it is a fixed cost. Conversion into dollars for each year shows what interest expense has been (2007 = $80, 2006 = $80) and that would be a reasonable projected amount to use. The restructuring charge should not be included as it is a non-recurring item. The tax rate, 35%, is given. Sales $2,250.00 CGS (45%) 1,012.50 Operating expenses (40%) 900.00 Interest expense 80.00 Pretax margin $257.50 Tax (35%) 90.10 Net income $167.40
68	"Understanding the Income Statement," Thomas R. Robinson, Jan Hennie van Greuning, Elaine Henry, and Michael A. Broihahn 2008 Modular Level I, Vol. 3, p. 186 "International Standards Convergence," Thomas R. Robinson, Jan Hennie van Greuning, Elaine Henry, and Michael A. Broihahn 2008 Modular Level I, Vol. 3, p. 682 Study Sessions 8-32-k, 10-43-a state the accounting classification for items that are excluded from the income statement but affect owners' equity, and list the major types of items receiving that treatment; identify and explain the major international accounting standards for each asset and liability category on the balance sheet and the key differences from U.S. generally accepted accounting principles (GAAP) Under both U.S. GAAP and IFRS the unrealized gains and losses arising from carrying available-for-sale securities at market value are reported in equity as part of accumulated other comprehensive income.

69	"Capital Budgeting," John D. Stowe and Jacques R. Gagné 2008 Modular Level I, Vol. 4, pp. 8-10 Study Session 11-44-a explain the capital budgeting process, including the typical steps of the process, and distinguish among the various categories of capital projects Regulatory, safety, and environmental projects are often mandated by governmental agencies. The corporation may be required to install equipment to meet a regulatory standard, and the cost of satisfying the standard is born by the corporation. In this case, the corporation selects the lowest cost alternative that meets the requirement, i.e., the alternative with the least negative net present value.
70	"Capital Budgeting," John D. Stowe and Jacques R. Gagné 2008 Modular Level I, Vol. 4, pp. 10-12 Study Session 11-44-c explain how the following project interactions affect the evaluation of a capital project: (1) independent versus mutually exclusive projects, (2) project sequencing, and (3) unlimited funds versus capital rationing Project sequencing occurs when the investment in one project creates the option to invest in future projects.
71	"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 with a 13% discount rate, the NPV is €14.85. The profitability index = 1 + (NPV / initial investment) = 1 + 14.85 / 100) = 1.15.

72	"Cost of Capital," Yves Courtois, Gene C. Lai, and Pamela p. Peterson 2008 Modular Level I, Vol. 4, pp. 38-43 Study Session 11-45-a, c calculate and interpret the weighted average cost of capital (WACC) of a company; describe alternative methods of calculating the weights used in the weighted average cost of capital, including the use of the company's target capital structure Because the target capital weights are not given, you can use market value weights to compute the WACC. The market value weights for debt, preferred stock and equity are 0.2667, 0.0667, and 0.6667 respectively. WACC = w_d x r_d x (1 - t) + w_p x r_p + w_e x r_e = 0.2667 x 8% x (1 - 0.4) + 0.0667 x 10% + 0.6667 x 12% = 9.95%
73	"Cost of Capital," Yves Courtois, Gene C. Lai, and Pamela p. Peterson 2008 Modular Level I, Vol. 4, pp. 43-45 Study Session 11-45-d explain how the marginal cost of capital and the investment opportunity schedule are used to determine the optimal capital budget The optimal capital budget is the amount of new capital required to undertake all investment projects with an IRR greater than the marginal cost of capital.
74	"Cost of Capital," Yves Courtois, Gene C. Lai, and Pamela p. Peterson 2008 Modular Level I, Vol. 4, pp. 45-47 Study Session 11-45-f calculate and interpret the cost of fixed rate debt capital using the yield-to-maturity approach and the debt-rating approach Using a financial calculator: N = 20, PMT = 45, PV = 950, FV = 1000; solve for %I = 4.90%. The annual yield is twice the semiannual yield = 4.90% x 2 = 9.80%. The after-tax cost of debt = annual yield x (1 - t) = 9.80% x (1 - 0.30) = 6.86%
75	"Cost of Capital," Yves Courtois, Gene C. Lai, and Pamela p. Peterson 2008 Modular Level I, Vol. 4, pp. 48-49 Study Session 11-45-g calculate and interpret the cost of noncallable, nonconvertible preferred stock The cost of a perpetuity is the annual cash flow divided by the selling price. In this case: rp = 6.00 / 40 = 15.0%. Because the preferred stock dividend is not tax deductible to the issuing company, there is no after-tax adjustment.

