CONCEPTUAL FRAMEWORK UNDERLYING FINANCIAL ACCOUNTING

Ex. 2-135—Accounting concepts—identification.

State the accounting assumption, principle, information characteristic, or constraint that is most applicable in the following cases.

- 1. All payments less than \$25 are expensed as incurred. (Do not use conservatism.)
- 2. The company employs the same inventory valuation method from period to period.
- 3. A patent is capitalized and amortized over the periods benefited.
- 4. Assuming that dollars today will buy as much as ten years ago.
- 5. Rent paid in advance is recorded as prepaid rent.
- 6. Financial statements are prepared each year.
- 7. All significant post-balance sheet events are reported.
- 8. Personal transactions of the proprietor are distinguished from business transactions.

Solution 2-135

- 1. Materiality constraint.
- 2. Consistency characteristic.
- 3. Matching principle or going concern assumption.
- 4. Monetary unit assumption.
- 5. Matching principle or going concern assumption.
- 6. Periodicity assumption.
- 7. Full disclosure principle.
- 8. Economic entity assumption.

Ex. 2-136—Accounting concepts—identification.

Presented below are a number of accounting procedures and practices in Ramirez Corp. For each of these items, list the assumption, principle, information characteristic, or modifying convention that is violated.

- 1. Because the company's income is low this year, a switch from accelerated depreciation to straight-line depreciation is made this year.
- 2. The president of Ramirez Corp. believes it is foolish to report financial information on a yearly basis. Instead, the president believes that financial information should be disclosed only when significant new information is available related to the company's operations.
- 3. Ramirez Corp. decides to establish a large loss and related liability this year because of the possibility that it may lose a pending patent infringement lawsuit. The possibility of loss is considered remote by its attorneys.
- 4. An officer of Ramirez Corp. purchased a new home computer for personal use with company money, charging miscellaneous expense.
- 5. A machine, that cost \$40,000, is reported at its current market value of \$45,000.

Solution 2-136

- 1. Consistency.
- 2. Periodicity.
- 3. Matching (also, conservatism).
- 4. Economic entity.

Ex. 2-137—Accounting concepts—matching.

Listed below are several information characteristics and accounting principles and assumptions. Match the letter of each with the appropriate phrase that states its application. (Items *a* through k may be used more than once or not at all.)

- a. Economic entity assumption
- b. Going concern assumption
- c. Monetary unit assumption
- d. Periodicity assumption
- e. Historical cost principle
- f. Revenue recognition principle

- g. Matching principle
- h. Full disclosure principle
- i. Relevance characteristic
- j. Reliability characteristic
- k. Consistency characteristic
- 1. Stable-dollar assumption (do not use historical cost principle).
- 2. Earning process completed and realized or realizable.
- 3. Presentation of error-free information with representational faithfulness.
- _____ 4. Yearly financial reports.
- 5. Accruals and deferrals in adjusting and closing process. (Do not use going concern.)
- 6. Useful standard measuring unit for business transactions.
- 7. Notes as part of necessary information to a fair presentation.
- 8. Affairs of the business distinguished from those of its owners.
- 9. Business enterprise assumed to have a long life.
- _____10. Valuing assets at amounts originally paid for them.
- _____11. Application of the same accounting principles as in the preceding year.
- _____12. Summarizing significant accounting policies.
- _____13. Presentation of timely information with predictive and feedback value.

Solution 2-137

1.	С	4.	d	7.	h	10.	е	13.	i
2.	f	5.	g	8.	а	11.	k		
3.	j	6.	C	9.	b	12.	h		

Ex. 2-138—Accounting concepts—fill in the blanks.

Fill in the blanks below with the accounting principle, assumption, or related item that best completes the sentence.

- 1. ______ and ______ are the two primary qualities that make accounting information useful for decision making.
- 2. Information that helps users confirm or correct prior expectations has
- _____ enables users to identify the real similarities and differences 3. in economic phenomena because the information has been measured and reported in a similar manner for different enterprises.
- 4. Some costs which give rise to future benefits cannot be directly associated with the revenues they generate. Such costs are allocated in a _____ and _____ manner to the periods expected to benefit from the cost.
- would allow the expensing of all repair tools when purchased, even though they have an estimated life of 3 years. 5.
- characteristic requires that the same accounting method 6. The be used from one accounting period to the next, unless it becomes evident that an alternative method will bring about a better description of a firm's financial situation.
- ______ guides accountants to select the accounting treatment that is least 7. likely to overstate income and assets.
- 8. Parenthetical balance sheet disclosure of the inventory method utilized by a particular company is an application of the _____ principle.
- Corporations must prepare accounting reports at least yearly due to the _____ assumption.
- 10. Recording and reporting inflows at the end of production is an allowable exception to the _____principle.

Solution 2-138

- Relevance; reliability
 feedback value
 Comparability
 rational; systematic

- 5. The materiality convention 10. revenue recognition
- 6. consistency
- Conservatism
 full disclosure
 periodicity

Ex. 2-139—Basic assumptions.

Briefly explain the four basic assumptions that underlie financial accounting.

Solution 2-139

- 1. The economic entity assumption states that economic activity can be identified with a particular unit of accountability.
- 2. The going concern assumption assumes that a business enterprise will have a long life.
- 3. The monetary unit assumption means that money is the common denominator of economic activity and provides an appropriate basis for accounting measurement and analysis. In addition, the monetary unit remains reasonably stable.
- 4. The periodicity assumption implies that the economic activities of an enterprise can be divided into artificial time periods.

Ex. 2-140—Revenue recognition.

Revenue is generally recognized at the point of sale. There are three exceptions, however. Name the time for each exception, give two qualifications or criteria for the use of each exception, and give an example for each exception.

Solution 2-140

- 1. During production. The revenue is known (contract) or dependably estimable. Total costs are estimable or other means are available to estimate progress toward completion. Examples are long-term construction contracts and service-type transactions.
- 2. At completion. There are quoted prices. Units are interchangeable. There are no significant distribution costs. Examples are precious metals or agricultural products.
- 3. At collection. There is no reasonable basis for estimating the degree of collectibility. Costs of collection, bad debts, and repossessions are not estimable. Examples are installment sales and cost recovery method.

Ex. 2-141—Historical cost principle.

Cost as a basis of accounting for assets has been severely criticized. What defense can you build for cost as the basis for financial accounting?

Solution 2-141

Cost is definite and verifiable and not a matter for conjecture or opinion. Once established, cost is fixed as long as the asset remains the property of the party that incurred the cost. Cost is based on fact; that is, it is the result of an arm's length transaction. Cost is also measurable or determinable. Over the years, accountants have found cost to be the most practical basis for record keeping. Financial statements prepared on a cost basis provide business enterprise information having a common, accepted basis from which each reader can make inferences, comparisons, and analyses.

Ex. 2-142—Matching concept.

A concept is a group of related ideas. Matching could be considered a concept because it includes ideas related to both revenue recognition and expense recognition. Briefly explain the ideas in (a) revenue recognition and (b) expense recognition.

Solution 2-142

(a) The ideas in revenue recognition include the "three R's" and "earned":

- 1. Revenues are inflows of net assets from delivering or producing goods or services or other earning activities that are the major operations of an enterprise during a period.
- 2. Recognition is recording and reporting in the financial statements.
- 3. Revenues are *realized* when goods or services are exchanged for cash or claims to cash.
- 4. Revenues are *earned* when the earnings process is complete or virtually complete.

The revenue recognition principle is that revenue is recognized when it is realized and it is earned.

(b) The ideas in expense recognition include "expense" and "matching":

- 1. Expenses are outflows of net assets during a period from delivering or producing goods or services or other activities that are the major operations of the entity.
- 2. Expenses are recognized when the goods or services (efforts) make their contribution to revenue.

The expense recognition principle is that expenses are matched with revenues. Expenses are matched three ways:

- 1. When there is an association with revenue, expenses are matched with revenues in the period the revenues are recognized.
- 2. When no association with revenue is evident, expenses are allocated on some systematic and rational basis.
- 3. When no association with revenue is evident and no future benefits are expected, expenses are recognized immediately.

THE ACCOUNTING INFORMATION SYSTEM

Ex. 3-125—Adjusting entries.

Present, in journal form, the adjustments that would be made on July 31, 2011, the end of the fiscal year, for each of the following.

- 1. The supplies inventory on August 1, 2010 was \$7,350. Supplies costing \$20,150 were acquired during the year and charged to the supplies inventory. A count on July 31, 2011 indicated supplies on hand of \$8,810.
- 2. On April 30, a ten-month, 9% note for \$20,000 was received from a customer.
- *3. On March 1, \$12,000 was collected as rent for one year and a nominal account was credited.

Solution 3-125

1.	Supplies Expense Supplies	18,690	18,690
2.	Interest Receivable Interest Revenue	450	450
*3.	Rent Revenue Unearned Revenue	7,000	7,000

Ex. 3-126—Adjusting entries.

Reed Co. wishes to enter receipts and payments in such a manner that adjustments at the end of the period will not require reversing entries at the beginning of the next period. Record the following transactions in the desired manner and give the adjusting entry on December 31, 2010. (Two entries for each part.)

- 1. An insurance policy for two years was acquired on April 1, 2010 for \$8,000.
- 2. Rent of \$12,000 for six months for a portion of the building was received on November 1, 2010.

