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Accounting I



香港公開大學
THE OPEN UNIVERSITY
OF HONG KONG



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Chapter 1 Introduction to Accounting

1.1 Introduction



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The purpose of accounting is to provide a means of recording, reporting, summarizing, and interpreting economic data. In order to do this, an accounting system must be designed. A system design serves the needs of users of accounting information. Once a system has been designed, reports can be issued and decisions based upon these reports are made for various departments. Since accounting is used by everyone in one form or another, a good understanding of accounting principles is beneficial to all.

1.2 Accounting Fields



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The accounting profession is generally divided into two categories: 1) private accounting and 2) public accounting. Private accountants are employed by a business, while public accountants practice as individuals or as members of an accounting firm. Public accountants are subject to strict government regulations and requirements which are determined by each individual state where a license is granted. Private accountants on the other hand require no licenses. They perform tasks which have been determined by their employer. Accounting fields exist that specialize in very specific areas of a business. Examples are auditing, budgetary, tax, social, cost, managerial, financial and international.

1.3 Basic Accounting Principles & Concepts



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Bookkeeping is concerned with the recording of business data, while accounting is concerned with the design, interpretation of data, and the preparation of financial reports. Three forms of business entities exist: 1) sole proprietorship, 2) partnership, and 3) corporations. Corporations have the unique status of being a separate legal entity in which ownership is divided into shares of stock. A shareholder's liability is limited to his/her contribution to capital. Whenever a business transaction is recorded, it must be recorded to accounting records at cost. All business transactions must be recorded. All properties owned by businesses are assets. All debts are liabilities. The rights of owners is equity.

1.4 The Accounting Equation & Transactions



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Assets, liabilities and owner's equity are the basic elements of the accounting equation. The excess of assets over liabilities is owner's equity. Thus, assets are equal to liabilities plus owner's equity at all times. Any business transaction has to affect at least one of these elements.

1.5 Accounting Statements



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There are two basic accounting statements used by most businesses. The balance sheet presents the assets, liabilities and owner's equity. Each account balance in the balance sheet is reported as of the last day of the financial period. The income statement determines whether a net profit or loss was realized by matching total revenue and expenses for a specific time period. A third statement is used by some businesses. It is the statement of owner's equity which presents the changes which have taken place in owner's equity over the period.

1.6 Corporate Accounting Statements



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The financial statements of corporations are different from those of other forms of business in several aspects. Instead of having an owner's equity section in the balance sheet statement, a corporation has a stockholders' equity. Shareholders' equity is composed of capital stock and retained earnings. Capital stock represents the initial investment of the shareholders. Retained earnings represents accumulated profits. The owner's equity statement is usually called retained earnings statement. The retained earnings statement will at times have deductions called dividends which represent payments of earnings to shareholders. Whenever shareholders buy shares of stock from the corporation, assets and stockholders' equity increase. The reverse occurs when dividends are distributed.

1.7 Income Statements



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The income statement reports the amount of net income or loss determined by subtracting expenses from revenues during a specific time period. Only expenses which are attributable to items of income are recognized as period expenses. The net

income or loss from the income statement is recorded in the statement of owner's equity.

1.8 Statement of Owner's Equity



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The statement of owner's equity records the changes in the value of owner's equity. Additional investments and net profits increase owner's equity. Dividend payments, owner withdrawals, and net losses decrease owner's equity. Net profits or losses are derived from the income statement. The statement of owner's equity (or retained earnings statement for corporations) is the connecting link between the income statement and the balance sheet.

1.9 Balance Sheet



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The balance sheet lists all assets, liabilities, and owner's equity balances as of the last day of the financial period. The balance sheet always begins with assets, then liabilities and owner's equity. Assets which are listed first are the most liquid, such as cash, accounts receivable and prepaid expenses. Liabilities are grouped by due date, with short-term liabilities listed first.

1.10 Business Transaction & the Balance Sheet



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The following is a summary of business transactions and how they affect the items of the balance sheet.

1. Initial and additional investments increase both assets and owner's equity.
2. Assets purchased on credit increase both assets and liabilities.
3. When assets are used to purchase other assets, there is no net change in the amount of total assets.

1.11 Business Transaction & the Balance Sheet



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1. Assets used to pay debts decrease assets and liabilities.
2. Net income increases assets and owner's equity.
3. Net losses decrease assets and owner's equity.
4. Assets that are used up for the purpose of the generating revenue decrease assets and owner's equity.
5. Withdrawals owners and dividends decrease assets and owner's equity.

6. Expenses reduce assets and owner's equity.

1.12 Review Questions



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R- ac1-1: What is the purpose of accounting?

R- ac1-2: What are the two categories of the accounting profession?

R- ac1-3: How is bookkeeping different from accounting?

R- ac1-4: Give the accounting equation.

R- ac1-5: What are the two basic accounting statements used by most businesses?

R- ac1-6: How are financial statements of corporations different from other types of business?

R- ac1-7: What does the income statement reports?

R- ac1-8: What does the statement of owner's equity show?

R- ac1-9: What are the major components of a balance sheet?

R- ac1-10: Briefly describe the sequence of major business transactions.

R- ac1-11: How is the balance sheet affected when assets are decreased?

1.13 Assignments for Principles of Accounting I



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Assignment A-1.1

Below is the balance sheet of XYZ Corporation on August 30, 2007 and it contains the following items below:

Paid-in-capital \$190,000
 Notes payable \$20,000
 Cash \$22,000
 Accounts Receivable \$10,000
 Merchandise Inventory \$29,000
 Land \$41,000
 Machinery and equipment \$20,000
 Furniture and fixtures \$8,000
 Notes payable \$8,000
 Accounts payable \$16,000
 Building \$230,000
 Long-term debt payable \$142,000

On August 31, 2007 the following transactions occurred:

- A. Paid \$6,000 on accounts payable
- B. Appraisers valued the remaining value of the land as \$240,000
- C. Bought machinery and equipment for \$14,000 of which \$3,000 paid in cash and the rest by signing a note.
- D. Sold part of the land for \$6,000 on account.
- E. Issued capital stock as payment for \$23,000 of the long-term debt.

Prepare a Balance Sheet for August 31, 2007 that includes the above transactions.

Assignment A-1.2

Assignment Two ABC Pharmacy is a well known drug store in your area. A condensed balance sheet for August 31, 2007 follows (\$ in millions):

Assets Cash \$ 13 Accounts Receivable 614 Inventories 2,831 Property and other assets 3,646 Total Assets \$7,104

Liabilities and Stockholders' Equity Accounts Payable \$1,364 Other Liabilities 1,506 Stockholders' equity 4,234 Total Liabilities and Stockholders' Equity \$7,104

On September 1 and 2 the following transactions were added:

Issued 1,000,000 shares of common stock to employees for cash, \$30.

Issued 1,000,000 shares of common stock for the acquisition of special equipment from a supplier, \$45.

Borrowed cash signing a note payable for \$12.

Purchased equipment for cash \$13.

Purchased inventories on account \$90.

Disbursed cash on account (to reduce the accounts payable) \$35.

Sold display equipment to retailer on account at cost \$1.

Collected cash on account \$8.

Prepare a Balance Sheet as of September 2.

Chapter 2 Accounting Cycle

2.1 Introduction to an Account



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An account represents a document used to record all similar transactions. It consists of a title, a debit column, and a credit column. The left side of an account is the debit side, and the right side of the account is the credit side. The balance of an account is determined by subtracting the smaller sum (debit or credit) from the larger sum. Initially, all transactions are recorded in a journal in a process known as journalizing. When the information recorded in the journal is transferred to the individual accounts, this process is known as posting. Total debits and credits of any transaction must always be equal.

A single account is often called a T account because of its appearance as a T. When several related accounts grouped together is called a ledger. Accounts whose balance is carried forward from period to period are known as real accounts or balance sheet accounts. In a double entry accounting system, all journal entries require a debit entry in one account to be simultaneously matched by an equal credit entry in another account. A journal entry composed of more than one debit or credit is a compound journal entry.

2.2 Rules for Increasing & Decreasing Accounts



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The following are rules for increasing and decreasing accounts.

1. Asset accounts normally have debit balances and are increased by debits.
2. Liability accounts normally have credit balances and are increased by credits.
3. Owner's equity accounts normally have credit balances and are increased by credits.
4. Revenue accounts are increased when credited.
5. Expense accounts are increased when debited.

2.3 Income Statement Accounts



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Income statement accounts have a direct effect on the balance of owner's equity. Expense accounts decrease owner's equity, while revenue accounts increase owner's equity. The net gain or loss is determined by subtracting expenses from revenues. At the end of a financial period, all expense and revenue accounts are closed to a

summarizing account usually called Income Summary. For this reason, all income statement accounts are considered to be temporary or nominal.

2.4 Normal Account Balances



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Assets, drawing, dividends, and expense accounts normally have debit balances. Liabilities, owner's equity, retained earnings, and revenue accounts normally have credit balances. There can be special circumstances where accounts will not have a normal balance, but this usually is an indication of an error.

2.5 Balance Sheet Accounts



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Balance sheet accounts are classified as assets, liabilities, or owner's equity. Income statement accounts are classified as either expenses or revenues. Assets are divided into two categories, depending upon their expected life. Current assets are those that are usually sold or consumed within a year. Fixed assets are held for periods longer than a year. Among fixed assets, plant assets depreciate, while land does not. Liabilities are also divided into two categories: current, for those payable within a year, and long-term, for those with maturities beyond one year.

Current assets typically include cash, notes receivable, accounts receivable, inventories and prepaid expenses (such as insurance premiums). Fixed assets typically include property, plant and equipment, investments, patents and trademarks. Both tangible and intangible items can be assets, provided they have some monetary value. Current liabilities include bank credit outstanding, accounts payable, interest payable, wages payable and taxes payable. Long term liabilities include loans beyond one year, notes and bonds issued by company.

2.6 Classifying Balance Sheet Accounts



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Owner's equity is the portion that remains after liabilities are subtracted from assets. For a sole proprietorship or partnership, capital represents the owner's equity. For a corporation, capital stock is the investment made by stockholders. Retained earnings represent net income that a corporation retains. Dividends are earnings of a corporation that are distributed to shareholders. Drawings represent assets taken out by owners of proprietorships or partnerships. Drawings and dividends reduce owner's equity.

2.7 Classifying Income Statement Accounts



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Revenues increase the value of owner's equity. Revenues include sales, fees earned, services, interest income and rental income. For businesses with more than one source of income, it is recommended to maintain separate accounts. Expenses vary for different businesses, and they should be classified according to the size and type of expense.

2.8 Chart of Accounts



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All accounts of a business should be listed in a chart of accounts. Usually the accounts are classified as

1. assets,
2. liabilities,
3. owner's equity,
4. revenue, and
5. expenses.

Accounts appear in the general ledger in a sequential order of the chart of accounts. The first digit of a number in the chart of accounts indicates the major division in which the account is placed. A second number of an account represents a specific category. When the general ledger is first prepared and account balances from the previous period are entered, this is known as opening the ledger.

2.9 The Flow of Data



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The accounting data normally follows a normal pattern of flow. Its order is

1. the actual business transaction requires the preparation of documentation,
2. the entry for the transaction is recorded in the journal, and
3. the journal entry is posted to the ledger.

2.10 The Two Column Journal



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Of all types of journals, the two column journal is the simplest to use. It has a debit column and a credit column used for recording all initial transactions. Before a transaction is entered into a journal, it is necessary to determine the following:

1. which accounts will be affected,
2. whether the affected account increases or decreases, and
3. whether the transaction should be recorded as a debit or credit.

An explanation of the transaction is desirable.

When journalizing entries it is customary to enter the accounts numbers and exact name of the accounts to be debited and credited, to write in the debit portion first above the credit portion, and to indent slightly the credit entry. The complete date of a transaction must always appear. Most often expense account will have only debit entries, revenue accounts only credit entries, while balance sheets accounts may have either.