76	"Cost of Capital," Yves Courtois, Gene C. Lai, and Pamela p. Peterson 2008 Modular Level I, Vol. 4, pp. 54-55 Study Session 11-45-h 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 According to the dividend discount model approach, the cost of common equity is equal to the dividend yield plus the growth rate. In this case, the growth rate is the earnings retention rate times the expected ROE or (1 - dividend payout rate) x expected ROE = 1 - 0.4) x 15% = 9%. The expected dividend = 2.40 x (1 + 0.09) = 2.616. The expected dividend yield = 2.616 / 32 = 8.175%. The cost of common equity = 8.175% + 9.0% ≈ 17.2%.
77	"Working Capital Management," Edgar A. Norton, Jr., Kenneth L. Parkinson, and Pamela p. Peterson 2008 Modular Level I, Vol. 4, pp. 101-102 Study Session 11-46-e compute and interpret comparable yields on various securities, compare portfolio returns against a standard benchmark, and evaluate a company's short-term investment policy guidelines Money market yield = discount-basis yield x (face value / purchase price) Purchase price = face value - [face value x discount-basis yield x (days to maturity / 360)] = $1,000,000 - [$1,000,000 x 0.0405 x (150 / 360)] = $983,125 Money market yield = 4.05% x ($1,000,000 / $983,125) = 4.12%
78	"The Corporate Governance of Listed Companies: A Manual for Investors" (CFA Institute, 2005) 2008 Modular Level I, Vol. 4, pp. 173-175 Study Session 11-48-f state the key areas of responsibility for which board committees are typically created, and explain the criteria for assessing whether each committee is able to adequately represent shareowner interests The compensation committee should be independent from executive management.
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; A price-weighted index, such as the Dow Jones Industrial Average, is computed by summing up the prices of individual stocks and dividing by a divisor that is adjusted for stock splits such that the index value is the same before and after the split.

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 The "equivalent" number of firms is the reciprocal of Herfindahl Index and it is 10.5 for Industry A and 5.2 for Industry B.
81	"Company Analysis and Stock Valuation," Frank K. Reilly and Keith C. Brown 2008 Modular Level I, Vol. 5, pp. 150-152 Study Session 14-59-a differentiate between 1) a growth company and a growth stock, 2) a defensive company and a defensive stock, 3) a cyclical company and a cyclical stock, 4) a speculative company and a speculative stock, and 5) a value stock and a growth stock CITC is a growth company because its spread between ROA and WACC is larger than the industry average and its dividend yield is 0% compared to the industry average of 1.2%. CITC's stock is a growth stock considering its under-valuation. A speculative stock, on the other hand, would be overvalued.
82	"Introduction to Price Multiples," John D. Stowe, Thomas R. Robinson, Jerald E. Pinto, and Dennis W. McLeavey 2008 Modular Level I, Vol. 5, pp. 211-212 Study Session 14-61-a discuss the rationales for, and the possible drawbacks to, the use of price to earnings (P/E), price to book value (P/BV), price to sales (P/S), and price to cash flow (P/CF) in equity valuation The historical cost basis of assets in P/B ratio is a drawback not a rationalization for using it as a measure of relative valuation.
83	"An Introduction to Security Valuation: Part II," Frank K. Reilly and Keith C. Brown 2008 Modular Level I, Vol. 5, pp. 180-181, 184 Study Session 14-60-b, f calculate and interpret the value both of a preferred stock and a common stock using the dividend discount model (DDM); 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 $V = OFCF_1 / (WACC - g) = 5 (1.06) / (0.124 - 0.06) =$ 82.81

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"An Introduction to Security Valuation: Part II," Frank K. Reilly and Keith C. Brown
2008 Modular Level I, Vol. 5, pp. 182-185
"Understanding the Cash Flow Statement," Thomas R. Robinson, Hennie van Greuning, Elaine Henry, and Michael A. Broihahn
2008 Modular Level I, Vol. 3, pp. 287-288
Study Session 14-60-b, f; 8-34-i
calculate and interpret the value both of a preferred stock and a common stock using the dividend discount model (DDM);
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; explain and calculate free cash flow to the firm, free cash flow to equity, and other cash flow ratios