Solution 3-126

1.	Prepaid Insurance	8,000	
	Cash		8,000
	Insurance Expense	3,000	
	Prepaid Insurance	,	3,000
2.	Cash	12,000	
	Unearned Rent	,	12,000
	Unearned Rent	4,000	,
	Rent Revenue	·	4,000

Ex. 3-127

The adjusted trial balance of Ryan Financial Planners appears below. Using the information from the adjusted trial balance, you are to prepare for the month ending December 31:

- 1. an income statement.
- 2. a statement of retained earnings.
- 3. a balance sheet.

RYAN FINANCIAL PLANNERS Adjusted Trial Balance December 31 2010

	<u>Debit</u>	<u>Credit</u>
Cash	\$ 4,400	
Accounts Receivable	2,200	
Office Supplies	1,800	
Office Equipment	15,000	
Accumulated Depreciation—Office Equipment		\$ 4,000
Accounts Payable		3,800
Unearned Revenue		5,000
Common Stock		10,000
Retained Earnings		4,400
Dividends	2,500	
Service Revenue		3,700
Office Supplies Expense	600	
Depreciation Expense	2,500	
Rent Expense	1,900	
	\$30,900	\$30,900

Solution 3-127 (20 min)

RYAN FINANCIAL PLANNERS Income Statement For the Month Ended December 31, 2010

	\$ 3,700
\$2,500	
1,900	
600	
	5,000
	\$(1,300)
	\$2,500 1,900 600

2. RYAN FINANCIAL PLANNERS Statement of Retained Earnings For the Month Ended December 31, 2010

Retained earnings, December 1		\$ 4,400
Less: Net loss	\$1,300	
Dividends	2,500	3,800
Retained earnings, December 31		<u>\$600</u>

RYAN FINANCIAL PLANNERS Balance Sheet

December 31, 2010		
Assets		
Cash Accounts receivable Office supplies	\$15,000	\$ 4,400 2,200 1,800
Less: Accumulated depreciation—office equipment Total assets	4,000	<u>_11,000</u> <u>\$19,400</u>
Liabilities and Stockholders' Equity		
Liabilities		
Accounts payable Unearned revenue Total liabilities	\$ 3,800 <u>5,000</u>	\$ 8,800
Stockholders' Equity		. ,
Common stock	10,000	
Retained earnings	600	<u> 10,600</u>

Common stock	10,000	
Retained earnings	600	10,600
Total liabilities and stockholders' equity		\$19,400

1.

3.

PROBLEMS

Pr. 3-133—Adjusting entries and account classification.

Selected amounts from Trent Company's trial balance of 12/31/10 appear below:

1.	Accounts Payable	\$ 160,000
2.	Accounts Receivable	150,000
3.	Accumulated Depreciation—Equipment	200,000
4.	Allowance for Doubtful Accounts	20,000
5.	Bonds Payable	500,000
6.	Cash	150,000
7.	Common Stock	60,000
8.	Equipment	840,000
9.	Insurance Expense	30,000
10.	Interest Expense	10,000
11.	Merchandise Inventory	300,000
12.	Notes Payable (due 6/1/11)	200,000
13.	Prepaid Rent	150,000
14.	Retained Earnings	818,000
15.	Salaries and Wages Expense	328,000

(All of the above accounts have their standard or normal debit or credit balance.)

<u>Part A.</u> Prepare adjusting journal entries at year end, December 31, 2010, based on the following supplemental information.

- a. The equipment has a useful life of 15 years with no salvage value. (Straight-line method being used.)
- b. Interest accrued on the bonds payable is \$15,000 as of 12/31/10.
- c. Expired insurance at 12/31/10 is \$20,000.
- d. The rent payment of \$150,000 covered the six months from November 30, 2010 through May 31, 2011.
- e. Salaries and wages earned but unpaid at 12/31/10, \$22,000.

Solution 3-133

Part A.

a.	Depreciation Expense—Equipment (\$840,000 – 0) ÷ 15 Accumulated Depreciation—Equipment	56,000	56,000
b.	Interest Expense Interest Payable	15,000	15,000
C.	Prepaid Insurance Insurance Expense (\$30,000 - \$20,000)	10,000	10,000
d.	Rent Expense (\$150,000 ÷ 6) Prepaid Rent	25,000	25,000
e.	Salaries and Wages Expense Salaries and Wages Payable	22,000	22,000

INCOME STATEMENT AND RELATED INFORMATION

PROBLEMS

Pr. 4-124—Multiple-step income statement.

Presented below is information related to Farr Company.

Retained earnings, December 31, 2010	\$ 650,000
Sales	1,400,000
Selling and administrative expenses	240,000
Hurricane loss (pre-tax) on plant (extraordinary item)	290,000
Cash dividends declared on common stock	33,600
Cost of goods sold	780,000
Gain resulting from computation error on depreciation charge in 2009 (pre-tax)	520,000
Other revenue	120,000
Other expenses	100,000

Instructions

Prepare in good form a multiple-step income statement for the year 2011. Assume a 30% tax rate and that 80,000 shares of common stock were outstanding during the year.

Solution 4-124

Farr Company INCOME STATEMENT For the Year Ended December 31, 2011

Sales		\$1,400,000
Cost of goods sold		780,000
Gross profit		620,000
Selling and administrative expenses		240,000
Income from operations		380,000
Other revenue		120,000
Other expenses		(100,000)
Income before taxes		400,000
Income taxes		(120,000)
Income before extraordinary item		280,000
Extraordinary loss, net of applicable income ta	axes of \$87,000	(203,000)
Net income		<u>\$ 77,000</u>
Per share of common stock—		
Income before extraordinary item	\$3.50	
Extraordinary item, net of tax	(2.54)	
Net income	<u>\$.96</u>	

BALANCE SHEET AND STATEMENT OF CASH FLOWS

Pr. 5-120—Statement of cash flows preparation.

Selected financial statement information and additional data for Stanislaus Co. is presented below. Prepare a statement of cash flows for the year ending December 31, 2010

		December 31
	<u>2009</u>	<u>2010</u>
Cash	\$42,000	\$63,000
Accounts receivable (net)	84,000	151,200
Inventory	168,000	201,600
Land	58,800	21,000
Equipment	<u>504,000</u>	<u> </u>
TOTAL	<u>\$856,800</u>	<u>\$1,226,400</u>
Accumulated depreciation	\$84,000	\$115,600
Accounts payable	50,400	86,000
Notes payable - Short-term	67,200	29,400
Notes payable - Long-term	168,000	302,400
Common stock	420,000	487,200
Retained earnings	<u>67,200</u>	205,800
TOTAL	<u>\$856,800</u>	<u>\$1,226,400</u>

Additional data for 2010:

- 1. Net income was \$235,200.
- 2. Depreciation was \$31,600.
- 3. Land was sold at its original cost.
- 4. Dividends of \$96,600 were paid.
- 5. Equipment was purchased for \$84,000 cash.
- 6. A long-term note for \$201,600 was used to pay for an equipment purchase.
- 7. Common stock was issued to pay a \$67,200 long-term note payable.

Solution 5-120

Stanislaus Co. Statement of Cash Flows For the year ended December 31, 2010

Net Income Cash flow from operating activities		\$235,200
Depreciation expense	31,600	
Increase in inventory	(33,600)	
Increase in accounts payable	35,600 (37,800)	(71 400)
Net cash provided by operating activities	(<u>07,000)</u>	163,800
Cash flow from investing activities Purchase equipment Sale of land	(84,000) 37 800	
Net cash used by investing activities	<u>01,000</u>	(46,200)
Cash flow from financing activities Payment of cash dividend	(96,600)	
Net cash used by financing activities		<u>(96,600)</u>
Net increase in cash Cash at beginning of year		21,000 42,000
Cash at end of the year		63,000

Noncash investing and financing activities

Payment of long-term note payable with issuance of \$67,200 of common stock

ACCOUNTING AND THE TIME VALUE OF MONEY

PROBLEMS

Pr. 6-141—Present value and future value computations.

- Part (a) Compute the amount that a \$20,000 investment today would accumulate at 10% (compound interest) by the end of 6 years.
- Part (b) Tom wants to retire at the end of this year (2010). His life expectancy is 20 years from his retirement. Tom has come to you, his CPA, to learn how much he should deposit on December 31, 2010 to be able to withdraw \$40,000 at the end of each year for the next 20 years, assuming the amount on deposit will earn 8% interest annually.
- Part (c) Judy Thomas has a \$1,200 overdue debt for medical books and supplies at Joe's Bookstore. She has only \$400 in her checking account and doesn't want her parents to know about this debt. Joe's tells her that she may settle the account in one of two ways since she can't pay it all now:
 - 1. Pay \$400 now and \$1,000 when she completes her residency, two years from today.
 - 2. Pay \$1,600 one year after completion of residency, three years from today.

Assuming that the cost of money is the only factor in Judy's decision and that the cost of money to her is 8%, which alternative should she choose? Your answer must be supported with calculations.

Solution 6-141

- Part (a) Future value of \$20,000 compounded @ 10% for 6 years (\$20,000 × 1.77156) = <u>\$35,431</u>.
- Part (b) Present value of a \$40,000 ordinary annuity discounted @ 8% for 20 years (\$40,000 × 9.81815) = <u>\$392,726</u>.

Part (c)	Alternative 1		
	Present value of \$1,000 discounted @ 8% for 2 years (\$1,000 × .85734) = Present value of \$1,000 now = Present value of \$400 now = Present value of Alternative 1	\$ <u>\$1</u>	857 <u>400</u> ,257
	<u>Alternative 2</u> Present value of \$1,600 discounted @ 8% for 3 years (\$1,600 × .79383)	<u>\$1</u>	<u>,270</u>

On the present value basis, Alternative 1 is preferable.