2.11 Three-Column & Four-Column Accounts



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Three-column and four-column accounts are often used instead of two-column accounts. The purpose of the additional columns is to keep running balances of both debits and credits in the four-column account, or a net of the two in the three-column account. All accounts, as well as most accounting forms used to record transactions, often have a posting reference column. In the journal, the posting reference column is used to record the account number. In the individual account, the posting reference (also called journal reference) is used to record the page number of the journal where the entry was made.

Three-column and four-column accounts must show their account number and name, year and month, at the top of each page. Three-column and four-column accounts are most conveniently used in computer based accounting since debit and credit balances are automatically calculated.

2.12 The Trial Balance & Errors



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The trial balance is a list of accounts with their debit or credit balances. It is usually prepared at the end of an accounting period. The advantages of using a trial balance are:

1. it reveals mathematical errors since total debits must equal total credits, and
2. it assists in the preparation of financial statements. It should be noted, however, that trial balances cannot detect every type of error.

The first step in preparing a trial balance is to calculate the balance of each of the accounts in the general ledger. Some of the errors that the trial balance will not reveal are for instance:

- journalizing a transaction twice,
- forgetting to record a transaction,

- entering an erroneous but identical amount in debit and credit,
- posting part of a transaction as a debit or credit to the wrong account.

Errors that cause the trial balance not to balance are

- the beginning amount of an account was incorrectly recorded,
- a debit entry was posted as a credit entry,
- a debit or credit balance was omitted,
- a digit in a number was moved one or more spaces (known as slide).

Determining the amount of the difference between debit and credit can help to look for such amount. For instance, when a debit and a credit were interchanged, the trial balance difference will be twice this amount.

A major function of an auditor is to find accounting errors.

What can be done if a trial balance does not prove?

The following steps can generally help discover errors more quickly!

1. Add columns once more and determine the difference.
2. Check if the error could be a transposition, slide, or mathematical error.
3. Compare the balances of the ledger with those of the trial balance.
4. Recompute each ledger account balance.
5. Check all postings in the ledger by referring back to the journal.
6. When an error is found, (or part of it) add again all debits and credits to check if they are now equal.

2.13 Review Questions



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R- ac2-1:

R- ac2-2: State the rules for increasing and decreasing accounts.

R- ac2-3: List the major income statement accounts.

R- ac2-4: List what are the normal balances in type of account.

R- ac2-5: Outline how accounts are classified.

R- ac2-6: What is a chart of accounts?

R- ac2-7: Describe how data flows in a business.

R- ac2-8: How many columns do most journals have?

R- ac2-9: In what journals are there more than two columns?

R- ac2-10: What is the purpose of a trial balance?

R- ac2-11: Why are account often referred to as T accounts/

R- ac2-12: What typically is included in current assets?

R- ac2-13: How are accounts normally classified in a balance sheet?

R- ac2-14: How are accounts normally classified in an income statement?

R- ac2-15: What guides how accounts appear in the general ledger?

R- ac2-16: What must be first inscribed when journalizing entries?

R- ac2-17: What goes on the top of each account in a three column journal?

R- ac2-18: What is the first step in preparing a trial balance?

2.14 Assignments for Principles of Accounting I



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Assignment A-2.1

The trial balance of Kirk Used Auto Company, on March 31, 20X8, follows:

Account Title	Debit	Credit
Cash	\$10,000	
Accounts Receivable	20,000	
Automobile Inventory	100,000	
Accounts Payable		\$3,000
Notes Payable		70,000
Kirk, owner's equity		57,000
Total	\$130,000	\$130,000

This business is a sole proprietorship, thus the equity account used here is Kirk, Owner's Equity. In practice, it is often called Kirk, Capital.

Kirk rented operating space and equipment on a month-to month basis. During April, the business had the following summarized transactions:

- Invested additional \$20,000 cash in the business.
- Collected \$10,000 on accounts receivable.
- Paid \$2,000 on accounts payable.
- Sold autos for \$120,000 cash.
- Cost of autos sold was \$70,000
- Replenished inventory for \$60,000 cash
- Paid rent expense in cash, \$14,000
- Paid utilities in cash, \$1,000

- i. Paid selling expense in cash, \$30,000
 - j. Paid interest expense in cash, \$1,000
1. Journalize transactions a to j above and post the entries to the ledger.
 2. Open T-accounts for the accounts in the trial balance and the following to it: sales, cost of goods sold, rent expense, utilities expense, selling expense, and interest expense. Enter the March 31st balances in the appropriate accounts.
 3. Prepare the trial balance as of April 30, 20X8.
 4. Prepare an income statement for April. Ignore income taxes.
 5. Provide the closing entries.

Chapter 3 Completing the Accounting Cycle

3.1 Matching Revenues & Expenses



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There are two methods of recording revenues and expenses in the income statement: accrual basis and cash basis. The accrual basis of accounting is a more precise method of matching revenues and expenses, and it is more widely used. It matches revenues and expenses when they are incurred rather than when cash is received or disbursed. The cash basis of accounting records revenues and expenses only when cash is received or disbursed, and this method is often not acceptable for many forms of business.

3.2 Introduction to the Adjustment Process



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At the end of a financial period, many balances listed in the trial balance are in need of some adjustment. Common adjustments pertain to prepaid expenses, plant assets, and accrued expenses. If the proper adjusting entries are not made, financial statements will be incorrect. It is not necessary to keep track of transactions that affect revenues and expenses on a day to day basis. Adjustments should be made at the end of each accounting period.

3.3 Prepaid Expenses - Adjustments



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At the end of an accounting period, adjustments must be made to reflect the portion of the asset that has been consumed during the period. The amount of asset or prepaid expense consumed is recorded as a debit to the expense account, and a credit to the asset account. Should an adjusting entry not be made, expenses, net income, owner's equity and assets would all be overstated.

The amount of a prepaid asset to be expensed over its expected life can be expressed:

$$\text{Value of the prepaid asset} / \text{Time (months or years)} = \text{Amount expensed}$$

For example, insurance was prepaid for the next four years for \$ 26,000. The insurance expense for a year would be \$ 6,500 ($\$26,000 / 4 \text{ years}$), or \$ 541.67 per month ($\$26,000 / 48 \text{ months}$). The corresponding adjusting entry is:

Account	Debit	Credit
Insurance expense	\$ 6,500	
Prepaid insurance		\$ 6,500

3.4 Plant Assets - Adjustments



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Plant assets represent long-term tangible property owned by the firm. Although it is often not visible, the usefulness of a plant asset declines. This loss of usefulness is known as depreciation, and it requires an adjusting entry periodically. The decline in value requires a debit to Depreciation Expense account, and a credit to Accumulated Depreciation (which is said to be a contra asset account). The difference between the balances of the asset and contra asset accounts is the book value of the asset. If the adjusting entry is not made, assets, owner's equity, and net income will be overstated, and expenses will be understated.

Example:

Purchased equipment for \$36,000 that has an estimated life of 12 years with no residual value.

$$\begin{aligned} \text{Cost of equipment} - \text{Residual} & \\ \text{amount/ Life} & = \$36,000 - 0 / 12 \text{ years} \\ & = \$ 3,000 \text{ depreciation} \\ & \text{expense per year} \end{aligned}$$

$$\begin{aligned} \text{Cost of equipment} - \text{Residual} & \\ \text{amount/ Life} & = \$36,000 - 0 / 144 \text{ months} \\ & = \$ 250 \text{ depreciation expense} \\ & \text{per month} \end{aligned}$$

Adjusting journal entry:	Debit	Credit
Depreciation expense – Equipment	\$ 250	
Accumulated depreciation – Equipment		\$ 250

3.5 Liabilities - Adjustments



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While most expenses are prepaid, a few are paid after a service has been performed. This is the case of wages and salaries. Since the expense has not been paid but services have been received, an accrued expense and a liability have taken place. The adjusting entry requires a debit to an expense account and a credit to a liability account. Failure to do so will result in net income and owner's equity being overstated, and expenses and liabilities being understated.

Example:

At the end of the accounting period, it was verified that employee wages of \$1,500 and management salaries of \$4,000 were not paid.

Adjusting journal entry:

Employee wages	\$ 1,500
Management salaries	4,000
Accrued expense	\$ 5,500

1)- Debit all revenue accounts, and credit Income Summary.

3.6 Work Sheets and Financial Statements



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The work sheet is a collection of important data that is used to determine which adjusting entries must be performed. It also assists in the preparation of financial statements. The first step of preparing a work sheet is the trial balance. Once a trial balance proves (i.e. total debits equal total credits), adjusting entries can be performed. To make certain all debits and credits still prove after all adjusting entries, an adjusted trial balance is created. Once the adjusted trial balance proves, it is separated into an income statement and a balance sheet. All columns of the work sheet should have equal balances for debits and credits.

3.7 Preparing Financial Statements



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The work sheet is used in the preparation of the financial statements. The results of the income statement (net profit or loss) are transferred to the statement of owner's equity. If additional funds have been invested or withdrawn over the period, such changes are recorded to the statement of owner's equity. The owner's equity account in the balance sheet is transferred from the statement of owner's equity. All other balances of the balance sheet are transferred from the work sheet balance sheet columns.

3.8 Journalizing & Posting Closing Entries



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After the financial statements are completed, all adjusting entries are recorded in the journal and posted to the ledger so that all financial statements are in agreement. It is necessary to close all temporary accounts and record the net change to the owner's equity account. This is accomplished by journalizing and posting closing entries for all temporary accounts. An Income Summary account is used to summarize revenue and expense accounts, and establishing the net profit or loss for the period. In addition, any transaction that increases or decreases capital should also be posted to the appropriate capital account.

PROCEDURES TO CLOSE TEMPORARY ACCOUNTS

1. Debit all revenue accounts, and credit Income Summary.
2. Credit all expense accounts, and debit Income Summary.
3. Add debit and credit columns of Income Summary. If the credit balance exceeds the debit balance, a profit has been realized.
4. Results of the Income Summary should be posted to a capital account (Owner's or Shareholders equity).
5. If there is activity in the Drawing or Dividend accounts, it is necessary to credit those accounts and debit a capital account.

3.9 The Accounting Cycle



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The accounting cycle begins with the analysis of all transactions and recording them in the journal. Once all transactions have been recorded in the journal, they are posted to the ledger and a trial balance is drawn. The trial balance, adjusting entries, and any additional information for the financial statements are recorded in the work sheet.

After the completion of the work sheet, the financial statements are finalized. All adjusting and closing entries are then journalized and posted to the ledger. To ensure all entries were correctly made, a post-closing trial balance is prepared to show the equality of debits and credits, as well to confirm Assets, Liabilities, and Capital accounts with proper open balances.

3.10 Review Questions



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- R- ac3-1: What are the two methods for recording revenues and expenses?
- R- ac3-2: What entries are necessary after completing a trial balance in the accrual method of accounting?
- R- ac3-3: What are typical adjusting entries for prepaid expenses?
- R- ac3-4: What are typical adjusting entries for plant and equipment?
- R- ac3-5: What are typical adjusting entries for liabilities?
- R- ac3-6: How are work sheets used in preparation of financial statements?
- R- ac3-7: How many work sheets are used in preparation of financial statements?
- R- ac3-8: What are closing entries?
- R- ac3-9: What is the procedure to close temporary accounts?
- R- ac3-10: How are errors dealt with in the trial balance?
- R- ac3-11: Describe the accounting cycle.

3.11 Assignments for Principles of Accounting I



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Assignment A-3.1

Prepare journal entries and post to T-accounts the following transactions of Albert Smith – a realtor.

- a. Acquired office supplies of \$700 on open account. Use a Supplies Inventory account.
- b. Sold a house and collected a \$9,000 commission on the sale. Use a Commissions Revenue account.
- c. Paid cash of \$700 to a local newspaper for current advertisements.
- d. Paid \$600 for a previous credit purchase of office supplies.
- e. Recorded office supplies used of \$300.

