e. Predict what interest expense will be in Year 12 assuming no substantial change in the debt structure (Hint: Identify the substantial interest-bearing obligations of the company and multiply that balance times an appropriate estimate of the effective rate for that debt).

CHECK
(*e*) Rate is 11.53%

PROBLEM 3–2
Capital Lease Implications for Financial Statements

On January 1, Year 1, Burton Company leases equipment from Nelson Company for an annual lease rental of $10,000. The lease term is five years, and the lessor's interest rate implicit in the lease is 8%. The lessee's incremental borrowing rate is 8.25%. The useful life of the equipment is five years, and its estimated residual value equals its removal cost. Annuity tables indicate that the present value of an annual lease rental of $1 (at 8% rate) is $3.993. The fair value of leased equipment equals the present value of rentals. (Assume the lease is capitalized.)

Required:

a. Prepare accounting entries required by Burton Company for Year 1.

b. Compute and illustrate the effect on the income statement for the year ended December 31, Year 1, and for the balance sheet as of December 31, Year 1.

c. Construct a table showing payments of interest and principal made every year for the five-year lease term.

d. Construct a table showing expenses charged to the income statement for the five-year lease term if the equipment is purchased. Show a column for (1) amortization, (2) interest, and (3) total expenses.

e. Discuss the income and cash flow implications from this capital lease.

CHECK
Interest is $2,649.95 for Year 2

PROBLEM 3–3
Explaining and Interpreting Leases

On January 1, Borman Company, a lessee, entered into three noncancellable leases for new equipment identified as: Lease J, Lease K, and Lease L. None of the three leases transfers ownership of the equipment to Borman at the end of the lease term. For each of the three leases, the present value at the beginning of the lease term of the minimum lease payments, excluding that portion of the payments representing executory costs such as insurance, maintenance, and taxes to be paid by the lessor, including any profit thereon, is 75% of the excess of the fair value of the equipment to the lessor at the inception of the lease over any related investment tax credit retained by the lessor and expected to be realized by the lessor. The following additional information is distinct for each lease:

- Lease J does not contain a bargain purchase option; the lease term is equal to 80% of the estimated economic life of the equipment.
- Lease K contains a bargain purchase option; the lease term is equal to 50% of the estimated economic life of the equipment.
- Lease L does not contain a bargain purchase option; the lease term is equal to 50% of the estimated economic life of the equipment.

Required:

a. Explain how Borman Company should classify each of these three leases. Discuss the rationale for your answer.

b. Identify the amount, if any, Borman records as a liability at inception of the lease for each of the three leases.

c. Assuming that Borman makes the minimum lease payments on a straight-line basis, describe how Borman should record each minimum lease payment for each of these three leases.

d. Assess accounting practice in accurately portraying the economic reality for each lease.

CHECK
(*a*) Leases J and K are capital leases

(AICPA Adapted)

PROBLEM 3–4
Interpreting Accounting for Bonds

One means for a corporation to generate long-term financing is through issuance of noncurrent debt instruments in the form of bonds.

Required:

a. Describe how to account for proceeds from bonds issued with detachable stock purchase warrants.

b. Contrast a serial bond with a term (straight) bond.

c. Interest expense, under the generally accepted effective interest method, equals the book value of the debt (face value plus unamortized premium or minus unamortized discount) multiplied by the effective rate of the debt. Any premium or discount is amortized to zero over the life of the bond. Explain how both interest expense and the debt's book value will differ from year-to-year for debt issued at a premium versus a discount.

d. Describe how to account for and classify any gain or loss from reacquisition of a long-term bond prior to its maturity.

e. Assess accounting for bonds in the analysis of financial statements.

PROBLEM 3–5
Interpreting Accounting for Bonds

On November 1, Year 5, Abbott Company sells its five-year, $1,000 face value, 11% term bonds dated October 1, Year 5, at a discount yielding an effective annual interest rate (yield) of 12%. Interest is payable semiannually, and the first interest payment date is April 1, Year 6. Abbott amortizes the bond discount. It also incurs bond issue costs in preparing and selling the bond issue. In another, unrelated transaction, dated December 1, Year 5, Abbott issues six-year, $1,000 face value, 9% nonconvertible bonds with detachable stock warrants at an amount exceeding the sum of the face value of the bonds and the fair value of the warrants.

Required:

a. Identify what factors determine that the 11% term bonds are sold at a discount. Explain.

b. Describe how all items related to the 11% term bonds (except cash) are reported/disclosed (1) in a balance sheet prepared immediately after the term bond issue is sold, and (2) for a balance sheet prepared at December 31, Year 5.

c. Identify the period of time over which Abbott amortizes the bond discount.

d. Describe how Abbott should account for the proceeds from sale of the 9% nonconvertible bonds with detachable stock purchase warrants.