Time Period	FCFE	PVIF @ 15%	Present Value
1	20 x 1.30 = 26.0	0.8696	€ 22.61
2	20 x 1.30^2 = 33.8	0.7561	€ 25.56
3	20 x 1.30^2 x 1.20 = 40.56	0.6575	€ 26.67
4 & Beyond	V_3 = (40.56 x 1.08) / (0.15 – 0.08) = 625.78	0.6575	€411.46
Value of Equity			€486.30
Value per share = Value of Equity / # of outstanding shares			€ 9.72

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"Introduction to Price Multiples," John D. Stowe, Thomas R. Robinson, Jerald E. Pinto, and Dennis W. McLeavey
2008 Modular Level I, Vol. 5, pp. 213-215
Study Session 14-61-b
calculate and interpret P/E, P/BV, P/S, and P/CF
BV per share = 4m shares (1.50) + $20 m + $5 m - $10 m = $21 m / 3.5 m sh. = $6.00
Price-to-book value = $21 / $6.00 = 3.50

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"Equity: Concepts and Techniques," Bruno Solnik and Dennis McLeavey
2008 Modular Level I, Vol. 5, pp. 133-134
Study Session 14-58-a
classify business cycle stages and identify attractive investment opportunities for each stage
Neoclassical growth theory assumes that marginal productivity of capital declines as more capital is added. Thus, it predicts that the long-term level of GDP depends on the country's savings rate but not the long-term growth rate because of diminishing marginal returns and reaching a steady state. This implies increase in dividends, as the new level of GDP is reached, but not an increase in the dividend growth rate.

87	"Organizing and Functioning of Securities Markets," Frank K. Reilly and Keith C. Brown 2008 Modular Level I, Vol. 5, pp. 13-15 Study Session 14-52-b, c distinguish between primary and secondary capital markets, and explain how secondary markets support primary markets; distinguish between call and continuous market A call market is an exchange (secondary market), not a primary market. Typically, it is characterized by a few listed stocks or a small number of active investor-traders. Buy-sell orders are cleared at a single price (equilibrium price) that satisfies most of the orders.
88	"An Introduction to Security Valuation: Part II," Frank K. Reilly and Keith C. Brown 2008 Modular Level I, Vol. 5, p. 185 "Understanding the Cash Flow Statement," Thomas R. Robinson, Hennie van Greuning, Elaine Henry, and Michael A. Broihahn 2008 Modular Level I, Vol. 3, pp. 287-288 Study Sessions 14-60-f, 8-34-i 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; explain and calculate free cash flow to the firm, free cash flow to equity, and other cash flow ratios Free cash flow to equity is after subtracting payments to both debt holders and preferred stockholders.
89	"Equity: Concepts and Techniques," Bruno Solnik and Dennis McLeavey 2008 Modular Level I, Vol. 5, p. 143 Study Session 14-58-e discuss, with respect to global industry analysis, the elements related to risk, and describe the basic forces that determine industry competition At high levels of the bargaining power of both buyers and suppliers, the producer would potentially experience a squeeze on profits and profit margins. Therefore, equity investments in producer firms with low levels of bargaining power of both buyers and sellers tend to be more attractive.

<table>
<tr><td>90</td><td>“Introduction to Price Multiples,” John D. Stowe, Thomas R. Robinson, Jerald E. Pinto, and Dennis W. McLeavey
2008 Modular Level I, Vol. 5, pp. 216-217
Study Session 14-61-b
calculate and interpret P/E, P/BV, P/S, and P/CF
<table><tr><th>Unadjusted price-to-book value ratio</th><th>Adjusted price-to-book value ratio</th></tr><tr><td>BV per share =
$1 m + $10 m + $4 m - $5 m =
$10 m / 1.5 m sh. =
$6.67.</td><td>Inventory adj.: ($6 m - $5 m) x 0.7 =
$0.7 m;
Adj. BV per share =
$1 m + $10 m + $4 m - $5 m + $0.7 m =
$10.7 m / 1.5 m sh. =
$7.13.</td></tr><tr><td>Price-to-book value =
$15 / $6.67 =
2.25</td><td>Adj. Price-to-book value =
$15 / $7.13 =
2.10</td></tr></table></td></tr>
<tr><td>91</td><td>“Futures Markets and Contracts,” Don M. Chance
2008 Modular Level I, Vol. 6, pp. 55-57
Study Session 17-72-b
differentiate between margin in the securities markets and margin in the futures markets, and define initial margin, maintenance margin, variation margin, and settlement price
Holders of futures positions must maintain account balances above the maintenance margin requirement.</td></tr>
<tr><td>92</td><td>“Futures Markets and Contracts,” Don M. Chance
2008 Modular Level I, Vol. 6, pp. 60-62
Study Session 17-72-d
describe how a futures contract can be terminated by a close-out (i.e., offset) at expiration (or prior to expiration), delivery, an equivalent cash settlement, or an exchange-for-physicals
To lock in profits, take delivery and pay short the settlement price of the previous day, not the expiration day.</td></tr>
<tr><td>93</td><td>“Option Markets and Contracts,” Don M. Chance
2008 Modular Level I, Vol. 6, pp. 108-110
Study Session 17-73-j
explain put-call parity for European options, and relate put-call parity to arbitrage and the construction of synthetic options
The put requires a short position in the underlying rather than a long position.</td></tr>
</table>