Assignment A-3.2

Callaway Gardens a retailer of garden supplies and equipment had the accompanying balance sheet accounts, December 31, 20X7.

Assets

Cash \$22,000
 Accounts Receivable 37,000
 Inventory 131,000
 Prepaid rent 4,000
 Store equipment \$60,000
 Less: Accumulated depreciation 24,000 36,000
 Total \$230,000

Liabilities and Stockholders' Equity

Accounts payable \$111,000
 Paid-in capital 40,000
 Retained income 79,000
 Total \$230,000

Following is a summary of transactions that occurred during 20X8:

- a. Purchase of merchandise inventory on open account, \$550,000.
- b. Sales, all on credit, \$800,000.
- c. Cost of merchandise sold to customers, \$440,000.
- d. On June 1, 20X4, borrowed \$80,000 from a supplier. The note is payable at the end of 20X8. Interest is payable yearly on December 31 at the rate of 15% per annum.
- e. Disbursed \$25,000 the rent of the store. Add to Prepaid Rent.
- f. Disbursed \$165,000 for wages through November.
- g. Disbursed \$76,000 for miscellaneous expenses such as utilities, advertising and legal help.
- h. On July 1, 20X8, lent \$20,000 to the office manager. He signed a note that will mature on July 1, 20X9, together with interest at 10% per annum. Interest for 20X8 is due on December 31, 20X8.
- i. Collections on accounts receivable, \$691,000.
- j. Payments on accounts payable \$471,000.
- k. Previous rent payments applicable to 20X9 amounted to \$3,000.
- l. Depreciation for 20X8 was \$6,000.
- m. Wages earned by employees during December were paid on December 31, \$6,000.

-
- n. Interest on the loan from the supplier was disbursed.
 - o. Interest on the loan made to the office manager was received.
-
1. Prepare journal entries in thousands of dollars.
 2. Post the entries to the ledger, keying your posting by transaction letter.
 3. Prepare a trial balance, December 31, 20X8.

Chapter 4 Merchandising Enterprise Accounting

4.1 Entries for Purchases Transactions Accounting Entries Used to Record the Purchase And Payment of Goods



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1. When goods are purchased with cash, the following entry is necessary:
debit Purchases, credit Cash
2. When goods are purchased on credit, the following entry is necessary:
debit Purchases, credit Accounts Payable
3. When goods are purchased on credit, but are paid back early due to a cash discount incentive, the following entry is necessary:
debit Accounts Payable, credit Cash, and credit Purchases Discount.
debit Accounts Payable, credit Cash, and credit Purchases Discount.

4.2 Purchases Discounts



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A seller will often offer a cash discount to the buyer for an early payment. Credit terms are the conditions for the payment agreed upon by the buyer and the seller. Cash discounts are stated in a fractional form with the percentage of discount in the numerator and the number of days in the denominator. The credit period, or number of days a buyer can pay without incurring a finance charge, is stated in NET days or n/ days. Example: terms 3/15, n/60 means a buyer will receive a 3% cash discount if paid within 15 days of the invoice date, and the buyer has a maximum of 60 days to pay the entire debt amount.

4.3 Purchases Returns and Allowances Rules



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FOR RECORDING RETURNS AND ALLOWANCES FOR GOODS PURCHASED ON CREDIT

1. If merchandise is returned or a price adjustment is necessary, the buyer should debit Accounts Payable and credit the Purchases Returns and Allowances account.

- When the returned goods were purchased on credit, and a cash discount for early payment is available, the discount only applies to the price of the goods that are kept, (in addition, discounts are not taken on freight costs).

4.4 Sales Accounting



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When goods are sold for cash or on credit, the Sales account should be credited. To encourage early payment of goods purchased on credit, the seller will often offer a cash discount. These discounts are recorded in the Sales Discounts account. When goods are returned or an allowance is requested, the adjustment is made to the Sales Returns and Allowances account. All sales discounts, returns, and allowances reduce sales revenues.

4.5 Sales Accounting - Rules for Recording Sales Transactions



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- When goods are sold and payment is made in cash, debit Cash and credit Sales.
- When goods are sold on credit, debit Accounts Receivable and credit Sales.
- When goods are sold through the use of a credit card, there often will be a service fee. In such circumstances, debit Cash and Credit Card Collection Expense (for the fee) and credit Accounts Receivable.

4.6 Sales Accounting - Recording Sales Discounts



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When a buyer takes advantage of a cash discount, Cash and Sales Discount should be debited, and Accounts Receivable should be credited.

Example: Invoice for \$950 with terms 3/15, n/30 is paid early by the buyer.

Debit Cash \$921.50

Debit Sales Discounts \$28.50

Credit Accounts Receivable \$950

4.7 Sales Accounting - Recording Sales Returns and Allowances



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When a seller grants a return or an allowance, Sales Returns and Allowances is debited, and Accounts Receivable is credited. A buyer of goods can only take a cash discount on the goods that are actually kept (cash discounts do not apply to freight either). Example: A seller receives a debit memorandum for \$70 of goods that were not ordered by ABC company. If the return is granted, the following entry is necessary.

Debit Sales Returns & Allowances \$70

Credit Accounts Receivable ABC company \$70

4.8 Sales Accounting



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Manufacturers and wholesalers often reduce catalog list prices by allowing trade (or quantity) discounts. The discounts vary depending on customer and order size. Trade discounts permit flexible prices without having to print new catalogs. Trade discounts are not reflected in accounting records, only the agreed upon price between a buyer and seller is recorded.

4.9 Transportation Costs



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Whenever goods are sold, the buyer and the seller must agree upon who pays shipping costs. When goods are shipped FOB shipping point, the buyer agrees to pay for shipping costs and ownership passes to the buyer when the merchandise is delivered to the shipper. When goods are shipped FOB destination, the seller agrees to pay for transportation costs and ownership of goods passes to the buyer when the goods are delivered.

4.10 Sales Taxes



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The majority of states in the United States levy a tax on the sale of merchandise. At the moment the sale is completed (whether payment is received or not) the amount of the sales tax is credited to the Sales Tax Payable in the books of the seller. Periodically the Sales Tax Payable account will be debited when the tax is remitted to the state tax authority. The buyer of goods does not record a sales tax expense separately in his/

her accounts, it is merely added to the cost of the goods, and the entire amount is debited to Purchases.

4.11 Interim Reporting for Merchandising Enterprises



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Merchandising enterprises often prepare quarterly or monthly financial reports, called interim financial statements, which are useful to management. This requires the preparation of a trial balance, and an analysis of accounts to determine what adjustments are necessary. Once adjusting entries are entered on the work sheet, the adjusted trial balance is prepared. Interim financial statements are then prepared based upon the information that is provided by the work sheet.

4.12 Accounting for Merchandise Inventory



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There are two systems commonly used to keep track of inventory: periodic inventory and perpetual inventory systems. In the periodic inventory system, revenue is recorded each time a sale is made. However, but the cost of goods sold is not determined until a physical inventory is taken. In the perpetual system, both sales amount and the cost of goods sold are recorded each time an item is sold. This makes it possible to know quantity and the value of inventory at all times.

4.13 Determining the Cost of Goods Sold



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The cost of goods sold is usually reported in a separate section of the income statement. In the periodic inventory system, determining the cost of goods sold requires the following steps:

1. All purchases must be totaled.
2. Purchases returns & allowances and purchases discounts are deducted from purchases to determine the net purchase balance.
3. Net purchases plus transportation costs equals cost of goods purchased.
4. Beginning inventory plus cost of goods purchased equals goods available for sale.
5. Goods available for sale minus ending inventory equals cost of goods sold.

4.14 Adjustments for Merchandise Inventory



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The merchandise inventory account only shows the beginning balance of inventory, not any purchases made during the period. It is therefore necessary to remove the

beginning inventory balance and replace it with the ending inventory balance. This is performed by the following two adjusting entries:

1. Debit the beginning inventory balance to Income Summary, and credit the Merchandise Inventory account.
2. Debit the ending inventory balance to Merchandise Inventory, and credit the Income Summary account.

4.15 Adjustments on the Work Sheet



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The first step in preparing a work sheet requires a trial balance to be taken. Next, data should be gathered to perform adjusting entries. Accounts that typically require adjustments are Merchandise Inventory, prepaid expenses, supplies, assets that have to be depreciated, and outstanding liabilities. All these adjustments are posted to the adjustments column of the work sheet, and the debit and credit columns must prove. After the adjusting entries have been entered, the adjusted trial balance is prepared. Balances in this column reflect the correct ending balances of the accounts at the end of the fiscal period.

4.16 Review Questions



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- R- ac4-1: Outline the entries related to purchases.
- R- ac4-2: Explain how purchase discounts are used and entered into accounts.
- R- ac4-3: How are returns and allowances recorded?
- R- ac4-4: Outline the entries related to sales.
- R- ac4-5: Explain how sales discounts are handled>
- R- ac4-6: Describe what is done with sales returns and allowances.
- R- ac4-7: How are shipping costs accounted for by buyer and seller?
- R- ac4-8: How are sales taxes recorded?
- R- ac4-9: What interim reporting is commonly?
- R- ac4-10: What are the two systems for keeping track of inventory?
- R- ac4-11: How is cost of goods sold calculated?
- R- ac4-12: What are common adjustments to merchandise inventory?
- R- ac4-13: What must be done before starting work sheets of adjusting entries?

4.17 Assignments for Principles of Accounting I



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Assignment A-4.1

A University Bookstore ordered 500 copies of an introductory economics textbook from a publisher on July 17, 20X8. The books were delivered on August 12, at which time a bill was sent requesting payment of \$40 per book. However, a 2% discount was allowed if the publisher received payment by September 12. University Bookstore sent the proper payment, which was received by the Publisher on September 10. On December 18, University Bookstore returned 60 books to the publisher for a full cash refund.

1. Prepare the journal entries (if any) for the publisher on
 - a. July 17
 - b. August 12
 - c. September 10 and
 - d. December 18. Include appropriate explanations.

2. Suppose this was the only sales transaction in 20X8. Prepare the revenue section of the publisher's income statement.

Assignment A-4.2

Gemini Company borrowed \$100,000 from First Bank at 8% interest. The loan agreement stated that a compensating balance of \$10,000 must be kept in the Gemini checking account at First Bank. The total Gemini cash balance at the end of the year was \$45,000.

1. How much usable cash did Gemini Company received for its \$100,000 loan?
2. What was the real interest rate paid by Gemini?

Assignment A-4.3

International Metal Products, Inc reported the following in the 20X8 statement. (\$ in thousands):

Net Sales \$600

Cash discounts on sales 20

Sales returns and allowances 30

1. Prepare the revenue section of the 20X8 income statement.
2. Prepare journal entries for
 - a. initial revenue recognition for 20X8 sales
 - b. sales return and allowances and
 - c. collection of accounts receivable.

Assume that all sales were on credit and all accounts receivables for 20X8 sales were collected in 20X8.

Chapter 5 Preparing Financial Statements

5.1 Income Statements



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Income statements are commonly prepared in two formats: multiple-step and single-step. In the multiple-step format revenues are often presented in great detail, cost of goods sold is subtracted to show gross profit, operating expenses are separated from other expenses, and operating income is separated from other income. In the single-step format, all expenses are combined in a single section including cost of goods sold.

5.2 Retained Earnings Statement



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The retained earnings statement is a summary of what has occurred to the retained earnings account. The retained earnings statement always begins with the ending balance of the past period, then presents net income or loss, dividend payments and other elements affecting the retained earnings account. It is not unusual for the retained earnings statement and the income statement to be combined into one statement. This is primarily done for simplicity.

5.3 Balance Sheets



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Balance sheets can be arranged in two forms: account form and report form. The account form lists all asset accounts on the left hand side of the balance sheet, and all liabilities and equity accounts are listed on the right-hand side. The report form lists all accounts in a downward sequence beginning with assets, liabilities, and ending with equity. Both assets and liabilities should be arranged according to their liquidity or purpose. Assets that are generally liquid and are expected to be held less than a year are listed under current assets. Assets that are permanent in nature or are expected to be used for a long period of time are listed under plant assets. Liabilities are classified into short and long term depending on their maturity.