(AICPA Adapted)

PROBLEM 3–6
Interpreting Stock Prices and Their Link to Financial Statements

Assume the stock of Superior Oil Corporation is being traded on the New York Stock Exchange for $1,492 per share, while Getty Oil Company stock is trading at $64 per share.

Required:

a. Explain how Superior Oil stock could be selling for a much larger price than Getty stock.

b. Indicate whether you can conclude anything about the relative profitability of these two companies from their stock prices.

CHECK
(*c*) Getty's return is higher

c. On the previous day, Superior Oil stock was selling at $1,471 per share, while Getty Oil sold for $62. Indicate which stock experienced the greater return.

d. If you (as an investor) purchased Getty Oil at $62 per share and sold it the next day for $64, describe what effect your purchase and sale of stock would have on the financial statements of Getty Oil Company.

EXERCISE 4–11
Identifying Assets

Which of the following items are classified as assets on a typical balance sheet?

a. Depreciation.
b. CEO salary.
c. Cash.
d. Deferred income taxes.
e. Installment receivable (collectible in 3 years).
f. Capital withdrawal (dividend).
g. Inventories.
h. Prepaid expenses.
i. Deferred charges.
j. Work-in-process inventory.
k. Depreciation expense.
l. Bad debts expense.
m. Loan to officers.
n. Loan from officers.
o. Fully trained sales force.
p. Common stock of a subsidiary.
q. Trade name purchased.
r. Internally developed goodwill.
s. Franchise agreements obtained at no cost.
t. Internally developed e-commerce system.

EXERCISE 4–12
Restating and Analyzing Inventory from LIFO to FIFO

Campbell Soup

Refer to the financial statements of **Campbell Soup Company** in Appendix A.

Required:

Campbell Soup mainly uses the LIFO cost assumption in determining its cost of goods sold and inventory amounts. Compute both ending inventory and gross profit of Campbell Soup for Year 11 assuming the company uses FIFO inventory accounting.

PROBLEMS

PROBLEM 4–1
Interpreting and Restating Inventory from FIFO to LIFO

Assume you are analyzing the financial statements of ABEX Chemicals. Your analysis raises concerns with certain accounting procedures that potentially distort its operating results.

Required:

a. Data for ABEX Corp. is reported in Case 10–5. Using the data in Exhibit I of that case, describe how ABEX's use of the FIFO method in accounting for its petrochemical inventories affects its division's operating margin for each of the following periods:
(1) Years 5 through 7.
(2) Years 7 through 9.

b. ABEX is considering adopting the LIFO method of accounting for its petrochemical inventories in either Year 10 or Year 11. Recommend an adoption date for LIFO and justify your choice.

(CFA Adapted)

CHECK
(*a*) (2) FIFO increases margins

PROBLEM 4–2
Restating Inventory from LIFO to FIFO

BigBook.Com uses LIFO inventory accounting. Notes to BigBook.Com's Year 9 financial statements disclose the following (it has a marginal tax rate of 35%):

Inventories	Year 8	Year 9
Raw materials	$392,675	$369,725
Finished products	401,342	377,104
	794,017	746,829
Less LIFO reserve	(46,000)	(50,000)
	$748,017	$696,829

CHECK
(*b*) $2,600

Required:

a. Determine the amount by which Year 9 retained earnings of BigBook.Com changes if FIFO is used.

b. Determine the amount by which Year 9 net income of BigBook.Com changes if FIFO is used for both Years 8 and 9.

c. Discuss the usefulness of LIFO to FIFO restatements in an analysis of BigBook.Com.

(AICPA Adapted)

PROBLEM 4–3
Analysis of Inventory and Related Adjustments

Excerpts from the annual report of **Lands' End** follow ($ in thousands):

Lands' End

	Year 9	Year 8
Inventory	$219,686	$241,154
Cost of sales	754,661	675,138
Net income	31,185	64,150
Tax rate	37%	37%

Note 1: If the first-in, first-out (FIFO) method of accounting for inventory had been used, inventory would have been approximately $26.9 million and $25.1 million higher than reported at Year 9 and Year 8, respectively.

CHECK
(*b*) $32,319

Required:

a. What would ending inventory have been at Year 9 and Year 8 had FIFO been used?

b. What would net income for the year ended Year 9 have been had FIFO been used?

c. Discuss the usefulness of LIFO to FIFO restatements for analysis purposes.

PROBLEM 4–4
T-Account Analysis of Plant Assets

Refer to the financial statements of **Campbell Soup** in Appendix A.