Pr. 6-142—Annuity with change in interest rate.

Jan Green established a savings account for her son's college education by making annual deposits of \$6,000 at the beginning of each of six years to a savings account paying 8%. At the end of the sixth year, the account balance was transferred to a bank paying 10%, and annual deposits of \$6,000 were made at the end of each year from the seventh through the tenth years. What was the account balance at the end of the tenth year?

Solution 6-142

Years 1-6: Future value of annuity due of \$6,000 for 6 periods at 8%: (7.33592 × 1.08) × \$6,000 = <u>\$47,537</u>

Years 7-10: Future value of \$47,537 for 4 periods at 10%: 1.4641 × \$47,537 = \$69,599 Future value of ordinary annuity of \$6,000 for 4 periods at 10%: 4.6410 × \$6,000 = \$27,846 Sum in bank at end of tenth year: \$27,846 + \$69,599 = \$97,445

Pr. 6-143—Present value of an ordinary annuity due.

Jill Morris is presently leasing a small business computer from Eller Office Equipment Company. The lease requires 10 annual payments of \$4,000 at the end of each year and provides the lessor (Eller) with an 8% return on its investment. You may use the following 8% interest factors:

	<u>9 Periods</u>	<u>10 Periods</u>	<u>11 Periods</u>
Future Value of 1	1.99900	2.15892	2.33164
Present Value of 1	.50025	.46319	.42888
Future Value of Ordinary Annuity of 1	12.48756	14.48656	16.64549
Present Value of Ordinary Annuity of 1	6.24689	6.71008	7.13896
Present Value of Annuity Due of 1	6.74664	7.24689	7.71008
Pr. 6-143 (cont.)			

Instructions

- (a) Assuming the computer has a ten-year life and will have no salvage value at the expiration of the lease, what was the original cost of the computer to Eller?
- (b) What amount would each payment be if the ten annual payments are to be made at the *beginning* of each period?

Solution 6-143

(a)	Present value of an ordinary annuity of \$4,000 at 8% for 10 years is 6.71008 × \$4,000 =	<u>\$26,840</u>
(b)	Present value factor for an annuity due of \$4,000 at 8% for 10 years is 7.24689; \$26,840 ÷ 7.24689 =	<u>\$3,704</u>

Pr. 6-144—Finding the implied interest rate.

Bates Company has entered into two lease agreements. In each case the cash equivalent purchase price of the asset acquired is known and you wish to find the interest rate which is applicable to the lease payments.

Instructions

Calculate the implied interest rate for the lease payments.

<u>Lease A</u> — Lease A covers office equipment which could be purchased for 36,048. Bates Company has, however, chosen to lease the equipment for 10,000 per year, payable at the end of each of the next 5 years.

<u>Lease B</u> — Lease B applies to a machine which can be purchased for 57,489. Bates Company has chosen to lease the machine for 12,000 per year on a 6-year lease. Payments are due at the start of each year.

Solution 6-144

<u>Lease A</u> — Calculation of the Implied Interest Rate: \$10,000 × (factor for Present Value of Ordinary Annuity for 5 yrs.) = \$36,048 Factor for Present Value of Ordinary Annuity for 5 yrs. = \$36,048 ÷ \$10,000 = <u>3.6048</u>

The 3.6048 factor implies a 12% interest rate.

<u>Lease B</u> — Calculation of the Implied Interest Rate: $$12,000 \times (factor for Present Value of Annuity Due for 6 yrs.) = $57,489$ Factor for Present Value of Annuity Due for 6 yrs. = \$57,489 ÷ \$12,000 $= \frac{4.79075}{2}$

The 4.79075 factor implies a 10% interest rate (present value of an annuity due table).

Pr. 6-145—Calculation of unknown rent and interest.

Pine Leasing Company purchased specialized equipment from Wayne Company on December 31, 2009 for \$400,000. On the same date, it leased this equipment to Sears Company for 5 years, the useful life of the equipment. The lease payments begin January 1, 2010 and are made every 6 months until July 1, 2014. Pine Leasing wants to earn 10% annually on its investment.

)	Vari	ious	Fac	tors	at	10%	

Periods	Future	Present	Future Value of an	Present Value of an
<u>or Rents</u>	Value of \$1	Value of \$1	Ordinary Annuity	Ordinary Annuity
9	2.35795	.42410	13.57948	5.75902
10	2.59374	.38554	15.93743	6.14457
11	2.85312	.35049	18.53117	6.49506
		Various Fa	ctors at 5%	
Periods	Future	Present	Future Value of an	Present Value of an
<u>or Rents</u>	Value of \$1	Value of \$1	Ordinary Annuity	Ordinary Annuity
9	1.55133	.64461	11.02656	7.10782
10	1.62889	.61391	12.57789	7.72173
11	1.71034	.58468	14.20679	8.30641

Instructions

(a) Calculate the amount of each rent.

(b) How much interest revenue will Pine earn in 2010?

Solution 6-145

(a) Calculation of rent: $7.72173 \times 1.05 = 8.10782$ (present value of a 10-rent annuity due at 5%.) \$400,000 ÷ 8.10782 = \$49,335.

(b) Interest Revenue during 2010:

		Cash	Interest	Lease
<u>Rent No</u> .	Date	Received	<u>Revenue</u>	<u>Receivable</u>
1	1/1/10	\$49,335	\$ -0-	\$350,665
2	7/1/10	49,335	17,533	318,863
None	12/31/10	None	<u>15,943</u> (Accru	al)
	Tot	al	<u>\$33,476</u>	

Pr. 6-146—Deferred annuity.

Carey Company owns a plot of land on which buried toxic wastes have been discovered. Since it will require several years and a considerable sum of money before the property is fully detoxified and capable of generating revenues, Carey wishes to sell the land now. It has located two potential buyers: Buyer A, who is willing to pay \$320,000 for the land now, and Buyer B, who is willing to make 20 annual payments of \$50,000 each, with the first payment to be made 5 years from today. Assuming that the appropriate rate of interest is 9%, to whom should Carey sell the land? Show calculations.

Solution 6-146

Buyer A. The present value of the purchase price is \$320,000.

Buyer B. The present value of the purchase price is:

Present value of ordinary annuity of \$50,000 for 24 periods at 9%	9.70661
Less present value of ordinary annuity of \$50,000 for 4 periods (deferred) at 9%	<u>3.23972</u>
Difference	6.46689
Multiplied by annual payments	<u>× \$50,000</u>
Present value of payments	<u>\$323,345</u>

Conclusion: Carey should sell to Buyer B.

CASH AND RECEIVABLES

PROBLEMS

Pr. 7-138—Entries for bad debt expense.

The trial balance before adjustment of Risen Company reports the following balances:

	<u> </u>	<u> </u>
Accounts receivable	\$100,000	
Allowance for doubtful accounts		\$ 2,500
Sales (all on credit)		750,000
Sales returns and allowances	40,000	

Instructions

- (a) Prepare the entries for estimated bad debts assuming that doubtful accounts are estimated to be (1) 6% of gross accounts receivable and (2) 1% of net sales.
- (b) Assume that all the information above is the same, except that the Allowance for Doubtful Accounts has a debit balance of \$2,500 instead of a credit balance. How will this difference affect the journal entries in part (a)?

Solution 7-138

(a)	(1)	Bad Debt Expense Allowance for Doubtful Accounts		3,500	3,500
		Gross receivables	\$100,000		
		Rate	6%		
		Total allowance needed	6,000		
		Present allowance	<u>(2,500</u>)		
		Bad debt expense	<u>\$ 3,500</u>		
	(2)	Bad Debt Expense		7,100	
		Allowance for Doubtful Accounts			7,100
		Sales	\$750,000		
		Sales returns and allowances	<u>(40,000</u>)		
		Net sales	710,000		
		Rate	1%		
		Bad debt expense	<u>\$ 7,100</u>		
(b)	The	percentage of receivables approach would be	e affected as fo	ollows:	
		Gross receivables	\$100,000		
		Rate	6%		
		Total allowance needed	6,000		
		Present allowance	2,500		
		Additional amount required	<u>\$ 8,500</u>		
The	journa	al entry is therefore as follows:			
		Bad Debt Expense		8,500	
		Allowance for Doubtful Accounts			8,500

The entry would not change under the percentage of sales method.

Pr. 7-139—Amortization of discount on note.

On December 31, 2010, Green Company finished consultation services and accepted in exchange a promissory note with a face value of \$400,000, a due date of December 31, 2013, and a stated rate of 5%, with interest receivable at the end of each year. The fair value of the services is not readily determinable and the note is not readily marketable. Under the circumstances, the note is considered to have an appropriate imputed rate of interest of 10%.

The following interest factors are provided:

	Interes	st Rate
Table Factors For Three Periods	5%	<u> 10% </u>
Future Value of 1	1.15763	1.33100
Present Value of 1	.86384	.75132
Future Value of Ordinary Annuity of 1	3.15250	3.31000
Present Value of Ordinary Annuity of 1	2.72325	2.48685

Instructions

- (a) Determine the present value of the note.
- (b) Prepare a Schedule of Note Discount Amortization for Green Company under the effective interest method. (Round to whole dollars.)