5.4 Adjusting and Closing Entries



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The work sheet provides the information needed for the adjusting entries. Adjusting entries involve asset, liability, expense, and revenue accounts. Special adjusting entries are required for inventory:

- debit Income Summary and credit Inventory for the beginning balance, and
- debit Inventory and credit Income Summary for the ending balance.

5.5 Adjusting and Closing Entries



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After all adjusting entries have been performed, closing entries are required for all temporary accounts. Sales, income accounts, purchases returns & allowances, and purchases discounts are debited to close, and the Income Summary account is credited for the total. Expenses, purchases, sales discounts, sales returns & allowances, and transportation in are all credited to close, and the Income Summary account is debited for the total. The Income Summary debit or credit balance is closed to the Owner's Equity or Retained Earnings account. The Dividends account is credited and Retained Earnings debited if any dividends were paid during the year.

5.6 Reversing Entries



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Since some adjusting entries performed at the end of a financial period disrupt routine transactions, they are simply reversed on the first day of the new period. A reversing entry exact reverses the adjusting entry. An example of an adjusting entry that is commonly reversed is salary or wages payable. Reversing entries are performed because they reduce errors and save time. Reversing entries are optional and some firms do not perform them.

5.7 Interim Statements



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Financial statements prepared for a period less than a complete accounting year are referred to as interim statements. Data for interim statements is obtained from work sheets. Any adjusting and closing entries performed to prepare interim statements are not recorded in the accounts, (this is only necessary at the end of a fiscal year or accounting period).

5.8 Correcting Errors



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Depending upon the type of an error and the point in time it is discovered, the correcting procedure differs.

1. When a journal entry is incorrect and has not yet been posted, a line should be drawn through the error and the correct title or amount should be entered.
2. When a journal entry has been posted incorrectly, it is necessary to journalize and post a correcting entry.
3. When a journal entry is correct but has been posted incorrectly, a correcting entry should be posted.

5.9 Review Questions



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1. R- ac5-1: How is the income statement commonly prepared?
2. R- ac5-2: What does the statement of retained earnings show?
3. R- ac5-3: How is the balance sheet arranged?
4. R- ac5-4: What is the purpose of work sheets at the end of the year?
5. R- ac5-5: What comes first, adjusting or closing entries?
6. R- ac5-6: What are reversing entries?
7. R- ac5-7: What name is used for statements for less than one year?
8. R- ac5-8: How are accounting errors handled?

5.10 Assignments for Principles of Accounting I



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Assignment A-5.1

ABC Company, a retail hardware store, pays quarterly rent on its store at the beginning of each quarter. The rent per quarter is \$15,000. The owner of the building in which the stores is located is the XYZ Corporation.

By using the balance sheet equation format (Asset = Liability + Equity), analyze the effects of the following on the tenant's and the landlord's financial position:

1. ABC pays \$15,000 rent on July 1.
2. Adjustment for July.
3. Adjustment for August.
4. Adjustment for September. Also prepare the journal entries for ABC and XYZ for September.

Assignment A-5.2

Delta Airlines had the following as a current liability on its balance sheet, Dec 31, 20X7:

Accrued salaries and vacation pay \$1,170,000,000

Under the accrual basis of accounting, vacation pay is ordinarily accrued throughout the year as workers are regularly paid. For example, suppose a Delta baggage handler earns \$800 per week for 50 weeks and also gets paid \$1,600 for two weeks vacation. Accrual accounting requires that the obligation for the \$1,600 be recognized as it is earned instead of when the payment is disbursed. Thus, in each of the 50 weeks Delta would recognize a wage expense (or vacation pay expense) of $\$1,600/50 = \32 .

1. Prepare the weekly Delta adjusting journal entry called for by the \$32 example.
2. Prepare the entry for the \$1,600 payment of vacation pay.

Assignment A-5.3

ABC Bank lent XYZ Company \$1,000,000 on April 1, 20X1. The loan plus interest of 12% is payable on April 1, 20X2.

1. By using the balance sheet equation format (Asset = Liability + Equity), prepare an analysis of the impact of the transaction on both ABC Bank and XYZ's financial position on April 1, 20X1. Show the summary adjustments on December 31, 20X1, for the period April to December 31.
2. Prepare adjusting journal entries for ABC Bank and XYZ Company on December 31, 20X1.

Chapter 6 Accruals and Deferrals

6.1 Introduction to Deferrals & Accruals



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Deferrals and accruals are instrumental in properly matching revenues and expenses. A deferral delays the recognition of either an expense that has been paid or a revenue that has been collected. An accrual is an expense that has not been paid or a revenue that has not yet been received.

6.2 Deferrals - Prepaid Expenses



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Prepaid expenses represent the cost of goods and services purchased that are not entirely used up at the end of the year. Adjusting entries are necessary so that asset and expense accounts have the proper balances. Prepaid expenses can be initially recorded as either an asset or an expense. Either method will yield the same results, but adjusting entries to obtain the final result differ. The advantage of recording a prepaid expense initially as an asset is that no reversing entry is necessary.

6.3 Deferrals - Unearned Revenues



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When revenue is received before goods are delivered or services performed, the revenue is said to be unearned. Unearned revenues can initially be recorded as either a liability or a revenue. When unearned revenues are recorded as liabilities, an unearned revenue account is credited. An advantage of this method is that no reversing entry is necessary. When unearned income is recorded as a revenue, a revenue account is credited. This method requires a reversing entry at the beginning of the new period. Both methods produce, however, the same end result.

6.4 Accruals - Liabilities or Expenses



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Many expenses which accumulate on a daily basis are only recorded at set intervals. At the end of an accounting period a portion of such expenses (for instance, salaries) often remains unpaid. Such accruals are considered to be both liabilities or expenses. An adjusting entry is necessary at the end of an accounting period to properly reflect

the portion of the accrued but yet unpaid expense and liability. At the start of the next period, the adjusting entry is reversed to simplify accounting.

6.5 Accruals - Assets or Revenues



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Many businesses only record revenues when they are actually received. At the end of an accounting period, all revenues earned but not yet collected require adjusting entries. The adjustment is performed by debiting an asset account and crediting a revenue account. As a result, financial statements will be able to properly match revenues and expenses. A reversing entry is performed at the first day of the new period to simplify accounting.

6.6 Reviewing Accruals and Deferrals



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Although all accruals and deferrals require adjusting entries at the end of an accounting period, reversing entries are not necessary for all adjustments. Reversing entries should only be performed under the following circumstances:

1. when an accrued asset or an accrued liability is adjusted,
2. when a prepaid expense is initially recorded as an expense,
3. when an unearned revenue is initially recorded as revenue.

6.7 Review Questions



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R- ac6-1: What is the purpose of deferrals and accruals?

R- ac6-2: What are prepaid expenses? Give examples.

R- ac6-3: What is unearned revenue? Give examples.

R- ac6-4: What accruals related to liabilities are usually necessary?

R- ac6-5: What accruals related to assets or revenues are usually necessary?

R- ac6-6: Do accruals and deferrals require year end adjusting entries?

R- ac6-7: What happens to deferrals and accruals at the beginning of the year?

1. Explain the following statement by using some examples: "The accrual of previously unrecorded revenues is the mirror image of the accrual of previously unrecorded expenses."
2. You have just started a program of selling gift certificates at your store. In the first month you sold \$1,000 worth and customers redeemed \$100 of these certificates for merchandise. Your average gross profit margin is 50%. What should you

report as gift certificate revenue and how much gross margin will appear in the income statement?

3. A company began business on July 1 and purchased \$1,000 in supplies including paper, pens, paper clips, and so on. On December 31, as they prepared their financial statements, the accounting clerk asked how to treat the \$1,000 that appeared in the supplies inventory account. What should this clerk do?

6.8 Assignments for Principles of Accounting I



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Assignment A-6.1

Tony Audio Company is a retailer of stereo equipment. Tony Audio has been in business for 1 month. The company's unadjusted trial balance, January 31, 20X8, has the following accounts:

Accounts	Amount	
Cash	\$ 71,700.00	
Accounts Receivable	\$ 160,300.00	
Notes Receivable	\$ 40,000.00	
Merchandise Inventory	\$ 250,200.00	
Prepaid Rent	\$ 15,000.00	
Store Equipment	\$ 114,900.00	
Notes Payable		\$ 100,000.00
Accounts Payable		\$ 117,100.00
Unearned Rent Revenue		\$ 3,000.00
Paid-in-capital		\$ 400,000.00
Sales		\$ 160,000.00
Cost of Goods Sold	\$ 100,000.00	
Wages Expense	\$ 28,000.00	
Total	\$ 780,100.00	\$ 780,100.00

Consider the following adjustments on January 31:

- a. January depreciation, \$1,000.
- b. On January 2, rent of \$15,000 was paid in advance for the first quarter of 20X8 as shown by the debit balance in the Prepaid Rent account. Adjust for January rent.
- c. Wages earned by employees during January but not paid as of January 31 were \$3,750.

- d. Tony borrowed \$100,000 from the bank on January 1. The explicit transaction was recorded when the business began, as shown by the credit balance in the Notes payable account. The principal and 9% interest are to be paid 1 year later (January 1, 20X9). However, an adjustment is necessary now for the interest expense of $1/12 \times 0.09 \times \$100,000 = \$750$ for January.
- e. On January 1, a cash loan of \$40,000 was made to a local supplier, as shown by the debit balance in the Notes Receivable account. The promissory note stated that the loan is to be repaid 1 year later (January 1, 20X9), together with interest at 12% per annum. On January 31, an adjustment is needed to recognize the interest earned on the notes receivable.
- f. On January 15, a nearby corporation paid \$3,000 cash to Tony Audio Company as an advance rental for Tony's storage space and equipment to be used temporarily from January 15 to April 15 (3 months). This \$3,000 is the credit balance in the Unearned Revenue account. On January 31, an adjustment is needed to recognize the rent revenue earned for half a month.
- g. Income tax expense must be accrued on January income at a rate of 50% of income before taxes.

Questions

1. Enter the trial balance amounts in the general ledger. Set up the new asset account, Accrued Interest Receivable, and the new asset-reduction account, the contra account, Accumulated Depreciation, Store Equipment. Set up the following new liability accounts: Accrued Wages Payable, Accrued Interest Payable, and Accrued Income Taxes Payable. Set up the following new expense and revenue accounts: Depreciation Expense, Rent Expense, Interest Expense, Interest Revenue, and Income Tax Expense.
2. Journalize adjustments "a" to "g" above and post the entries to the ledger. Key entries by transaction later.
3. Prepare an adjusted trial balance as of January 31, 20X8.

Assignment A-6.2

Nike, Inc. has many well-known products, including footwear. The company's balance sheet included (\$ in millions):

	31-May	
	2007	2008
Prepaid Expenses	\$ 190.9	\$ 196.2
Income Tax Payable	\$ -	\$ 28.9

Suppose that during the fiscal year ended May 31, 2008, \$210,000,000 cash was disbursed and charge to Prepaid Expenses. Similarly, \$325,000,000 was disbursed for income taxes and charged to Income Taxes Payable.

1. Assume that the Prepaid Expenses account relates to outlays for miscellaneous operating expense, for example, supplies, insurance, and short-term rentals. Prepare summary journal entries for (a) the disbursements and (b) the expenses for fiscal 2008.
2. Assume that there were no other accounts related to income taxes. Prepare summary journal entries for (a) the disbursements and (b) the expenses for fiscal 2008.

Chapter 7 Accounting Systems

7.1 Principles of Accounting Systems



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The accounting system of an organization should provide all necessary information. The type of accounting system used depends on the information needs of an organization. All accounting systems should have the following characteristics:

1. cost effectiveness,
2. adequate internal controls,
3. flexibility to a changing environment, and
4. compatibility and adaptability to an organization's structure.