Campbell Soup

Required:

a. By means of T-account analysis, explain the changes in Campbell's Property, Plant, and Equipment account for Year 11. Provide as much detail as the disclosures enable you to provide. (*Hint:* Utilize information disclosed on the Form 10-K schedule attached at the end of its annual report in Appendix A.)

b. Explain the usefulness of this type of analysis.

PROBLEM 4–5
Capitalizing versus Expensing of Costs

Trimax Solutions develops software to support e-commerce. Trimax incurs substantial computer software development costs as well as substantial research and development (R&D) costs related to other aspects of its product line. Under GAAP, if certain conditions are met, Trimax capitalizes software development costs but expenses the other R&D costs. The following information is taken from Trimax's annual reports ($ in thousands):

	1999	2000	2001	2002	2003	2004	2005	2006
R&D costs	$ 400	$ 491	$ 216	$ 212	$ 355	$ 419	$ 401	$ 455
Net income	312	367	388	206	55	81	167	179
Total assets (at year-end)	3,368	3,455	3,901	4,012	4,045	4,077	4,335	4,650
Equity (at year-end)	2,212	2,460	2,612	2,809	2,889	2,915	3,146	3,312
Capitalized software costs								
Unamortized balance (at year-end)	20	31	27	22	31	42	43	36
Amortization expense	4	7	9	12	13	15	15	14

d. Describe how to account for the gain or loss on sale of property, plant, and equipment for cash.

e. Discuss the important considerations in analyzing property, plant, and equipment.

PROBLEM 4–9
Capitalization, Depreciation, and Return on Investment

Mirage Resorts, Inc., recently completed construction of Bellagio Hotel and Casino in Las Vegas. Total cost of this project was approximately $1.6 billion. The strategy of the investors is to build a gambling environment for "high rollers." As a result, they paid a premium for property in the "high rent" district of the Las Vegas Strip and built a facility inspired by the drama and elegance of fine art. The investors are confident that if the facility attracts high volume and high stakes gaming, the net revenues will justify the $1.6 billion investment several times over. If the facility fails to attract high rollers, this investment will be a financial catastrophe. Mirage Resorts depreciates its fixed assets using the straight-line method over the estimated useful lives of the assets. Assume construction of Bellagio is completed and the facility is opened for business on January 1, Year 1. Also assume annual net income before depreciation and taxes from Bellagio is $50 million, $70 million, and $75 million for Year 1, Year 2, and Year 3, and that the tax rate is 25%.

Required:

Compute the return on assets for the Bellagio segment for Year 1, Year 2, and Year 3, assuming management estimates the useful life of Bellagio to be:

a. 25 years. *b.* 15 years. *c.* 10 years. *d.* 1 year.

CHECK
(*a*) ROA, Year 1: −0.68%, Year 2: 0.31%, Year 3: 0.59%

PROBLEM 4–10
Analyzing Self-Constructed Assets

Jay Manufacturing, Inc., began operations five years ago producing probos, a new medical instrument it hoped to sell to doctors and hospitals. The demand for probos far exceeded initial expectations, and the company was unable to produce enough probos to meet demand. The company was manufacturing this product using self-constructed equipment at the start of operations. To meet demand, it needed more efficient equipment. The company decided to design and self-construct this new, more efficient equipment. A section of the plant was devoted to development of the new equipment and a special staff was hired. Within six months, a machine was developed at a cost of $170,000 that successfully increased production and reduced labor costs substantially. Sparked by the success of this new machine, the company built three more machines of the same type at a cost of $80,000 each.

Required:

a. In addition to satisfying a need that outsiders could not meet within the desired time, why might a company self-construct fixed assets for its own use?

b. Generally, what costs should a company capitalize for a self-constructed fixed asset?

c. Discuss the propriety of including in the capitalized cost of self-constructed assets:
  (1) The increase in overhead caused by the self-construction of fixed assets.
  (2) A proportionate share of overhead on the same basis as that applied to goods manufactured for sale.

d. Discuss the accounting treatment for the $90,000 amount ($170,000 − $80,000) by which the cost of the first machine exceeded the cost of subsequent machines.

(AICPA Adapted)

PROBLEM 4–11
Analyzing Intangible Assets (Patents)

On June 30, Year 1, your client, the Vandiver Corp., is granted two patents covering plastic cartons that it has been producing and marketing profitably for the past three years. One patent covers the manufacturing process, and the other covers related products. Vandiver executives tell you that these patents represent the most significant breakthrough in the industry in three decades. The products have been marketed under the registered trademarks Safetainer, Duratainer, and Sealrite. Your client has already granted licenses under the patents to other manufacturers in the U.S. and abroad and is receiving substantial royalties. On July 1, Year 1, Vandiver commenced patent