Solution 7-139

(a)	Present value of interest	=	\$20,000 × 2.48685	=	\$ 49,737
	Present value of maturity value	=	\$400,000 × .75132	=	300,528
					<u>\$350,265</u>

(b) Green Company

Schedule of Note Discount Amortization Effective Interest Method 5% Note Discounted at 10% (Imputed)

	Cash	Effective		Unamortized	Present
	Interest	Interest	Discount	Discount	Value
Date	_(5%)	(10%)	Amortized	Balance	of Note
12/31/10				\$49,735	\$350,265
12/31/11	\$20,000	\$ 35,027	\$15,027	34,708	365,292
12/31/12	20,000	36,529	16,529	18,179	381,821
12/31/13	20,000	<u>38,179</u> *	<u>18,179</u>	0	400,000
	<u>\$60,000</u>	<u>\$109,735</u>	<u>\$49,735</u>		

*\$3 adjustment to compensate for rounding.

Pr. 7-140—Accounts receivable assigned.

Prepare journal entries for Mars Co. for:

- (a) Accounts receivable in the amount of \$500,000 were assigned to Utley Finance Co. by Mars as security for a loan of \$425,000. Utley charged a 3% commission on the accounts; the interest rate on the note is 12%.
- (b) During the first month, Mars collected \$200,000 on assigned accounts after deducting \$450 of discounts. Mars wrote off a \$530 assigned account.
- (c) Mars paid to Utley the amount collected plus one month's interest on the note.

Solution 7-140

(a)	Cash	410,000	
	Notes Payable	15,000	425,000
(b)	Cash	200,000	
	Sales Discounts	450	
	Allowance for Doubtful Accounts	530	
	Accounts Receivable		200,980
(c)	Notes Payable	200,000	
	Interest Expense	4,250	
	Cash		204,250

Pr. 7-141—Factoring Accounts Receivable.

On May 1, Dexter, Inc. factored \$800,000 of accounts receivable with Quick Finance on a without recourse basis. Under the arrangement, Dexter was to handle disputes concerning service, and Quick Finance was to make the collections, handle the sales discounts, and absorb the credit losses. Quick Finance assessed a finance charge of 6% of the total accounts receivable factored and retained an amount equal to 2% of the total receivables to cover sales discounts.

Instructions

- (a) Prepare the journal entry required on Dexter's books on May 1.
- (b) Prepare the journal entry required on Quick Finance's books on May 1.
- (c) Assume Dexter factors the \$800,000 of accounts receivable with Quick Finance on a *with* recourse basis instead. The recourse provision has a fair value of \$14,000. Prepare the journal entry required on Dexter's books on May 1.

Solution 7-141

(a)	Cash	736,000	
	Due from Factor (2% × \$800,000)	16,000	
	Loss on Sale of Receivables (6% × \$800,000)	48,000	
	Accounts Receivable	·	800,000
(b)	Accounts Receivable	800,000	
	Due to Dexter		16,000
	Financing Revenue		48,000
	Cash		736,000
(c)	Cash	736,000	
. ,	Due from Factor	16,000	
	Loss on Sale of Receivables	62,000	
	Accounts Receivable	-	800,000
	Recourse Liability		14,000

*Pr. 7-142—Bank reconciliation.

Benson Plastics Company deposits all receipts and makes all payments by check. The following information is available from the cash records:

MARCH 31 BANK RECONCILIATION

Balance per bank	\$26,746
Add: Deposits in transit	2,100
Deduct: Outstanding checks	<u>(3,800</u>)
Balance per books	<u>\$25,046</u>

Month of April Results

	<u>Per Bank</u>	Per Books
Balance April 30	\$27,995	\$28,855
April deposits	10,784	13,889
April checks	11,600	10,080
April note collected (not included in April deposits)	3,000	-0-
April bank service charge	35	-0-
April NSF check of a customer returned by the bank		
(recorded by bank as a charge)	900	-0-

Instructions

(a) Calculate the amount of the April 30:

1. Deposits in transit

2. Outstanding checks

(b) What is the April 30 adjusted cash balance? Show all work.

*Solution 7-142

- (a) 1. Deposits in transit, \$5,205 [\$13,889 (\$10,784 \$2,100)]
 2. Outstanding checks, \$2,280 [\$10,080 (\$11,600 \$3,800)]
- (b) Adjusted cash balance at April 30, \$30,920
 (\$27,995 + \$5,205 \$2,280) OR (\$28,855 + \$3,000 \$35 \$900)

VALUATION OF INVENTORIES: A COST-BASIS APPROACH

PROBLEMS

Pr. 8-157—Inventory cut-off.

Vogts Company sells TVs. The perpetual inventory was stated as \$28,500 on the books at December 31, 2010. At the close of the year, a new approach for compiling inventory was used and apparently a satisfactory cut-off for preparation of financial statements was not made. Some events that occurred are as follows.

- 1. TVs shipped to a customer January 2, 2011, costing \$5,000 were included in inventory at December 31, 2010. The sale was recorded in 2011.
- 2. TVs costing \$12,000 received December 30, 2010, were recorded as received on January 2, 2011.
- 3. TVs received during 2010 costing \$4,600 were recorded twice in the inventory account.
- 4. TVs shipped to a customer December 28, 2010, f.o.b. shipping point, which cost \$10,000, were not received by the customer until January, 2011. The TVs were included in the ending inventory.
- 5. TVs on hand that cost \$6,100 were never recorded on the books.

Instructions

Compute the correct inventory at December 31, 2010.

Solution 8-157

Inventory per books		\$28,500
Add: Shipment received 12/30/10	\$12,000	
TVs on hand	<u> 6,100 </u>	<u>18,100</u>
		46,600
Deduct: TVs recorded twice	4,600	
TVs shipped 12/28/10	10,000	14,600
Correct inventory 12/31/10		<u>\$32,000</u>

Pr. 8-159—Accounting for purchase discounts.

Otto Corp. purchased merchandise during 2010 on credit for \$300,000; terms 2/10, n/30. All of the gross liability except \$60,000 was paid within the discount period. The remainder was paid within the 30-day term. At the end of the annual accounting period, December 31, 2010, 90% of

the merchandise had been sold and 10% remained in inventory. The company uses a periodic system.

Instructions

- (a) Assuming that the net method is used for recording purchases, prepare the entries for the purchase and two subsequent payments.
- (b) What dollar amounts should be reported for the final inventory and cost of goods sold under the (1) net method; (2) gross method? Assume that there was no beginning inventory.

Solution 8-159

(a) Purchases	294,000	
Accounts Payable		294,000
(To record the purchase at net amount:		
.98 × \$300,000 = \$294,000.)		
Accounts Payable	235,200	
Cash		235,200
(To record payment within the discount period:		
\$300,000 - \$60,000 = \$240,000; .98 × \$240,000 = \$235,200.)		
Accounts Payable	58,800	
Purchase Discounts Lost	1,200	
Cash		60,000
(To record the final payment.)		

(b) (1) Net method:	
Purchases:	\$294,000
Final inventory: 10% × \$294,000 =	29,400
Cost of goods sold: 90% × \$294,000 =	<u>\$264,600</u>

(The \$1,200 discount lost is reported in the other expense section of the income statement.)

(2) Gross method:				
Purchases:	\$300,000		Purchases:	\$300,000
Less purchase discounts:			Less purchase discounts:	
.02 × \$240,000 =	4,800		.02 × \$240,000 =	4,800
Goods available	295,200	<u> </u>	Goods available	295,200
Final inventory:			Final inventory:	
10% × \$295,200 =	29,520		10% × \$300,000 =	30,000
Cost of goods sold:			Cost of goods sold:	
90% × \$295,200 =	<u>\$265,680</u>		\$295,200 - \$30,000 =	<u>\$265,200</u>
(Assuming that the \$4,800 d	liscount is		(Assuming that the \$4,800 disc	ount is used

prorated between the cost of goods sold, 90%, and the final inventory, 10%.) (Assuming that the \$4,800 discount is used to reduce cost of goods sold. Final inventory is carried at the gross amount.)

INVENTORIES: ADDITIONAL VALUATION ISSUES

Pr. 9-149—Gross profit method.

On December 31, 2010 Felt Company's inventory burned. Sales and purchases for the year had been \$1,400,000 and \$980,000, respectively. The beginning inventory (Jan. 1, 2010) was \$170,000; in the past Felt's gross profit has averaged 40% of selling price.

Instructions

Compute the estimated cost of inventory burned, and give entries as of December 31, 2010 to close merchandise accounts.

Solution 9-149

Beginning inventory	\$ 170,00	0	
Add: Purchases	980,00	<u>0</u>	
Cost of goods available	1,150,00	0	
Sales	\$1,400,000		
Less 40%	(560,000) 840,00	<u>0</u>	
Estimated inventory lost	<u>\$ 310,00</u>	<u>0</u>	
Sales		. 1,400,000	
Income Summary			1,400,000
Cost of Goods Sold		840,000	
Fire Loss		310,000	
Inventory		· · ·	170,000
Purchases			980,000

Pr. 9-150—Retail inventory method.

When you undertook the preparation of the financial statements for Telfer Company at January 31, 2011, the following data were available:

-	<u>At Cost</u>	At Retail
Inventory, February 1, 2010	\$70,800	\$ 98,500
Markdowns		35,000
Markups		63,000
Markdown cancellations		20,000
Markup cancellations		10,000
Purchases	219,500	294,000
Sales		345,000
Purchases returns and allowances	4,300	5,500
Sales returns and allowances		10,000

Instructions

Compute the ending inventory at cost as of January 31, 2011, using the retail method which approximates lower of cost or market. Your solution should be in good form with amounts clearly labeled.