7.2 Installing & Revising Accounting Systems



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The installation and revision of an accounting system requires a complete knowledge of a business operation. The following steps are necessary when installing or changing an accounting system.

1. Systems analysis: this stage determines data needs, the sources of data and any problem in processing current data.
2. Systems design: this stage involves designing new or revising current accounting systems based upon the results of the systems analysis.
3. Systems implementation: this final stage installs and evaluates the new or revised accounting system.

7.3 Internal Controls



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Internal controls are designed to safeguard assets, check accuracy of accounting data, promote efficiency, and encourage adherence to company policies. Internal accounting controls are specifically concerned with the protection of assets and the reliability of accounting information. Internal administrative controls are concerned with operational efficiency, and help determine whether business goals are being met.

7.4 Subsidiary Ledgers



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Subsidiary ledgers are used for accounts that have a large number of individual accounts with common characteristics. Subsidiary ledgers are commonly used for accounts receivable and accounts payable; both consist of a large number of smaller accounts. The general ledger contains all balance sheet and income statement accounts. Every subsidiary ledger has a controlling account which can be found in the general ledger. The sum of the balances of the subsidiary ledger must be equal to the controlling account.

7.5 Special Journals



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Special journals are designed to record a specific type of transaction which occurs frequently. The following is a summary of the four most commonly used special journals:

1. purchases journal: used to record purchases on credit,
2. sales journal: used to record all sales made on credit,
3. cash payments journal: records all cash disbursements, and
4. cash receipts journal: records all cash receipts.

In certain instances, business documents such as purchases and sales invoices are used instead of special journals to reduce expenses.

7.6 Purchases Journal



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Items commonly purchased on account are goods held in inventory for sale, supplies, and equipment. The accounts payable account is always credited, and an asset account is debited. Assets purchased on a recurring basis have their own column in the journal. Assets purchased less regularly are posted in the sundry accounts section of the journal. At all times, total debits must equal total credits. At the end of an accounting period, all entries should be posted to a subsidiary ledger or the general ledger.

7.7 Cash Payments Journal



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When the cash payments journal is used, the cash column is always credited whenever a payment is issued. When a payment is made for goods previously purchased on credit, the accounts payable column is credited. In the event a discount is offered for early payment, the purchases discounts column should be debited. The sundry accounts column is used for debits to accounts which do not have an individual column. At the end of the month, all data from the journal should be posted to subsidiary ledgers or the general ledger. The sum of the accounts payable subsidiary ledger must be equal to the controlling account. In the event it is not, errors must be found and corrected.

7.8 Sales Journal



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The sales journal is only used to record sales of merchandise on account. A unique feature of the sales journal is that accounts receivable debits and credits share the same column. A column also often exists to record sales tax payable. Any sales returns or allowances granted for goods sold on credit require an entry to the general journal. If a cash refund is given, the transaction should be recorded to the cash payments journal.

7.9 Cash Receipts Journal



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The cash receipts journal is used to record all transactions that increase the cash balance. The most common sources of cash receipts are cash sales and payments for goods on account. When debtors pay for goods purchased on account, the accounts receivable column should be credited. If a cash discount is taken by a customer, the sales discount column should be debited for the cash discount. All accounts in the cash receipts journal are posted periodically to the general ledger. Accounts receivables should be posted monthly to the accounts receivable subsidiary ledger.

7.10 Review Questions



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R- ac7-1: What is the purpose of accounting system principles?

R- ac7-2: When and how is an accounting system revised?

R- ac7-3: Why internal controls are needed?

R- ac7-4: When are subsidiary ledgers use for liabilities or expenses?

R- ac7-5: What is the purpose of subsidiary ledgers?

R- ac7-6: When are special journals used?

R- ac7-7: What is entered into a purchases journal?

R- ac7-8: What is entered into a cash payments journal?

R- ac7-9: What is recorded in a sales journal?

R- ac7-10: What transactions are entered into a cash receipts journal?

1. "If everyone were honest, there would be no need for internal controls to safeguard cash." Do you agree? Explain.
2. When a company records a sales transaction, it also records another related transaction. Explain the related transaction.

7.11 Assignments for Principles of Accounting I



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Assignment A-7.1

A wine wholesaler sells its products on credit terms of 2/10, n/30. Consider the following transactions:

June 9: Sales on credit to AB Wines, \$20,000

June 11: Sales on credit to Marty's Liquors, \$10,000

June 18: Collected from AB Wines

June 26: Accepted the return of six cases from Marty's, \$1,000

July 10: Collected from Marty's

July 12: AB Wines returned some defective wine that it had acquired on June 9 for \$100. The Wholesaler issued a cash refund immediately.

Prepare journal entries for these transactions. Explain the transaction, when needed.

Assignment A-7.2

A clothing Store has extended credit to customers on open account. Its average experience for each of the past 3 years has been:

Account	Cash	Credit	Total
Sales	\$500,000	\$300,000	\$800,000
Bad debts expense	-	6,000	6,000
Administrative expense	-	10,000	10,000

The Store is considering whether to accept bank cards (e.g. VISA, MasterCard). However, the manager resisted because she does not want to bear the cost of the service, which would be 5% of gross sales.

A representative of VISA claims that the availability of bank cards would have increased overall sales by at least 10%. However, regardless of the level of sales, the new mix of the sales would be 50% bank card and 50% cash.

1. How would a bank card sale of \$200 affect the accounting equation? Where would the discount appear on the income statement?
2. Should the Store adopt the bank card if sales do not increase? Base your answers solely on the facts given here.
3. Repeat requirement 2, but assume that total sales would increase 10%.

Assignment A-7.3

Consider the following data taken from the adjusted trial balance of ABC Company, December 31, 20X7 (in millions):

Account	Amount
Purchases	\$ 125
Sales returns and allowances	\$ 5
Freight in	\$ 14
Cash discounts on purchases	\$ 1
Inventory (beginning of the year)	\$ 25
Sales	\$ 239

Account	Amount
Purchase returns and allowances	\$ 6
Cash discounts on sales	\$ 8
Other expenses	\$ 80

Prepare summary journal entries. The ending inventory was \$40 million.

Chapter 8 Cash

8.1 Bank Accounts



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The most effective tool used to control cash is a bank account. It provides a double record of all cash transactions. In order to provide effective controls on the use of bank accounts, special documents are used to evidence transactions. Signature cards are kept by the bank for all employees authorized to make withdrawals. Deposit tickets must accompany deposits, and checks must be issued for all payments. A remittance advice is sent with each payment to ensure that proper credit is recorded by creditors. Banks commonly require that a minimum balance (compensating balance) be held.

8.2 Bank Statements



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An advantage of using a bank account to control cash is that banks send a bank statement monthly reporting all the transactions in the account. Information normally present in the bank statement consists of the beginning and ending balances, deposits, other credits, withdrawals and other debits. The cancelled checks are enclosed with the statement, as well as debit and credit memorandums (for items processed by the bank usually unknown to the depositor). Rarely will the bank statement balance and the depositor's Cash in Bank account balance be exactly the same, and they must be reconciled.

8.3 Bank Reconciliations



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A bank reconciliation is a method used to determine the reasons for discrepancies between the bank statement balance and the Cash in Bank account balance and to calculate an adjusted balance. Discrepancies are usually due to outstanding items which have not yet been recorded by either of the bank or the company, and which typically include checks not yet presented for collection, deposits in transit and bank service charges. Errors are another common cause of discrepancies, which the reconciliation will help correct. Finally, the reconciliation may uncover irregularities.

Balance per bank	XX
Add:	
Deposits in transit	XX

Total		XX
Less:		
Outstanding checks		XX
Adjusted bank balance		XX

Balance per book		XX
Add:		
Deposits not recorded in book	XX	
Interests earned not yet recorded	XX	XX
Total		XX
Less:		
Not-sufficient-fund checks	XX	
Bank service charges	XX	XX
Adjusted book balance		XX

* Adjusted bank balance must equal adjusted book balance.

8.4 Bank Reconciliations



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A bank reconciliation is divided into two sections, the balance per bank statement and the balance per depositor's records. Although it is possible to reconcile one balance to the other, common practice adjusts both balances to prove to one another. Outstanding transactions unknown to the depositor discovered when the bank statement was sent require journal entries.

Example:

Prepare a bank reconciliation based on the following:

Balance per bank statement	\$ 700,000
Balance per book	430,000

Deposits in transit	50,000
Deposits not recorded in book	165,000
Not-sufficient-fund checks	80,000
Outstanding checks	250,000
Bank service charges	15,000

Balance per bank	\$ 700,000
Add:	
Deposits in transit	50,000
Total	\$ 700,000
Less:	
Outstanding checks	250,000
Adjusted bank balance	\$ 500,000

Balance per book		\$ 430,000
Add:		
Deposits not recorded in book		165,000
Total		\$ 595,000
Less:		
Not-sufficient-fund checks	80,000	
Bank service charges	<u>15,000</u>	95,000
Adjusted book balance		\$ 500,000

8.5 Cash Accounts



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There are often several cash accounts because they serve different purposes. The Cash in Bank account represents the checking account that processes deposits, checks and memorandum items. The Cash Short and Over account is used to record any

variance by sales clerks. The Cash on Hand Fund is used to provide change to conduct business with customers. The Petty Cash Fund is used to pay for small items with cash. Each of these cash accounts needs to be strictly controlled to prevent mishandling.

Setting up petty cash fund	Journal entry		
		Debit	Credit
	Petty cash	\$150	
	Cash		\$150

The accounting assistant brought the following receipts and accepted \$ 40 to replenish the petty cash fund.

Receipts

Repairs to tables \$ 15

Delivery to customers \$ 25

Replenishment of petty cash fund	Journal entry		
		Debit	Credit
	Repairs and maintenance	\$15	
	Delivery expense	\$25	
	Cash		\$40

8.6 Internal Control of Cash Accounts



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Numerous procedures are available to control cash accounts. Monthly bank statements help verify the cash account balance. The bank reconciliation is particularly useful in controlling cash receipts. The voucher system is used to control cash payments. Different cash funds exist for specific purposes to keep track of each type of cash transaction. It should be noted that it is of utmost importance to separate cash handling and cash related accounting duties.

8.7 Internal Control of Cash Accounts



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One of the most common methods to control cash payments is the voucher system. The components of a voucher system are

1. vouchers: documents establishing proof of payment,
2. a voucher register: to record every voucher,
3. an unpaid voucher file,
4. a paid voucher file, and the
5. a check register: to record the payment of each voucher.

The voucher system provides effective accounting controls and aids management decision making.

8.8 The Voucher System: Important Facts Concerning Vouchers



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1. Vouchers must be prepared for all payments.
2. Vouchers represent written authorization of a payment.
3. Before a voucher can be approved; the receiving report, invoice and purchase order should be compared keeping in mind possible discounts.
4. All vouchers should be recorded in the voucher register in a numerical order.

8.9 The Voucher System: Facts Concerning the Voucher Register



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1. All vouchers must be recorded in the voucher register.
2. Vouchers are listed in numerical order.
3. The register records the payee, the date the payment is made and the number of the check issued for payment,
4. The Accounts Payable account is always credited, but there may be different accounts to be debited.
5. The Sundry Accounts is used to debit accounts not listed in the other Register columns.

8.10 The Voucher System: Voucher Files Procedures



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1. Unpaid vouchers are filed in the unpaid voucher file.

2. Unpaid vouchers should be filed in the order they are due.
3. Paid vouchers are filed in the paid voucher file.
4. Paid vouchers are filed in numerical order.

8.11 The Voucher System: Using the Check Register



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1. When a voucher is paid, it is recorded in the check register.
2. The check register is similar to the cash payments journal.
3. All checks should be listed numerically, even those that are voided.
4. Cash in Bank account should always be credited. If a discount is taken, credit the Purchases Discount account.
5. Voucher numbers and a running cash balance column are used in the check register.