94	"Option Markets and Contracts," Don M. Chance 2008 Modular Level I, Vol. 6, pp. 115-116 Study Session 17-73-m indicate the directional effect of an interest rate change or volatility change on an option's price When volatility increases, the price of options increase. When interest rates increase, call option prices increase.
95	"Risk Management Applications of Option Strategies," Don M. Chance 2008 Modular Level I, Vol. 6, pp. 151-157 Study Session 17-75-a determine the value at expiration, profit, maximum profit, maximum loss, breakeven underlying price at expiration, and general shape of the graph of the strategies of buying and selling calls and puts, and indicate the market outlook of investors using these strategies Profit = max (0, -value of put at expiration + premium) = max (0, - (X - S) + premium) = -1 + 2.25 = $1.25
96	"Risk Management Applications of Option Strategies," Don M. Chance 2008 Modular Level I, Vol. 6, pp. 158-162 Study Session 17-75-b determine the value at expiration, profit, maximum profit, maximum loss, breakeven underlying price at expiration, and general shape of the graph of a covered call strategy and a protective put strategy, and explain the risk management application of each strategy A covered call breakeven price equals the price paid for the stock less the premium received for the call. Breakeven = (S - c) = (60 - 3.60) = $56.40
97	"Risks Associated With Investing in Bonds," Frank J. Fabozzi 2008 Modular Level I, Vol. 5, p. 267 Study Session 15-63-c explain how features of a bond (e.g., maturity, coupon, and embedded options) and the level of a bond's yield affect the bond's interest rate risk A callable bond's value is equal to an option-free bond less the value of the call option. As interest rates rise, the value of the call option decreases by a decreasing amount relative to the straight bond. The option-free bond also declines in value as interest rates rise, but this is offset by the decline in the value of the call option. Therefore, the price of a callable bond decreases by less than a comparable option-free bond.
98	"Risks Associated With Investing in Bonds," Frank J. Fabozzi 2008 Modular Level I, Vol. 5, p. 264-285 Study Session 15-63-a explain the risks associated with investing in bonds The investor faces event risk in a corporate bond and interest rate risk in a long dated, fixed coupon rate bond.

99	"Risks Associated With Investing in Bonds," Frank J. Fabozzi 2008 Modular Level I, Vol. 5, p. 284 Study Session 15-63-n explain how yield volatility affects the price of a bond with an embedded option and how changes in volatility affect the value of a callable bond and a putable bond An increase in expected yield volatility increases the price of the embedded put option. The price of a putable bond will increase because the price of the putable bond is equal to an option-free bond plus the put option.
100	"Risks Associated With Investing in Bonds," Frank J. Fabozzi 2008 Modular Level I, Vol. 5, pp. 266-270, 276-277 Study Session 15-63-c, i explain how features of a bond (e.g., maturity, coupon, and embedded options) and the level of a bond's yield affect the bond's interest rate risk; identify the factors that affect the reinvestment risk of a security and explain why prepayable amortizing securities expose investors to greater reinvestment risk than nonamortizing securities An amortizing security receives periodic payments of both interest and principal that must be reinvested; therefore, it is exposed to reinvestment risk. A zero-coupon bond has no reinvestment risk since no cash flows are received that must be reinvested before maturity. Because zero-coupon bonds do not have periodic cash flows, they have the highest interest rate risk for a given maturity and a given change in market yields.
101	"Risks Associated With Investing in Bonds," Frank J. Fabozzi 2008 Modular Level I, Vol. 5, pp. 269-271 Study Session 15-63-f compute and interpret the duration and dollar duration of a bond The formula for calculating the duration of a bond (estimated percentage price change for a 100 basis point change in yield) is: Price if yields decline - price if yields increase / 2(initial price)(change in yield in decimal) = 99.3 - 89.7 / 2 (95.4)0.0120 = 4.19287.
102	"Risks Associated With Investing in Bonds," Frank J. Fabozzi 2008 Modular Level I, Vol. 5, pp. 277-281 Study Session 15-63-j describe the various forms of credit risk and describe the meaning and role of credit ratings The bond is expected to see a widening of spreads as a result of deteriorating fundamentals and a potential downgrade but still remaining investment grade.