Solution 9-150

	At Co	ost	<u> </u>	tail
Beginning inventory, 2/1/10		\$ 70,800		\$ 98,500
Purchases	\$219,500		\$294,000	
Less purchase returns	4,300	215,200	<u> </u>	288,500
Totals		<u>\$286,000</u>		387,000
Add markups (net)				<u> </u>
Totals				440,000
Deduct markdowns (net)				<u> 15,000</u>
Sales price of goods available				425,000
Sales less sales returns				335,000
Ending inventory, 1/31/11 at retail				<u>\$ 90,000</u>
Ending inventory at cost: Ratio of cost t	o retail =			
\$286,000 ÷ \$440,000 = 65%;				
\$90,000 × 65% = \$58,500		<u>\$ 58,500</u>		

*Pr. 9-151—Retail inventory method.

The records of Lohse Stores included the following data:

Inventory, May 1, at retail, \$14,500; at cost, \$10,440 Purchases during May, at retail, \$42,900; at cost, \$31,550 Freight-in, \$2,000; purchase discounts, \$250 Additional markups, \$3,800; markup cancellations, \$400; net markdowns, \$1,300 Sales during May, \$46,500

Instructions

Calculate the estimated inventory at May 31 on a LIFO basis. Show your calculations in good form and label all amounts.

*Solution 9-151

	<u>Cost</u>	<u>Retail</u>	<u>Ratio</u>
Inventory, May 1	<u>\$10,440</u>	<u>\$14,500</u>	.72
Purchases	31,550	42,900	
Freight-in	2,000		
Purchase discounts	(250)		
Net markups		3,400	
Net markdowns		<u>(1,300</u>)	
Totals excluding beginning inventory	33,300	45,000	.74
Goods available	<u>\$43,740</u>	59,500	
Sales		<u>(46,500)</u>	
Inventory, May 31		<u>\$13,000</u>	
Estimated inventory, May 31 (\$13,000 × .72)	<u>\$ 9,360</u>		

ACQUISITION AND DISPOSITION OF PROPERTY, PLANT, AND EQUIPMENT

PROBLEMS

Pr. 10-138—Capitalizing acquisition costs.

Gibbs Manufacturing Co. was incorporated on 1/2/10 but was unable to begin manufacturing activities until 8/1/10 because new factory facilities were not completed until that date. The Land and Building account at 12/31/10 per the books was as follows:

<u>Date</u>	<u>ltem</u>	Amount
1/31/10	Land and dilapidated building	\$200,000
2/28/10	Cost of removing building	4,000
4/1/10	Legal fees	6,000
5/1/10	Fire insurance premium payment	5,400
5/1/10	Special tax assessment for streets	4,500
5/1/10	Partial payment of new building construction	150,000
8/1/10	Final payment on building construction	150,000
8/1/10	General expenses	30,000
12/31/10	Asset write-up	75,000
		<u>\$624,900</u>

Additional information:

- 1. To acquire the land and building on 1/31/10, the company paid \$100,000 cash and 1,000 shares of its common stock (par value = \$100/share) which is very actively traded and had a market value per share of \$170.
- 2. When the old building was removed, Gibbs paid Kwik Demolition Co. \$4,000, but also received \$1,500 from the sale of salvaged material.

3.	Legal fees covered the following:	
	Cost of organization	\$2,500
	Examination of title covering purchase of land	2,000
	Legal work in connection with the building construction	1,500
		\$6,000

4. The fire insurance premium covered premiums for a three-year term beginning May 1, 2010.

5.	General expenses covered the following for the period 1/2/10 to 8/1/10.	
	President's salary	\$20,000
	Plant superintendent covering supervision of new building	10,000
		\$30.000

6. Because of the rising land costs, the president was sure that the land was worth at least \$75,000 more than what it cost the company.

Instructions

Determine the proper balances as of 12/31/10 for a separate land account and a separate building account. Use separate T-accounts (one for land and one for building) labeling all the relevant amounts and disclosing all computations.

Solution 10-138

Land			
Land and old building			
(\$100,000 plus \$170,000)	270,000		
Removal of old building			
(\$4,000 - \$1,500)	2,500		
Legal fees	2,000		
Special assessment	4,500		
Balance	<u>279,000</u>		
	Buil	ding	
Legal Fees	1,500		
Partial payment	150,000		
Insurance (3 months)	450		
Final payment	150,000		

10,000

<u>311,950</u>

Pr. 10-139—Capitalization of interest.

Superintendent's salary

Balance

During 2010, Barden Building Company constructed various assets at a total cost of \$8,400,000. The weighted average accumulated expenditures on assets qualifying for capitalization of interest during 2010 were \$5,600,000. The company had the following debt outstanding at December 31, 2010:

1.	10%, 5-year note to finance construction of various assets, dated January 1, 2010, with interest payable annually on January 1	\$3,600,000
2.	12%, ten-year bonds issued at par on December 31, 2004, with interest payable annually on December 31	4,000,000
3.	9%, 3-year note payable, dated January 1, 2009, with interest payable annually on January 1	2,000,000
Ins Co	structions mpute the amounts of each of the following (show computations).	
4	Avoidable interact	

1. Avoidable interest.

2. Total interest to be capitalized during 2010.

1.

Weighted Average			
Accumulated	Applicable	Avoidable	
Expenditures	Interest Rate	Interest	
\$3,600,000	.10	\$360,000	
2,000,000	.11*	220,000	
<u>\$5,600,000</u>		<u>\$580,000</u>	= Avoidable Interest

*Computation of weighted average interest rate:

	Principal	Interest
12% ten-year bonds	\$4,000,000	\$480,000
9% 3-year note	2,000,000	180,000
-	<u>\$6,000,000</u>	<u>\$660,000</u>

Weighted average interest rate = $660,000 \div 6,000,000 = 11\%$.

2. Actual interest cost during 2010:

Construction note \$3,600,000 × 10	\$	360 000
12% ten-vear bonds, \$4,000,000 × .12	Ŷ	480.000
9% three-year note, \$2,000,000 × .09		180,000
	\$	1,020,000

The interest cost to be capitalized is \$580,000 (the lesser of the \$580,000 avoidable interest and the \$1,020,000 actual interest).

Pr. 10-140—Capitalization of interest.

Early in 2010, Dobbs Corporation engaged Kiner, Inc. to design and construct a complete modernization of Dobbs's manufacturing facility. Construction was begun on June 1, 2010 and was completed on December 31, 2010. Dobbs made the following payments to Kiner, Inc. during 2010:

Date	Payment_
June 1, 2010	\$3,600,000
August 31, 2010	5,400,000
December 31, 2010	4,500,000

In order to help finance the construction, Dobbs issued the following during 2010:

- 1. \$3,000,000 of 10-year, 9% bonds payable, issued at par on May 31, 2010, with interest payable annually on May 31.
- 2. 1,000,000 shares of no-par common stock, issued at \$10 per share on October 1, 2010.

In addition to the 9% bonds payable, the only debt outstanding during 2010 was a \$750,000, 12% note payable dated January 1, 2006 and due January 1, 2016, with interest payable annually on January 1.

Instructions

Compute the amounts of each of the following (show computations):

- 1. Weighted-average accumulated expenditures qualifying for capitalization of interest cost.
- 2. Avoidable interest incurred during 2010.
- 3. Total amount of interest cost to be capitalized during 2010.

1.				Weighted-Average
		Capitalization		Accumulated
	Date	Expenditures	<u>Period</u>	Expenditures
	June 1	\$3,600,000	7/12	\$2,100,000
	August 31	5,400,000	4/12	1,800,000
	December 31	4,500,000	0	0
				<u>\$3,900,000</u>
2.	Weighted-Average			
	Accumulated	Appropriate	Avoid	dable
	Expenditures	Interest Rate	Inte	<u>erest</u>
	\$3,000,000	.09	\$270),000
	900,000	.12	108	<u>3,000</u>
	<u>\$3,900,000</u>		<u>\$378</u>	<u>3,000</u>
3.	Actual interest inc	urred during 2010:		
	9% bonds payable	e, \$3,000,000 × .09 ×	7/12	\$157,500
	12% note payable	e, \$750,000 × .12		90,000
				\$247,500

The interest cost to be capitalized is \$247,500 (the lesser of the \$378,000 avoidable interest and the \$247,500 actual interest cost).

Pr. 10-141—Asset acquisition.

Ford Inc. plans to acquire an additional machine on January 1, 2010 to meet the growing demand for its product. Stever Company offers to provide the machine to Ford using either of the options listed below (each option gives Ford exactly the same machine and gives Stever Company approximately the same net present value cash equivalent at 10%).

- Option 1 Cash purchase \$800,000.
- Option 2 Installment purchase requiring 15 annual payments of \$105,179 due December 31 each year.

The expected economic life of this machine to Ford is 15 years. Salvage value at that time is estimated to be \$50,000. Straight-line depreciation is used. Interest expense under Option 2 is computed using the effective interest method.

Instructions

Based upon current generally accepted accounting principles, state how, if at all, the book value of the machine and the obligation should appear on the December 31, 2010 balance sheet of Ford Inc., for each option. Present your answer on an answer sheet in the following format. If an item should not appear in the balance sheet, write "not shown" opposite the option.