8.12 Electronic Funds Transfer



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The evolution of electronic funds transfer (EFT) will change the way cash transactions are processed. EFT uses electronic impulses that are computerized to perform cash transactions. This eliminates the need for checks and physical money. EFT has a particularly strong presence in retail sales. Point-of-sale systems are used by customers to pay for purchases using credit cards, charge cards, and bank cards. The greatest benefit EFT can provide is reduced costs, and quicker and more accurate information.

8.13 Review Questions



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- R- ac8-1: What is the most effective tool to control cash?
- R- ac8-2: What are the advantages of using a bank account?
- R- ac8-3: What is the purpose of a bank reconciliation?
- R- ac8-4: How is a bank reconciliation performed?
- R- ac8-5: Why are there usually more than one cash account?
- R- ac8-6: Describe the procedure to control cash accounts.
- R- ac8-7: What is the purpose of a voucher system?
- R- ac8-8: How are electronic funds transfer affecting cash transactions?
1. List the internal control procedures used to safeguard cash.
 2. "The cash balance on a company's books should always equal the cash balance shown by its bank." Do you agree? Explain.

8.14 Assignments for Principles of Accounting I



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Assignment A-8.1

A local Bakery has a checking account with a Community Bank. The Bakery's cash balance on July 31 of this year was \$30,000. The deposit balance on the bank's books on July 31 was also \$30,000. The following transactions occurred during July:

Date	Check #	Amount	Explanation
7/1	261	\$11,000	Payment of previously billed fee
7/6	262	9,000	Payment of accounts payable
7/10		10,000	Collection of taxes receivable
7/14	263	14,000	Acquisition of equipment for cash
7/17		16,000	Collection of receivables
7/28	264	8,000	Payment of accounts payable
7/30	265	21,000	Payment of interest
3/31		25,000	Collection of taxes receivable

All cash deposits are deposited via a night depository system after the close of the municipal business day. Therefore, the receipts are not recorded by the Bank until the succeeding day.

On July 31, the Bank charged the Bakery \$95 for miscellaneous bank services.

- A. Prepare the journal entries on the Bank's books for check 262 and the deposit of July 10.
- B. Prepare the journal entries for all July transactions on the books of the Bakery.
- C. Post all transactions for July to T-accounts for the Bakery's Cash in Bank account and the bank's Deposit account. Assume that only

checks 261 to 263 have been presented to the bank in July, each taking 4 days to clear the bank's records.

- D. Prepare bank reconciliation for the Bakery, July 31, 20X8. The final three Bakery transaction of July had not affected the bank's records as of July 31. What adjusting entry in the books of the Bakery is required on July 31?
- E. What would be the cash balance shown on the balance sheet of the Bakery on July 31, 20X8?

Assignment A-8.2

An employee named Elizabeth has a personal bank account. Her employer deposits her weekly paycheck automatically each Friday. The employee's check register (check-book) for August is summarized as follows:

Reconciled cash balance, July 31,		\$ 100.00
Additions		
Weekly payroll deposits	August	
	3	\$ 800.00
	10	\$ 800.00
	17	\$ 800.00
	24	\$ 800.00
Deposit of check received for gambling debt	25	\$ 500.00
Deposit of check received as winner of cereal contest	31	\$ 400.00
Subtotal		\$ 4,200.00
Deductions		
Checks written No. 352-339	1-23	
Check No. 340	26	
Check No. 341	30	
Check No. 342	31	\$ 3,800.00
Cash in bank August 31		\$ 400.00

The bank statement is summarized in the next exhibit. (Please note that

NSF stands for Not Sufficient Funds). The check deposited on August 25 bounced; by prearrangement with Elizabeth, the bank automatically lends sufficient amounts (in multiples of \$100) to ensure that her balance is never negative.

- i. Prepare Elizabeth's bank reconciliation, August 31.
- ii. Assume that Elizabeth keeps a personal set of books on the accrual basis. Prepare the compound journal entry called by the bank reconciliation.

EXHIBIT

Bank Statement of Elizabeth

SUMMARY OF YOUR CHECKING ACCOUNTS

Beginning Balance	\$ 100.00
Deposits	\$ 4,600.00
Withdrawals	\$ 3,870.00
Service charges/fees	\$ 25.00*
Ending balance	\$ 805.00
Minimum balance on Aug., 28	\$ (80.00)

*\$10.00 for returned check;

\$15.00 monthly service charge.

CHECKING ACTIVITY

Deposits

Posted	Amount	Description
3-Aug	\$ 800.00	Payroll deposit
10-Aug	\$ 800.00	Payroll deposit
17-Aug	\$ 800.00	Payroll deposit
24-Aug	\$ 800.00	Payroll deposit
25-Aug	\$ 500.00	Payroll deposit
28-Aug	\$ 100.00	Automatic loan
31-Aug	\$ 800.00	Payroll deposit

Withdrawals

Ck. No.	Paid	Amount
325-339	Various dates in August. These would be shown by specific amounts, but are shown here as a total.	\$ 3,300.00
340	27-Aug	\$ 70.00
NSF	28-Aug	\$ 500.00

Total number of checks = 16

Chapter 9 Receivables

9.1 Introduction to Receivables



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Receivables are any monetary claims against debtors. Credit can be granted in two forms: open account or evidenced by a formal instrument. When a formal instrument of credit, that is a promissory note, the creditor has a stronger legal claim and can endorse it to a third party. The party that promises payment is known as the maker, and the party entitled to receive the payment is the payee. Notes receivable can be interest or non-interest bearing. The amount due at maturity, known as maturity value, is equal to the face value plus any accrued interest. Receivables not expected to be collected within the current year, should be listed as investments on the balance sheet.

9.2 Receivable Controls



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Receivables require the same internal controls as other assets of a business. Employees responsible for collecting and approving receivables should not be involved with accounting aspect related to them. All accounting functions should be designed so that the work of one employee can be used as verification of another employee's work. A business that has a substantial amount of notes may find the use of a notes receivable register very helpful. It provides detailed information on each note, and assists in the timely collection of notes. Proper controls of receivables also includes obtaining approval for credit sales, sales returns and allowances, and sales discounts.

9.3 Calculating Interest



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Interest rates are usually stated on an annual basis. The interest is computed by multiplying principal by rate and then by time (principal x rate x time). The maturity value is determined by calculating interest and adding it to the face value of the note. When interest is computed for periods of less than a year, time is expressed as a fraction. The numerator of the fraction is the length of the note and the denominator is the number of days in a year. Government agencies use 365 days in the denominator, while the private sector uses 360 days.

9.4 Accounting for Notes Receivable



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When a note is received from the debtor (i.e. open account customer), a journal entry should be made debiting Notes Receivable and crediting Accounts Receivable account. Notes receivable that do not mature by the end of a fiscal period, require both adjusting and reversing entries for the accrued interest. This is done so that interest income is allocated to the proper financial periods. When a note matures and is paid, the Cash account is debited and the Notes Receivable and Interest Income accounts is credited.

9.5 Discounting a Note Receivable



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In the event a business is in need of cash, it has the option to transfer its notes receivable to a bank, which is known as discounting. The interest a bank charges on the period it holds a note is known as discount. Depending upon the arrangement with the bank, the company may still be liable in the event a debtor defaults on the payment. It is necessary to disclose these contingent obligations on a firm's Balance Sheet in a foot note. When proceeds are received for the discounted notes, the Cash account is debited, and the Notes Receivable account credited. If the proceeds exceed the face value of the note, the Interest Income account is credited. If the proceeds are less than the face value of the note, Interest Expense is debited.

9.6 Dishonored Notes Receivable



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When the maker of a note fails to pay on the due date, the note receivable is considered to be dishonored. A dishonored note is no longer negotiable. In the books of creditors, the following entry is made :

Debit Accounts Receivable

Credit Notes Receivable

Credit Interest Income or Interest Receivable

When a note previously discounted with a bank is dishonored, the holder of the note (the bank) notifies the endorser (i.e the company) of non-payment. Protest fees are charged to the endorser for legal fees.

Accounts receivable are sales on credit made to customers that have not yet been collected in cash. Accounts receivable are discounted based on:

a. Trade discount – discount based on sales volume

Example:

Price per unit will be \$8.50 for sales of more than 200 units.

The volume discount is \$1.50.

b. Terms of payment

Example:

This means that a 2% discount will be given to a customer for the amount paid within 15 days while the unpaid amount should be settled in 30 days.

c. Cash discount – discount is given if full amount is paid within a normal credit period.

Example 1:

Customers will be given 2% discount if they pay in cash at the time of sale.

Example 2:

\$25 is the selling price per unit.

Customers will be given 1% discount if they fully pay within 5 days.

9.7 Receivables which Become Uncollectible



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No matter what kind of credit policy or collection procedures a business establishes, a certain percentage of receivables will usually turn out to be uncollectible. When a receivable is determined to be uncollectible, it is written-off as an operating expense. Strong indications that a receivable may be uncollectible are the declaration of bankruptcy by the debtor, repeated failures to collect, disappearance of the debtor, and debts that are beyond the statute of limitations. Two methods exist to write-off receivables. The direct write-off method records the expense when the receivable is uncollectible, while the allowance method makes a provision for a portion of the current year sales to become uncollectible throughout the entire year.

9.8 The Allowance Method



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The allowance method of accounting for uncollectibles estimates the percentage of accounts that will be uncollectible. Once the amount is determined, an adjusting entry is made that debits the Uncollectible Accounts Expense and credits the Allowance for Doubtful Accounts (also known as Allowance for Bad Debt). When a specific account is determined to be uncollectible, the Allowance for Doubtful Accounts is debited and the Accounts Receivable account is credited. The advantage of using the allowance method is it provides a reduction of the value of receivables and recognition of expense in the period the corresponding sales have taken place.

Example:

1. December 31, 2010

Company Y believed that it has \$25,000 unsettled accounts receivable for the year and an allowance should be recorded in the books.

Journal entry to establish allowance

	Debit	Credit
Bad debts expense	\$25,000	
Allowance for bad debts		\$25,000

2. January 25, 2011

Company Y's customer, Company X, filed for bankruptcy. Company X had to pay Company Y \$5,000.

Journal entry to write off accounts receivable from Company X

	Debit	Credit
Allowance for bad debts	\$5,000	
Accounts receivable		\$5,000

9.9 Methods Used to Estimate Uncollectibles



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There are several methods of estimating uncollectibles. The most commonly used methods base their estimates on sales data or the age of the receivables. Estimates based on sales figures can be determined by taking a percentage of either total sales or credit sales. An estimate of uncollectibles based on an analysis of receivables, classifies accounts into outstanding age groups. The longer a receivable is past due, the higher the probability of nonpayment. If the estimate is larger than the balance of the Allowance for Doubtful Accounts, the excess should be debited to the Uncollectible Accounts Expense and credited to the Allowance for Doubtful Accounts.

a. Percentage of sales method

Example:

Company EP assumes that 5% of total sales will not be collected. Sales for the year was \$500,000.

Journal entry

	Debit	Credit
Bad debts expense	\$25,000	
Allowance for bad debts		\$25,000

b. Aging schedule method

Aging schedule of accounts receivable determines the likelihood of the receivables' collection or the probability of the customers' default of payments based on the company's credit policy.

Example:

Company A evaluates the percentage of bad debts based on the age of accounts receivable balances. This is done to record the approximate value of the allowance for doubtful accounts.

Age of Balance	Balance	% of Doubtful Accounts	Allowance
30 days	\$95,000	2%	\$1,900
31 – 60 days	\$50,000	4%	\$2,000
61 – 90 days	\$18,000	7%	\$1,260
Over 90 days	\$ 7,000	12%	\$ 840
Total	<u>\$170,000</u>		<u>\$6,000</u>

Journal entry to record allowance

	Debit	Credit
Bad debts expense	\$6,000	
Allowance for bad debts		\$6,000

9.10 The Direct Write-Off Method



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The direct write-off method only records an uncollectible account expense when an account has been determined to be uncollectible. This method is not recommended because the recognition of the expense does not always occur in the year the corresponding revenues were recorded. It has, however, the advantage of simplicity since no adjusting entry is necessary at the end of a financial period. The method is best used by businesses that do not have a large number of credit sales. In the event an account needs to be reinstated, the Accounts Receivable account is debited. Uncollectible Accounts Expense should be credited.