103	"Overview of Bond Sectors and Instruments," Frank J. Fabozzi 2008 Modular Level I, Vol. 5, pp. 299-301 Study Session 15-64-b describe the types of securities issued by the U.S. Department of the Treasury (e.g., bills, notes, bonds, and inflation protection securities), and differentiate between on-the-run and off-the-run Treasury securities First adjust the principal by inflation = $100,000 x 1.05 = $105,000. Then multiply the adjusted principal by the real rate = $105,000 x 0.02 = $2,100.
104	"Overview of Bond Sectors and Instruments," Frank J. Fabozzi 2008 Modular Level I, Vol. 5, pp. 308-312 Study Session 15-64-f state the motivation for creating a collateralized mortgage obligation Adding Tranche B of the CMO to the portfolio will most likely reduce prepayment. A passthrough security, such as a Ginnie Mae, can be prepaid as the underlying loans pay off principal, i.e., they are exposed to prepayment risk. On the other hand, the tranches in a CMO will be paid off sequentially, i.e., Tranche A then Tranche B. Tranche B has less prepayment risk than the underlying passthrough securities.
105	"Overview of Bond Sectors and Instruments," Frank J. Fabozzi 2008 Modular Level I, Vol. 5, pp. 318-321 Study Session 15-64-h describe the characteristics and motivation for the various types of debt issued by corporations (including corporate bonds, medium-term notes, structured notes, commercial paper, negotiable CDs, and bankers acceptances) Default rates apply to the issuer and would be equal for any security issued by that issuer while the recovery of the unsecured debenture is lower than for the first mortgage bond which is secured.
106	"Monetary Policy in an Environment of Global Financial Markets," Otmar Issing 2008 Modular Level I, Vol. 5 pp. 379-383 Study Session 15-66-a, b identify how central bank behavior affects short-term interest rates, systemic liquidity, and market expectations, thereby affecting financial markets; describe the importance of communication between a central bank and the financial markets Central banks should guide markets and not follow them. The reason for this is that financial markets are susceptible to speculative bubbles that stray from fundamentals. Central bankers must keep their eyes on fundamentals.

107	"Introduction to the Valuation of Debt Securities," Frank J. Fabozzi 2008 Modular Level I, Vol. 5, pp. 398-399, 410-412 Study Session 15-67-e compute the value of a zero-coupon bond Interest rate is 5.6% = 5% + 0.6%. The semiannual interest rate is 2.8%. The price of the bond, using semiannual discounting is: $\frac{\$1000}{1.028^{10}} = \$758.70$
108	"Introduction to the Valuation of Debt Securities," Frank J. Fabozzi 2008 Modular Level I, Vol. 5, pp. 392-395 Study Session 15-67-d explain how the price of a bond changes as the bond approaches its maturity date, and compute the change in value that is attributable to the passage of time The bond's price should move downward toward par as time passes given that it trades at a premium and market rates are unchanged.
109	"Alternative Investments," Bruno Solnik and Dennis McLeavey 2008 Modular Level I, Vol. 6, pp. 191-192 Study Session 18-76-e describe the various approaches to the valuation of real estate One variation of the sales comparison approach (hedonic price estimation) uses recent transactions in the area to derive an equation that weights various property attributes to determine a value for the property.
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 NOI = \$180,000 - \$15,000 - \$10,000 - \$18,000 = \$137,000
111	"Alternative Investments," Bruno Solnik and Dennis McLeavey 2008 Modular Level I, Vol. 6, pp. 227-228 Study Session 18-76-q explain the motivation for investing in commodities, commodity derivatives, and commodity-linked securities A primary motivation for an investment in commodities, commodity derivatives, commodity-linked bonds, and commodity-linked equity are the diversification benefits provided due to the negative return correlation with other assets and the positive correlation with inflation.