	Assets		Liabilities	
	Account Name	<u>Amount</u>	Account Name	<u>Amount</u>
Option 1				

Option 2

	Assets		Liabilities	
	Account Name	<u>Amount</u>	Account Name	<u>Amount</u>
Option 1	Machinery	\$800,000	"not shown"	
	Accum. Depr.	50,000		
Option 2	Machinery	\$800,000	Notes Payable—	
	Accum. Depr.	50,000	Current	\$ 27,697
			Notes Payable—	
			Long-term	747,124

Computations:

At January 1, 2010, the note payable is \$800,000.

At December 31, 2010, after the first payment of \$105,179 has been made (\$80,000 interest) 774,821 principal remains, of which \$747,124 is long-term and \$27,697 is current [\$105,179 - (10% × \$774,821)].

<u>Note:</u> \$105,179 × 7.60608 (Table 6-4) = \$800,000, the present value of the obligation on January 1, 2010.

Pr. 10-142—Nonmonetary exchanges.

Moore Corporation follows a policy of a 10% depreciation charge per year on all machinery and a 5% depreciation charge per year on buildings. The following transactions occurred in 2011:

- March 31, 2011— Negotiations which began in 2010 were completed and a warehouse purchased 1/1/02 (depreciation has been properly charged through December 31, 2010) at a cost of \$3,200,000 with a fair market value of \$2,000,000 was exchanged for a second warehouse which also had a fair market value of \$2,000,000. The exchange had no commercial substance. Both parcels of land on which the warehouses were located were equal in value, and had a fair value equal to book value.
- June 30, 2011— Machinery with a cost of \$240,000 and accumulated depreciation through January 1 of \$180,000 was exchanged with \$150,000 cash for a parcel of land with a fair market value of \$230,000.

Instructions

Prepare all appropriate journal entries for Moore Corporation for the above dates.

Solution 10-142

3/31/11	Depreciation Expense	40,000	
	Accumulated Depreciation—Warehouse (\$3,200,000 × 5% × 1/4)		40,000
	Warehouse	1,720,000	
	Accumulated Depreciation—Warehouse	1,480,000	
	Warehouse		3,200,000
	(\$3,200,000 × 5% × 9 1/4 = \$1,480,000)		

Solution 10-142 (cont.)

6/30/11	Depreciation Expense Accumulated Depreciation—Machinery (\$240,000 × 10% × 1/2)	12,000	12,000
	Land Accumulated Depreciation—Machinery Gain on Exchange Machinery Cash	230,000 192,000	32,000 240,000 150.000
	[\$80,000 - (\$240,000 - \$192,000)] = \$32,000		,

Pr. 10-143—Nonmonetary exchange.

Rogers Co. had a sheet metal cutter that cost \$96,000 on January 5, 2006. This old cutter had an estimated life of ten years and a salvage value of \$16,000. On April 3, 2011, the old cutter is exchanged for a new cutter with a market value of \$48,000. The exchange lacked commercial substance. Rogers also received \$12,000 cash. Assume that the last fiscal period ended on December 31, 2010, and that straight-line depreciation is used.

Instructions

- (a) Show the calculation of the amount of the gain or loss to be recognized by Rogers Co.
- (b) Prepare all entries that are necessary on April 3, 2011. Show a check of the amount recorded for the new cutter.

Solution 10-143

(a)	Cost Accumulated deprecia Book value Fair value (\$48,000 + Gain	ation (5 1/4 × \$8,000) \$12,000)	\$96,000 (<u>42,000</u>) 54,000 <u>60,000</u> <u>\$6,000</u>	
	Gain recognized (12/6	60 × \$6,000)	<u>\$ 1,200</u>	
(b)	Depreciation Expense Accumulated E	Depreciation) 2,000
	Accumulated Deprecia Machinery Cash Machinery Gain on Dispos Check: Fa	ation sal air value ess deferred gain asis of new machinery)) 96,000 1,200

Pr. 10-144—Nonmonetary exchange.

Layne Co. has a machine that cost \$255,000 on March 20, 2007. This old machine had an estimated life of ten years and a salvage value of \$15,000. On December 23, 2011, the old machine is exchanged for a new machine with a market value of \$162,000. The exchange lacked commercial substance. Layne also received \$18,000 cash. Assume that the last fiscal period ended on December 31, 2010, and that straight-line depreciation is used.

Instructions

- (a) Show the calculation of the amount of gain or loss to be recognized by Layne Co. from the exchange. (Round to the nearest dollar.)
- (b) Prepare all entries that are necessary on December 23, 2011. Show a check of the amount recorded for the new machine.

Solution 10-144

(a)	Cost Accumulated depr Book value Fair value (\$162,0 Gain	eciation (4 3/4 × \$24,000) 00 + \$18,000)	\$25 _(1^ _14 _ <u>18</u> <u>\$_3</u>	5,000 1 <u>4,000</u>) 1,000 <u>30,000</u> 9 <u>9,000</u>	
	Gain recognized (18/180 × \$39,000)	<u>\$</u>	3,900	
(b)	Depreciation Expe Accumulate	nse ed Depreciation		24,000	24,000
	Accumulated Depr	eciation		114,000	
	Machine			126,900	
	Cash			18,000	
	Machine				255,000
	Gain on Di	sposal			3,900
	Check:	Fair value	\$162,000		
		Deferred gain	(35,100)		
		Basis of new machine	\$126,900		

Pr. 10-145—Nonmonetary exchange.

Hodge Co. exchanged Building 24 which has an appraised value of \$3,200,000, a cost of \$5,060,000, and accumulated depreciation of \$2,400,000 for Building M belonging to Fine Co. Building M has an appraised value of \$3,008,000, a cost of \$6,020,000, and accumulated depreciation of \$3,168,000. The correct amount of cash was also paid. Assume depreciation has already been updated.

Instructions

Prepare the entries on both companies' books assuming the exchange had no commercial substance. Show a check of the amount recorded for Building M on Hodge's books. (Round to the nearest dollar.)

Hodge	<u>Co.:</u>		
-	Cost	\$5,060,000	
	Accumulated depreciation	2,400,000	
	Book value	2,660,000	
	Fair value	3,200,000	
	Gain	<u>\$ 540,000</u>	
	Gain recognized (192/3,200 × \$540,000)) <u>\$32,400</u>	
	Accumulated Depreciation	2,400,000	
	Building M	2,500,400	
	Cash		
	Building 24		5,060,000
	Gain on Disposal		32,400
	Check: Fair value	\$3,008,000	
	Deterred gain		
	Basis for Building M	<u>\$2,500,400</u>	
Fine Co	<u>o.:</u>		
	Cost	\$6,020,000	
	Accumulated Depreciation	<u>3,168,000</u>	
	Book value	2,852,000	
	Fair value	3,008,000	
	Gain	<u>\$ 156,000</u>	
	Accumulated Depreciation		
	Building 24		
	Building M		6,020,000
	Cash		192,000

Pr. 10-146—Nonmonetary exchange.

Beeman Company exchanged machinery with an appraised value of \$1,755,000, a recorded cost of \$2,700,000 and Accumulated Depreciation of \$1,350,000 with Lacey Corporation for machinery Lacey owns. The machinery has an appraised value of \$1,695,000, a recorded cost of \$3,240,000, and Accumulated Depreciation of \$1,782,000. Lacey also gave Beeman \$60,000 in the exchange. Assume depreciation has already been updated.

Instructions

- (a) Prepare the entries on both companies' books assuming that the exchange had commercial substance. (Round all computations to the nearest dollar.)
- (b) Prepare the entries on both companies' books assuming that the exchange lacked commercial substance. (Round all computations to the nearest dollar.)

(a)	Commercial Substance			
	Beeman Machinery Cash Accum. Depreciation— Machinery Gain on Exchange of Plant Assets Machinery	1,695,000 60,000 1,350,000 405,000 2,700,000	Cost A/D BV FV Gain	\$2,700,000 _1,350,000 _1,350,000 _1,755,000 \$ 405,000
	Lacey Machinery Accum. Depreciation— Machinery Gain on Exchange of Plant Assets Machinery Cash	1,755,000 1,782,000 237,000 3,240,000 60,000	Cost A/D BV FV Gain	\$3,240,000 <u>1,782,000</u> 1,458,000 <u>1,695,000</u> <u>\$237,000</u>
(b)	<u>No Commercial Substance</u> <u>Beeman</u> Machinery Cash Accumulated Deprecation—Machine Gain on Exchange Machinery	ery	1,303,846 60,000 1,350,000	13,846 2,700,000
	\$60,000 ÷ (\$60,000 + \$1,695,000) ×	\$405,000 = \$13,846		
	Lacey Machinery Accumulated Depreciation—Machin Machinery Cash	ery	1,518,000 1,782,000	3,240,000 60,000

DEPRECIATION, IMPAIRMENTS, AND DEPLETION

Ex. 11-129—Calculate depreciation.

A machine which cost \$200,000 is acquired on October 1, 2010. Its estimated salvage value is \$20,000 and its expected life is eight years.

Instructions

Calculate depreciation expense for 2010 and 2011 by each of the following methods, showing the figures used.

- (a) Double-declining balance
- (b) Sum-of-the-years'-digits

Solution 11-129

(a)	2010: 25% × \$200,000 × ¼	=	<u>\$12,500</u>
	2011: 25% × \$187,500	=	<u>\$46,875</u>
(b)	2010: 8/36 × \$180,000 × ¼	=	<u>\$10,000</u>
	2011: 8/36 × \$180,000 × ¾ 7/36 × \$180,000 × ¼	= =	\$30,000 <u>8,750</u> <u>\$38,750</u>

Ex. 11-130—Calculate depreciation.