Journal entry to write off bad debts

	Debit	Credit
Uncollectible Accounts Expense	XX	
Accounts Receivable		XX
Journal entry to recover receivables		
	Debit	Credit
Accounts Receivable	XX	
Uncollectible Accounts Expense		XX

9.11 Review Questions



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- R- ac9-1: What are receivables?
- R- ac9-2: What controls are normally required for receivables?
- R- ac9-3: How is a company interest rate calculated?
- R- ac9-4: Describe the accounting method used to deal with notes receivable.
- R- ac9-5: What are notes receivable discounting? And when is its used?
- R- ac9-6: What is name given to notes receivable which fail to be collected?
- R- ac9-7: What happens when receivables are not collected?
- R- ac9-8: What is allowance method for receivables?
- R- ac9-9: How are future uncollectibles estimated?
- R- ac9-10: When is the write-off method used for uncollectibles?
 1. Describe why a write-off of a bad debt should be reversed if collection occurs at alter date.
 2. "The primary responsibility for internal controls rests with the outside auditors." Do you agree? Explain.

9.12 Assignments for Principles of Accounting I



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Assignment A-9.1

During 20X7, a Paint Store had credit sales of \$700,000. The store manager expects that 2% of the credit sales will never be collected, although no accounts are written off until 10 assorted steps have been taken to attain collection. The 10 steps require a minimum of 14 months.

Assume that during 20X8; specific customers are identified who are never expected to pay \$10,000 that they owe from the sales of 20X7. All 10 collection steps have been completed.

1. Show the impact on the balance sheet equation of the preceding transactions in 20X7 and 20X8 under:
 - a. the specific write-off method and
 - b. the allowance method. Which method do you prefer? Why?
2. Prepare journal entries for both methods.

Assignment A-9.2

An Electric company that serves customers in four provinces uses the allowance method for recognizing uncollectible accounts. The company's January 1, 2006 balance sheet showed accounts receivable of \$17,377,963. The footnotes revealed that this was net of uncollectible accounts of \$372,000.

1. Suppose the Company wrote off a specific uncollectible account for \$10,000 on January 2, 2006. Assume that this was the only transaction affecting the accounts receivable or allowance accounts on that day. Give the journal entry to record this write-off. What would the balance sheet show for accounts receivable at the end of the day on January 2.
2. Suppose the Electric Company used the specific write-off method instead of the allowance method for recognizing uncollectible accounts. Compute the accounts receivable balance that would be shown on the January 1, 2006, balance sheet.

Assignment A-9.3

A Department Store has many accounts receivables. The Store's balance sheet, December 31, 20X1, showed Accounts Receivable, \$950,000 and Allowance for Uncollectible Accounts, \$40,000. In early 20X2, write-offs of customer accounts of \$30,000 were made. In late 20X2, a customer, whose \$5,000 debt has been written off earlier, won a lottery and decided to pay back his \$5,000 debt to the Store immediately. The Store welcomed the customer's payment and returned his credit standing to high level.

Prepare the journal entries for the \$30,000 write-off in early 20X2 and the \$5,000 receipt in late 20X2.

Chapter 10 Inventory

10.1 Inventories and Financial Statements



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Inventories are usually the largest current asset of a business, and proper measurement of them is necessary to assure accurate financial statements. If inventory is not properly measured, expenses and revenues cannot be properly matched. When ending inventory is incorrect, the following balances of the balance sheet will also be incorrect as a result: merchandise inventory, total assets, and owner's equity. When ending inventory is incorrect, the cost of merchandise sold and net income will also be incorrect on the income statement.

10.2 Inventory Accounting Systems



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The two most widely used inventory accounting systems are the periodic and the perpetual. The perpetual inventory system requires accounting records to show the amount of inventory on hand at all times. It maintains a separate account in the subsidiary ledger for each good in stock, and the account is updated each time a quantity is added or taken out. In the periodic inventory system, sales are recorded as they occur but the inventory is not updated. A physical inventory must be taken at the end of the year to determine the cost of goods sold. Regardless of what inventory accounting system is used, it is good practice to perform a physical inventory at least once a year.

10.3 Determining Inventory Quantities



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& COSTS All goods owned by a business (whether or not physically present on the business premises), are included in inventory when an inventory is taken. This requires that all shipping documents be examined, and all merchandise out on consignment be identified. Determining the quantity of goods on hand should be performed by at least two individuals, and a third should verify accuracy of the count (especially if the goods have a high monetary value). When determining the cost of goods, all expenses incurred to acquire them are included in the purchase price.

10.4 Inventory Costing Methods - Periodic



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The periodic system records only revenue each time a sale is made. In order to determine the cost of goods sold, a physical inventory must be taken. The most commonly used inventory costing methods under a periodic system are

1. first-in first-out (FIFO),
2. last-in first-out (LIFO), and
3. average cost or weighted average cost.

These methods produce different results because their flow of costs are based upon different assumptions. The FIFO method bases its cost flow on the chronological order purchases are made, while the LIFO method bases its cost flow in a reverse chronological order. The average cost method produces a cost flow based on a weighted average of unit costs.

10.5 Comparing Inventory Costing Methods



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The choice of inventory costing method affects the balances of

1. ending inventory,
2. cost of goods sold, and
3. gross and net profit.

During periods of rising prices, the FIFO method generally produces a larger ending inventory, a smaller cost of goods sold and a higher profit. During periods of rising prices, the LIFO method produces a smaller ending inventory, a larger cost of goods sold and a smaller profit. During periods of declining prices the effects of the two methods are reversed. The average cost method produces results that are in between the LIFO and FIFO methods.

10.6 Using Non-Cost Methods to Value Inventory



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Under certain circumstances, valuation of inventory based on cost is impractical. If the market price of a good drops below the purchase price, the lower of cost or market method of valuation is recommended. This method allows declines in inventory value to be offset against income of the period. When goods are damaged or obsolete, and can only be sold for below purchase prices, they should be recorded at net realizable value. The net realizable value is the estimated selling price less any expense incurred to dispose of the good.

10.7 Periodic Vs. Perpetual Inventory Systems



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There are fundamental differences for accounting and reporting merchandise inventory transactions under the periodic and perpetual inventory systems. To record purchases, the periodic system debits the Purchases account while the perpetual system debits the Merchandise Inventory account. To record sales, the perpetual system requires an extra entry to debit the Cost of goods sold and credit Merchandise Inventory. By recording the cost of goods sold for each sale, the perpetual inventory system alleviated the need for adjusting entries and calculation of the goods sold at the end of a financial period, both of which the periodic inventory system requires.

10.8 Inventory Costing Methods - Perpetual



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The perpetual inventory system requires that a separate inventory ledger be maintained for each good. Inventory ledgers provide detailed information on purchases, cost of goods sold, and inventory on hand. Each column gives information on quantity, unit cost, and total cost. When the average cost method is used, an average unit cost of each good is calculated each time a purchase is made. The advantages of the perpetual inventory system is a high degree of control, it aids in the management of proper inventory levels, and physical inventories can be easily compared. Whenever a shortage (i.e. a missing or stolen good) is discovered, the Inventory Shortages account should be debited.

10.9 Methods Used to Estimate Inventory Cost



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In certain business operations, taking a physical inventory is impossible or impractical. In such a situation, it is necessary to estimate the inventory cost. Two very popular methods are

1. retail inventory method, and
2. gross profit (or gross margin) method.

The retail inventory method uses a cost to retail price ratio. The physical inventory is valued at retail, and it is multiplied by the cost ratio (or percentage) to determine the estimated cost of the ending inventory.

The gross profit method uses the previous years average gross profit margin (i.e. sales minus cost of goods sold divided by sales). Current year gross profit is estimated by multiplying current year sales by that gross profit margin, the current year cost of

goods sold is estimated by subtracting the gross profit from sales, and the ending inventory is estimated by adding cost of goods sold to goods available for sale.

10.10 Review Questions



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- ac10-1: How large is inventory on the balance sheet of merchandising businesses?
- R- ac10-2: What are the two inventory accounting systems most widely used?
- R- ac10-3: How are inventory quantities determined?
- R- ac10-4: How is revenue determined in a periodic system?
- R- ac10-5: Compare the different inventory costing methods.
- R- ac10-6: What are inventory methods that are not based on unit costs?
- R- ac10-7: What are the advantages of a periodic inventory system over a perpetual system?
- R- ac10-8: How is a perpetual inventory system implemented?
- R- ac10-9: Are there methods for estimating inventory cost rather than calculating it?
1. Distinguish between the perpetual and periodic inventory systems.
 2. Which of the following items would a company be likely to account for using the specific identification inventory method?
 - a. Corporate jet aircraft
 - b. Large sailboats
 - c. Pencils
 - d. Diamond rings
 - e. Automobile
 - f. Books
 - g. Compact discs

10.11 Assignments for Principles of Accounting I



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Assignment A-10.1

A Metal company has the following inventory transactions during the month of March:

March 1 Beginning Inventory	4,000 units @ \$2.00	\$8,000
Week 1, purchases	2,000 units @ \$2.10	\$4,200
Week 2, purchases	2,000 units @ \$2.20	\$4,400
Week 3, purchases	1,000 units @ \$2.30	\$2,300
Week 4, purchases	1,000 units @ \$2.40	\$2,400

On March 31, a count of the ending inventory was completed, and 5,500 units were on hand. By using the periodic system, calculate the cost of goods sold and ending inventory using LIFO, FIFO and weighted-average inventory methods.

Assignment A-10.2

A wholesaler for commercial builders uses a perpetual inventory system and a FIFO cost-flow assumption. The data concerning its inventory for the year 20X7 is as follows:

	Purchased	Sold	Balance
December 31, 20X6			110 @ \$5 = \$550
Feb. 10, 20X7	80 @ \$6 = \$480		
April 14		60	
May 9	110 @ \$7 = \$770		
July 14		120	
August 21	100 @ \$8 = \$800		
September 12		75	
Total	<u>290</u> \$2,050	<u>255</u>	

Calculate the ending inventory balance in units and dollars.

Assignment A-10.3

A company began business on March 15, 20X7. The following are purchases of inventory.

March 17	100 units @ \$10	\$1,000
April 19	50 units @ \$12	600
May 14	100 units @ \$13	1,300
Total		<u>\$2,900</u>

On May 25, 140 units were sold, leaving inventory of 110 units. The company's accountant was preparing a balance sheet for June 1, at which time the replacement cost of inventory was \$12 per unit.

1. Suppose the company uses LIFO, without applying lower-of-cost-or-market. Compute the June 1 inventory amount.
2. Suppose the company uses lower-of-LIFO-cost-or-market. Compute the June 1 inventory amount.
3. Suppose the company uses FIFO, without applying lower-of-cost-or-market. Compute the June 1 inventory amount.
4. Suppose the company uses lower-of-FIFO-cost-or-market. Compute the June 1 inventory amount.

Chapter 11 Fixed Assets

11.1 Introduction to Plant Assets



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Plant assets are assets that are held for more than one year and are used in business operations. Land, buildings, equipment, furniture, and machinery are examples of plant assets. When a plant asset is initially acquired, all costs incurred for acquisition and installation are debited to the plant asset account. Expenditures that are related to land can be debited to either Land, Land Improvements, or Buildings depending upon how permanent they are and how long they are expected to last.

11.2 Depreciation



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All plant assets, except land, depreciate. Factors that contribute to depreciation are physical and functional. Physical depreciation arises from the actual use of a plant asset. Functional depreciation is due to obsolescence factors such as technological advances and less demand for a product. The purpose of recording depreciation is to show the decline of usefulness of an asset, not a decline in its market value. Depreciation merely reduces the value of plant asset accounts, it does not reduce the cash account or affect cash flows.