112	"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 The presence of infrequently traded assets leads to smoothed pricing that induces a significant downward bias to the measured risk of the assets as well as the correlations of returns with conventional equity and fixed income returns.
113	"Alternative Investments," Bruno Solnik and Dennis McLeavey 2008 Modular Level I, Vol. 6, pp. 220-222 Study Session 18-76-g explain the stages in venture capital investing, venture capital investment characteristics and challenges to venture capital valuation and performance measurement Venture capital investments provided to initiate commercial manufacturing and sales is considered a form of first-stage financing.
114	"Alternative Investments," Bruno Solnik and Dennis McLeavey 2008 Modular Level I, Vol. 6, pp. 211-213 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 Emerging-market funds invest in less liquid and less efficient assets of emerging markets that are difficult to short.
115	"The Asset Allocation Decision," Frank K. Reilly and Keith C. Brown 2008 Modular Level I, Vol. 4, pp. 210-216 Study Session 12-49-d describe the investment constraints of liquidity, time horizon, tax concerns, legal and regulatory factors, and unique needs and preferences Unique needs and preferences include the prohibition of certain investments. The investment constraints of liquidity, tax concerns, and legal and regulatory factors adequately address the portfolio's other constraints.

116	"The Asset Allocation Decision," Frank K. Reilly and Keith C. Brown 2008 Modular Level I, Vol. 4, pp. 202-203 Study Session 12-49-a describe the steps in the portfolio management process, and explain the reasons for a policy statement The final step in the portfolio management process includes evaluating portfolio performance. Evaluation of investor's investment knowledge, investment research, and portfolio construction are part of the first three steps in the process.
117	"The Asset Allocation Decision," Frank K. Reilly and Keith C. Brown 2008 Modular Level I, Vol. 4, pp. 202-203 Study Session 12-49-a describe the steps in the portfolio management process, and explain the reasons for a policy statement The second step in the portfolio management process includes examining current and projected financial, economic, political, and social conditions. Historical trends may be educational, but the focus of the second phase is determining the short-term and intermediate-term expected conditions to use in constructing a specific portfolio.
118	"The Asset Allocation Decision," Frank K. Reilly and Keith C. Brown 2008 Modular Level I, Vol. 4, pp. 218-220 Study Session 12-49-e describe the importance of asset allocation, in terms of the percentage of a portfolio's return that can be explained by the target asset allocation, and explain how political and economic factors result in differing asset allocations by investors in various countries The asset allocation decision explains about 90% of a fund's returns over time. Across all funds, asset allocation explains an average of 40% of the variation in fund returns, and slightly more than 100% of the average fund's level of return.
119	"The Asset Allocation Decision," Frank K. Reilly and Keith C. Brown 2008 Modular Level I, Vol. 4, pp. 223-224 Study Session 12-49-e describe the importance of asset allocation, in terms of the percentage of a portfolio's return that can be explained by the target asset allocation, and explain how political and economic factors result in differing asset allocations by investors in various countries The need to invest for portfolio growth is higher in inflationary environments and lower in countries where workers receive generous state pensions.

120	"An Introduction to Portfolio Management," Frank K. Reilly and Keith C. Brown 2008 Modular Level I, Vol. 4, pp. 230-245 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 the portfolio is the weighted average return of the two assets = 0.60 x 11 + 0.40 x 7 = 9.4%. The expected standard deviation of the portfolio is calculated as: $= \sqrt{w_1^2 \sigma_1^2 + w_2^2 \sigma_2^2 + 2\, w_1\, w_2\, r_{1,2}\, \sigma_1 \sigma_2}$ or $[w_1^2 \sigma_1^2 + w_2^2 \sigma_2^2 + 2\, w_1\, w_2\, r_{1,2}\, \sigma_1 \sigma_2]^{0.5}$ $= [(0.60^2 \times 0.05^2) + (0.40^2 \times 0.04^2) + (2 \times 0.60 \times 0.40 \times 0.75 \times 0.05 \times 0.04)]^{0.5}$ $= [0.0009 + 0.000256 + 0.00072]^{0.5}$ $= [0.001876]^{0.5} = 0.0433 \approx 4.3\%$