A machine cost \$500,000 on April 1, 2010. Its estimated salvage value is \$50,000 and its expected life is eight years.

Instructions

Calculate the depreciation expense (to the nearest dollar) by each of the following methods, showing the figures used.

- (a) Straight-line for 2010
- (b) Double-declining balance for 2011
- (c) Sum-of-the-years'-digits for 2011

Solution 11-130

- (a) $1/8 \times $450,000 \times \frac{3}{4} = \frac{$42,188}{}$
- (b) 2011: 25% × \$406,250 = <u>\$101,563</u>
- (c) $8/36 \times $450,000 \times \frac{1}{4} = $25,000 \\ 7/36 \times $450,000 \times \frac{3}{4} = \underline{65,625}$

\$90,625

Ex. 11-131—Asset depreciation and disposition.

Answer each of the following questions.

- 1. A plant asset purchased for \$150,000 has an estimated life of 10 years and a residual value of \$12,000. Depreciation for the *second year of use*, determined by the declining-balance method at twice the straight-line rate is \$_____.
- 2. A plant asset purchased for \$200,000 at the beginning of the year has an estimated life of 5 years and a residual value of \$20,000. Depreciation for the *second year*, determined by the sum-of-the-years'-digits method is \$_____.
- 3. A plant asset with a cost of \$160,000 and accumulated depreciation of \$45,000, is given together with cash of \$60,000 in exchange for a similar asset worth \$165,000. The gain or loss recognized on the disposal (indicate by "G" or "L") is \$_____.
- 4. A plant asset with a cost of \$216,000, estimated life of 5 years, and residual value of \$36,000, is depreciated by the straight-line method. This asset is sold for \$160,000 at the end of the second year of use. The gain or loss on the disposal (indicate by "G" or "L") is \$_____.

Solution 11-131

- 1. \$24,000
- 2. \$48,000
- 3. \$10,000 L
- 4. \$16,000 G

Ex. 11-132—Composite depreciation.

Kemp Co. uses the composite method to depreciate its equipment. The following totals are for all of the equipment in the group:

Initial	Residual	Depreciable	Depreciation
Cost	Value	Cost	Per Year
\$700,000	\$100,000	\$600,000	\$60,000

Instructions

- (a) What is the composite rate of depreciation? (To nearest tenth of a percent.)
- (b) A machine with a cost of \$18,000 was sold for \$11,000 at the end of the third year. What entry should be made?

Solution 11-132

(a) $\frac{60,000}{700,000} = \frac{8.6\%}{1000}$

(b)	Cash	11,000
	Accumulated Depreciation	7,000

Equip	ment
Ex. 11-133-Dep	bletion allowance.

Rojas Company purchased for \$5,600,000 a mine estimated to contain 2 million tons of ore. When the ore is completely extracted, it was expected that the land would be worth \$200,000. A building and equipment costing \$2,800,000 were constructed on the mine site, and they will be completely used up and have *no salvage value* when the ore is exhausted. During the first year, 750,000 tons of ore were mined, and \$450,000 was spent for labor and other operating costs.

18.000

Instructions

Compute the total cost per ton of ore mined in the first year. (Show computations by setting up a schedule giving cost per ton.)

Solution 11-133

<u>ltem</u>	Base	Tons	Per Ton
Ore	\$5,400,000	2,000,000	\$2.70
Building and Equipment	2,800,000	2,000,000	1.40
Labor and Operating Expenses	450,000	750,000	.60
Total Cost			<u>\$4.70</u>

PROBLEMS

Pr. 11-134—Depreciation methods.

On July 1, 2010, Sparks Company purchased for \$2,160,000 snow-making equipment having an estimated useful life of 5 years with an estimated salvage value of \$90,000. Depreciation is taken for the portion of the year the asset is used.

Instructions

- (a) Complete the form below by determining the depreciation expense and year-end book values for 2010 and 2011 using the
 - 1. sum-of-the-years'-digits method.
 - 2. double-declining balance method.

Sum-of-the-Years'-Digits Method	2010	2011
Equipment	\$2,160,000	\$2,160,000
Less: Accumulated Depreciation		
Year-End Book Value Depreciation Expense for the Year		
Double-Declining Balance Method		
Equipment	\$2,160,000	\$2,160,000
Less: Accumulated Depreciation		
Year-End Book Value		
Depreciation Expense for the Year		

(b) Assume the company had used straight-line depreciation during 2010 and 2011. During 2012, the company determined that the equipment would be useful to the company for only one more year beyond 2012. Salvage value is estimated at \$120,000. Compute the amount of depreciation expense for the 2012 income statement.

(a)	Sum-of-the-Years'-l Accumulated Depre Book Value Depreciation Exper	<u>Digits</u> eciation nse	<u>2010</u> \$ 345,000 1,815,000 345,000	2011 \$ 966,000 1,194,000 621,000
	Double-Declining B Accumulated Depre Book Value Depreciation Exper	<u>alance</u> eciation nse	\$ 432,000 1,728,000 432,000	\$1,123,200 1,036,800 691,200
(b)	Cost Depreciation Salvage	\$2,160,000 (621,000) <u>(120,000)</u> \$1,419,000 >	< 1/2 = <u>\$709,500</u> , 2012 depreciation	

Pr. 11-135—Adjustment of Depreciable Base.

A truck was acquired on July 1, 2008, at a cost of \$216,000. The truck had a six-year useful life and an estimated salvage value of \$24,000. The straight-line method of depreciation was used. On January 1, 2011, the truck was overhauled at a cost of \$20,000, which extended the useful life of the truck for an additional two years beyond that originally estimated (salvage value is still estimated at \$24,000). In computing depreciation for annual adjustment purposes, expense is calculated for each month the asset is owned.

Instructions

Prepare the appropriate entries for January 1, 2011 and December 31, 2011.

Solution 11-135

Cost Less salvage value	\$216,000 24 000	
Depreciable base July 1 2008	192 000	
Less depreciation to date $[(\$192.000 \div 6) \times 2 1/2]$	80.000	
Depreciable base, Jan. 1, 2011 (unadjusted)	112,000	
Overhaul	20,000	
Depreciable base, Jan. 1, 2011 (adjusted)	<u>\$132,000</u>	
January 1, 2011		
Accumulated Depreciation	20,000	
Cash		20,000
December 31, 2011		
Depreciation Expense	24,000	
Accumulated Depreciation (\$132,000 ÷ 5.5 yrs)	1	24,000

INTANGIBLE ASSETS

Pr. 12-145—Goodwill, impairment.

On May 31, 2011, Armstrong Company paid \$3,500,000 to acquire all of the common stock of Hall Corporation, which became a division of Armstrong. Hall reported the following balance sheet at the time of the acquisition:

Current assets	\$ 900,000	Current liabilities	\$ 600,000
Noncurrent assets	2,700,000	Long-term liabilities	500,000
		Stockholders' equity	2,500,000
		Total liabilities and	
Total assets	<u>\$3,600,000</u>	stockholders' equity	<u>\$3,600,000</u>

It was determined at the date of the purchase that the fair value of the identifiable net assets of Hall was \$2,800,000. At December 31, 2011, Hall reports the following balance sheet information:

Current assets	\$ 800,000
Noncurrent assets (including goodwill recognized in purchase)	2,400,000
Current liabilities	(700,000)
Long-term liabilities	(500,000)
Net assets	\$2,000,000

It is determined that the fair market value of the Hall division is \$2,100,000. The recorded amount for Hall's net assets (excluding goodwill) is the same as fair value, except for property, plant, and equipment, which has a fair value of \$200,000 above the carrying value.

Instructions

- (a) Compute the amount of goodwill recognized, if any, on May 31, 2011.
- (b) Determine the impairment loss, if any, to be recorded on December 31, 2011.
- (c) Assume that the fair value of the Hall division is \$1,900,000 instead of \$2,100,000. Prepare the journal entry to record the impairment loss, if any, on December 31, 2011.

Solution 12-145

- (a) Goodwill = Fair value of the division less the fair value of the identifiable assets. 33,500,000 2,800,000 = 700,000.
- (b) No impairment loss is recorded, because the fair value of Hall (\$2,100,000) is greater than the carrying value (\$2,000,000) of the new assets.

Solution 12-145 (Cont.)

(c) Computation of impairment loss:

Implied fair value of goodwill = Fair value of division less the carrying value of the division (adjusted for fair value changes), net of goodwill:

Fair value of Hall division Carrying value of division Increase in fair value of PP&E	\$2,000,000 200,000 (700,000)	\$1,900,000
Implied value of goodwill Carrying amount of goodwill Loss on impairment	_ <u>(100,000</u>)	<u>(1,500,000)</u> 400,000 <u>(500,000)</u> <u>\$ (100,000</u>)
Loss on Impairment Goodwill	100,000	100,000

Ex. 12-134—Carrying value of patent.

Sisco Co. purchased a patent from Thornton Co. for \$180,000 on July 1, 2008. Expenditures of \$68,000 for successful litigation in defense of the patent were paid on July 1, 2011. Sisco estimates that the useful life of the patent will be 20 years from the date of acquisition.

Instructions

Prepare a computation of the carrying value of the patent at December 31, 2011.

Solution 12-134

Cost of patent	\$180,000
Amortization 7/1/08 to 7/1/11 [(\$180,000 ÷ 20) × 3]	(27,000)
Carrying value at 7/1/11	153,000
Cost of successful defense	68,000
Carrying value	221,000
Amortization 7/1/11 to 12/31/11 [\$221,000 × 1/(20 – 3) × 1/2]	<u>(6,500</u>)
Carrying value at 12/31/11	<u>\$214,500</u>

Ex. 12-135—Accounting for patent.

In early January 2009, Lerner Corporation applied for a patent, incurring legal costs of \$50,000. In January 2010, Lerner incurred \$9,000 of legal fees in a successful defense of its patent.

Instructions

- (a) Compute 2009 amortization, 12/31/09 carrying value, 2010 amortization, and 12/31/10 carrying value if the company amortizes the patent over 10 years.
- (b) Compute the 2011 amortization and the 12/31/11 carrying value, assuming that at the beginning of 2011, based on new market research, Lerner determines that the fair value of the patent is \$44,000. Estimated future cash flows from the patent are \$45,000 on January 3, 2011.

- (a) 2009 amortization: \$50,000 ÷ 10 yrs. = \$5,000 12/31/09 carrying value: \$50,000 - \$5,000 = \$45,000 2010 amortization: (\$45,000 + \$9,000) ÷ 9 yrs. = \$6,000 12/31/10 carrying value: (\$45,000 + \$9,000) - \$6,000 = \$48,000
- (b) Since the expected future cash flows (\$45,000) are less than the carrying value (\$48,000), an impairment loss must be computed.
 Loss on impairment: \$48,000 carrying value \$44,000 fair value = <u>\$4,000</u>
 2011 amortization: \$44,000 ÷ 8 yrs. = <u>\$5,500</u>
 12/31/11 carrying value: \$44,000 \$5,500 = <u>\$38,500</u>

LONG-TERM LIABILITIES

PROBLEMS

Pr. 14-126—Bond discount amortization.

On June 1, 2009, Everly Bottle Company sold \$400,000 in long-term bonds for \$351,040. The bonds will mature in 10 years and have a stated interest rate of 8% and a yield rate of 10%. The bonds pay interest annually on May 31 of each year. The bonds are to be accounted for under the effective-interest method.

Instructions

- (a) Construct a bond amortization table for this problem to indicate the amount of interest expense and discount amortization at each May 31. Include only the first four years. Make sure all columns and rows are properly labeled. (Round to the nearest dollar.)
- (b) The sales price of \$351,040 was determined from present value tables. Specifically explain how one would determine the price using present value tables.
- (c) Assuming that interest and discount amortization are recorded each May 31, prepare the adjusting entry to be made on December 31, 2011. (Round to the nearest dollar.)

Solution 14-126

(a)			Debit	Credit	Carrying Amount
	Date	<u>Credit Cash</u>	Interest Expense	Bond Discount	of Bonds
	6/1/09		-		\$351,040
	5/31/10	\$32,000	\$35,104	\$3,104	354,144
	5/31/11	32,000	35,414	3,414	357,558
	5/31/12	32,000	35,756	3,756	361,314
	5/31/13	32,000	36,131	4,131	365,445

(b) (1) Find the present value of \$400,000 due in 10 years at 10%.

(2) Find the present value of 10 annual payments of \$32,000 at 10%. Add (1) and (2) to obtain the present value of the principal and the interest payments.

(C)	Interest Expense	20,858*	
. ,	Interest Payable	·	18,667**
	Discount on Bonds Payable		2,191

*7/12 × \$35,756 (from Table) = \$20,858 **7/12 × 8% × \$400,000 = \$18,667

Pr. 14-127—Bond interest and discount amortization.

Grove Corporation issued \$800,000 of 8% bonds on October 1, 2010, due on October 1, 2015. The interest is to be paid twice a year on April 1 and October 1. The bonds were sold to yield 10% effective annual interest. Grove Corporation closes its books annually on December 31.

Instructions

(a) Complete the following amortization schedule for the dates indicated. (Round all answers to the nearest dollar.) Use the effective-interest method.

		Debit	Credit	Carrying Amount
	<u>Credit Cash</u>	Interest Expense	Bond Discount	of Bonds
October 1, 2010				\$738,224
April 1, 2011				
October 1, 2011				

- (b) Prepare the adjusting entry for December 31, 2011. Use the effective-interest method.
- (c) Compute the interest expense to be reported in the income statement for the year ended December 31, 2011.

Solution 14-127

(a)		Debit	Credit	Carrying Amount
	<u>Credit Cash</u>	Interest Expense	Bond Discount	of Bonds
October 1, 2	010	•		\$738,224
April 1, 2011	\$32,000	\$36,911	\$4,911	743,135
October 1, 2	011 32,000	37,157	5,157	748,292
(b) Interest Expe	ense (\$748,292 × 10%	‰ × 3/12)		,707
Intere	est Payable (1/2 × \$32	2,000)		16,000
Disco	ount on Bonds Payable	e (\$18,707 – \$16,000))	2,707

(c) \$18,456 (1/2 of \$36,911)

37,157 18,707

<u>\$74,320</u>

Pr. 14-128—Entries for bonds payable.

Prepare the necessary journal entries to record the following transactions relating to the long-term issuance of bonds of Pitts Co.:

March 1

Issued \$800,000 face value Pitts Co. second mortgage, 8% bonds for \$872,160, including accrued interest. Interest is payable semiannually on December 1 and June 1 with the bonds maturing 10 years from this past December 1. The bonds are callable at 102.

<u>June 1</u>

Paid semiannual interest on Pitts Co. bonds. (Use straight-line amortization of any premium or discount.)

December 1

Paid semiannual interest on Pitts Co. bonds and purchased \$400,000 face value bonds at the call price in accordance with the provisions of the bond indenture.

March 1:	Cash	872,160	
	Bonds Payable		800,000
	Premium on Bonds Payable		56,160
	Interest Expense (\$800,000 × 8% × 3/12)		16,000
June 1:	Interest Expense	30,560	
	Premium on Bonds Payable (\$56,160 × 3/117)	1,440	
	Cash		32,000
Dec. 1:	Interest Expense	29,120	
	Premium on Bonds Payable (\$56,160 × 6/117)	2,880	
	Cash		32,000
	Bonds Payable	400,000	
	Premium on Bonds Payable*	25,920	
	Gain on Redemption of Bonds		17,920
	Cash		408,000

*1/2 × (\$56,160 - \$1,440 - \$2,880) = \$25,920.

Pr. 14-129—Entries for bonds payable.

Prepare journal entries to record the following transactions relating to long-term bonds of Kirby, Inc. (Show computations.)

- (a) On June 1, 2009, Kirby, Inc. issued \$600,000, 6% bonds for \$587,640, which includes accrued interest. Interest is payable semiannually on February 1 and August 1 with the bonds maturing on February 1, 2019. The bonds are callable at 102.
- (b) On August 1, 2009, Kirby paid interest on the bonds and recorded amortization. Kirby uses straight-line amortization.
- (c) On February 1, 2011, Kirby paid interest and recorded amortization on all of the bonds, and purchased \$360,000 of the bonds at the call price. Assume that a reversing entry was made on January 1, 2011.

Solution 14-129

(a)	Cash	587,640	
	Discount on Bonds Payable	24,360	000 000
	Bonds Payable Interest Expense (\$600,000 × 6% × 4/12)		12,000
(b)	Interest Expense (\$600,000 × 6% × 6/12) + \$420	18,420	
	Cash		18,000
	Discount on Bonds Payable (\$24,360 × 2/116)		420

Solution 14-129 (Cont.)

(C)	Interest Expense (\$18,000 + \$1,260) Cash	19,260	18,000
	Discount on Bonds Payable (\$24,360 × 6/116)		1,260
	Bonds Payable	360,000	
	Loss on Bond Redemption	19,296	
	Discount on Bonds Payable [.6 × (\$24,360 – \$4,200)]		12,096
	Cash		367,200

***Pr. 14-130**—Accounting for a troubled debt settlement.

Ludwig, Inc., which owes Giffin Co. \$800,000 in notes payable, is in financial difficulty. To eliminate the debt, Giffin agrees to accept from Ludwig land having a fair market value of \$610,000 and a recorded cost of \$450,000.

Instructions

- (a) Compute the amount of gain or loss to Ludwig, Inc. on the transfer (disposition) of the land.
- (b) Compute the amount of gain or loss to Ludwig, Inc. on the settlement of the debt.
- (c) Prepare the journal entry on Ludwig 's books to record the settlement of this debt.
- (d) Compute the gain or loss to Giffin Co. from settlement of its receivable from Ludwig.
- (e) Prepare the journal entry on Giffin's books to record the settlement of this receivable.

*Solution 14-130

(a)	Fair market value of the land Cost of the land to Ludwig, Inc. Gain on disposition of land	\$610,000 _ <u>450,000</u> <u>\$160,000</u>		
(b)	Carrying amount of debt Fair market value of the land given Gain on settlement of debt	\$800,000 _ <u>610,000</u> <u>\$190,000</u>		
(c)	Notes Payable Land Gain on Disposition of Land Gain on Settlement of Debt		800,000	450,000 160,000 190,000
(d)	Carrying amount of receivable Land received in settlement Loss on settled debt	\$800,000 _ <u>610,000</u> <u>\$190,000</u>		
(e)	Land Allowance for Doubtful Accounts Notes Receivable		610,000 190,000	800,000