11.3 Determining Depreciation



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Factors that determine depreciation expense are the initial cost, the residual value and the useful life. Depreciation can only be estimated because it depends on several potentially changing elements. Residual value is any value that remains after an asset has been retired. The calculation of depreciation is based on the initial cost minus residual value. Several methods used to calculate depreciation. The straight-line method is the most popular. Different depreciation methods can be used for financial statement information and tax purposes.

11.4 Straight-Line Method



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The straight-line method of depreciation charges equal amounts of depreciation to each period over the useful life of the asset. It is determined by subtracting the

residual value from the initial cost and dividing it by the number of the years of estimated life. Due to its simplicity, it is the most widely used method.

Example:

Purchased a building for \$400,000 with a life of 30 years and residual value of \$40,000.

$$\text{Cost of equipment} - \text{Residual amount} / \text{Life} = \$400,000 - \$40,000 / 30 \text{ years}$$

$$= \$ 12,000 \text{ depreciation expense per year}$$

$$\text{Cost of equipment} - \text{Residual amount} / \text{Life} = \$400,000 - \$40,000 / 360 \text{ months}$$

$$= \$ 1,000 \text{ depreciation expense per month}$$

11.5 Units-of-Production Method



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The units-of-production method determines depreciation expense based on the amount the asset is used. The length of life of an asset is expressed in a form of productive capacity. The initial cost less any residual value is divided by productive capacity to determine a rate of unit-of-production depreciation per units of usage. Units of usage can be expressed in quantity of goods produced, hours used, number of cuttings, miles driven or tons hauled, for instance. The depreciation expense of a period is determined by multiplying usage by a fixed unit-of-production rate of usage. This depreciation method is commonly used when asset usage varies from year-to-year.

Example:

A truck was purchased for \$27,000 with a residual value of \$2,000 based on a life of 200,000 miles. For the month of February, the truck registered 400 miles of use. The depreciation expense is computed as:

$$\text{Cost} - \text{Residual} / \text{Life in units} = \text{Depreciation expense per unit}$$

$$\text{Depreciation expense per unit} \times \text{Units used} = \text{Depreciation expense}$$

$$\begin{aligned} \$27,000 - 2,000 / 200,000 &= \$0.125 \text{ per mile} \\ \$0.125 \text{ per mile} \times 400 &= \$50 \text{ Depreciation expense} \end{aligned}$$

11.6 Declining-Balance Method



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The declining-balance (also known as double-declining-balance) method is a popular form of accelerated depreciating. The rate used is usually twice the rate employed by the straight-line method. This method does not consider the estimated salvage value in determining the depreciation rate or in computing the periodic depreciation. However, an asset cannot be depreciated beyond the estimated salvage value. Depreciation expense is highest in the first year, and becomes smaller each subsequent year.

Example:

Assume equipment that had a five-year life and a residual value of \$ 1,500 was acquired for \$36,000. The DDB equation is

$$\text{DDB\%} \times \text{Book value} = \text{Depreciation expense}$$

v DDB % is computed as 100%, or 1 divided by life of the asset:

$$100\% / 5 = 20\% \times 2 = \underline{40\%}, \text{ or } 1/5 = 20\% \times 2 = \underline{40\%}$$

Thus, depreciation expense schedule for the above example is

Year	DDB%	X	Book Value	=	Depreciation Expense	Net Book Value
0						\$ 36,000
1	40%	X	\$ 36,000	=	\$ 14,400	21,600
2	40%	X	21,600	=	8,640	12,960
3	40%	X	12,960	=	5,184	7,776
4	40%	X	7,776	=	3,110	4,666
5	40%	X	4,666	=	1,867	2,799
			Accumulated depreciation		<u>\$ 33,201</u>	
			Book value	-	-	\$ 2,799

11.7 Sum-of-the-Years-Digits Method



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The sum-of-the-years-digits method is another form of accelerated depreciation. The annual depreciation is calculated by subtracting salvage value from original cost, and multiplying this figure by a fractional rate of depreciation. The denominator of the fraction is the sum of the years of useful life; for a life of 5 years, the denominator is $1 + 2 + 3 + 4 + 5 = 15$. The numerator is the year in reverse order. For the first year, the numerator is 5 and the fraction is $5/15$.

Example:

Bought equipment worth \$ 12,000 with a residual value of \$2,000. Its life is estimated at five years.

The denominator is determined as follows:

$$\text{Yr. 1} + \text{Yr. 2} = 3 + \text{Yr. 3} = 6 + \text{Yr. 4} = 10 + \text{Yr. 5} = \underline{15}$$

The formula to solve the SYD depreciation is

$$\text{SYD fraction} \times \text{Cost} - \text{Residual} = \text{Depreciation expense}$$

Year	SYD Fraction	X	Cost – Residual	X	Depreciation
1	5/15	X	\$ 10,000	X	\$ 3,333
2	4/15	X	\$ 10,000	X	\$ 2,667
3	3/15	X	\$ 10,000	X	\$ 2,000
4	2/15	X	\$ 10,000	X	\$ 1,333
5	4/15	X	\$ 10,000	X	\$ 667
	15/15		Total depreciation		<u>\$10,000</u>

11.8 Comparing Depreciation Methods



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Different depreciation methods produce different results, and in some circumstances the use of a particular depreciation method is recommended. When the use of an asset fluctuates from period to period, the units-of-production method is recommended. For assets that decline in usefulness early, and are subject to high maintenance costs as they age, a form of accelerated depreciation should be used, i.e. declining-balance and the sum-of-the-years- digits methods.

11.9 Depreciation & Income Taxes



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For tax purposes, the straight-line, declining-balance, sum-of-the-years-digits, and units-of-production methods of depreciation were allowed prior to 1981. Between 1980 and 1987, either the straight-line method or the Accelerated Cost Recovery System (ACRS) could be used. The Tax Reform Act of 1986 revised the ACRS by providing a depreciation rate schedule for eight classes of plant assets. The use of an accelerated depreciation method reduces tax liabilities and increases cash flows.

11.10 Revising Depreciation Estimates



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Because depreciation is estimated, it often needs to be revised periodically over the life of the asset. An error in estimating the salvage value, the years of useful life, or

both can require a revision. Previously recorded depreciation is not affected by a revision. The revision of depreciation is only affects future depreciation expenses.

11.11 Recording Depreciation Expenses



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When depreciation is to be recorded, a Depreciation Expense account is debited, and Accumulated Depreciation is credited. Accumulated Depreciation is a contra-asset account that decreases the value of plant assets. The use of a contra-asset account allows assets to be shown at cost, and thus allows easier computations if a revision is necessary or different depreciation methods are used. When an asset is sold, all accounts related to the depreciation of that asset are adjusted.

11.12 Capital and Revenue Expenditures



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Expenditures on plant assets fall into two categories:

1. capital expenditures: these increase the productive capacity, efficiency or useful life of the asset, and
2. revenue expenditures: these include maintenance and repairs.

If an expenditure increases the efficiency or capacity of a plant asset, that Plant Asset account is debited. If an expenditure increases the useful life of a plant asset, the Accumulated Depreciation account is debited. Revenue expenditures are expensed in the year incurred.

11.13 Disposing Plant Assets



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Plant assets can be disposed of by discarding, selling, or trading in for other assets. No matter how plant assets are disposed of, the book value of the asset must be removed from the account. When an asset becomes completely useless, it is taken of the books by debiting the Accumulated Depreciation account and crediting the Equipment account. In the event an asset is discarded before its estimated useful life, the loss must be debited to the Loss on Disposal of Plant Assets account.

11.14 Disposing Plant Assets



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When a plant asset is sold, the Cash and Accumulated Depreciation accounts are always debited, and the Equipment account is credited. In the event there is a loss or

gain from the sale, either the Loss on Disposal of Plant Assets or the Gain on Disposal of Plant Assets accounts will have an entry. When old plant assets are exchanged for new plant assets, it is generally accepted that any gains from a trade need not be recognized. The amount that is owed after credit for the trade-in is known as the boot, which is also the required cash payment. The entry in this situation is Debit Accumulated Depreciation (old equipment) Debit Plant Assets (new equipment) Credit Plant Assets (old equipment) Credit Cash.

11.15 Subsidiary Ledgers for Plant Assets



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When a business has a large number of plant assets to keep track of, the use of a subsidiary ledger is recommended. Detailed information on each plant asset is maintained in the subsidiary ledger. All plant assets can be specifically identified by an assigned number. The first part of the number corresponds to the general ledger account, while the second part of the number represents the identification assigned to the asset. Periodically, it is advisable to compare balances of the subsidiary ledger with the controlling accounts in the general ledger. Subsidiary ledgers are very useful in determining depreciation expenses, filing tax and insurance forms, as well as recording the disposal of plant assets.

11.16 Composite-Rate Depreciation Method



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The composite-rate depreciation method determines depreciation of a group of similar plant assets by using a single rate. This rate is determined by dividing annual depreciation by the total original cost of assets. Although specific equipment in the group may be added and retired, this method assumes that the mix will remain unchanged. Gains and losses from the retirement or disposal of assets are not realized.

11.17 Leasing Plant Assets



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A business can rent a property for a specified period of time under a contract known as a lease. The lessor is the owner of the property, and the lessee is the party that has the right to use the property. Leases which extend over most of the asset life, and which transfer ownership to the lessee at the end of the lease, are called capital leases. Assets held under capital lease must be shown on the balance sheet, and therefore, the Plant Assets is debited and a lease liability account is credited. Operating leases tend to be more short-term, and the lessee does not acquire the leased property at the end of the lease.

11.18 Intangible Assets



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Intangible assets do not have physical substance. They are not held for sale, and they are usually highly valuable to the business. They include patents, copyrights, trademarks, goodwill, and franchises. Except for goodwill, most intangible assets receive legal protection of exclusive use. The cost of obtaining legal protection for the intangible asset should be debited to the intangible asset account. The periodic loss of value of the intangible asset is called amortization, and is expensed annually. Research and development costs are treated as expense in the year incurred, and are not treated as intangible assets because their future success is uncertain.

11.19 Depletion



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The periodic allocation of the use of natural resources is called depletion. Mineral deposits, coal, timber, natural gas, and petroleum are all subject to depletion. Depletion Expense is debited and Accumulated Depletion is credited for the amount of usage during the period. The usage is based on current year production as a fraction of total capacity, and the determination is essentially identical to the unit-of-production depreciation method.

11.20 Review Questions



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- R- ac11-1: What is characteristic of plant assets?
- R- ac11-2: Depreciation applies to which assets? And to which not?
- R- ac11-3: What factors affect the calculation of depreciation?
- R- ac11-4: Describe the straight-line method of depreciation.
- R- ac11-5: Describe the units-of-production method of depreciation.
- R- ac11-6: Describe the declining-balance method of depreciation.
- R- ac11-7: Describe the sum-of-the-years-digits method of depreciation.
- R- ac11-8: Compare the different depreciation methods.
- R- ac11-9: How are tax considerations affecting the choice of depreciation method?
- R- ac11-10: Why are depreciation estimates revised?
- R- ac11-11: Outline the entries for depreciation.
- R- ac11-12: What are the categories of plant asset expenditures?

R- ac11-13: Outline the accounting treatment of plant asset disposal.

R- ac11-14: What happens to depreciation when a plant asset is sold?

R- ac11-15: Why subsidiary ledgers are used fo plant assets?

R- ac11-16: What is the composite-rate depreciation method?

R- ac11-17: How does leasing compare to owning depreciable plant assets?

R- ac11-18: What is the accounting treatment of intangible assets?

R- ac11-19: To what assets does depletion pertain?

1. Distinguish between tangible and intangible assets. Name and describe four kinds of intangible assets.
2. Compare the choice between straight-line and accelerated depreciation with the choice between FIFO and LIFO. Give at least one similarity and one difference.

11.21 Assignments for Principles of Accounting I



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Assignment A-11.1

A Transport Company has many trucks that are kept for a useful life of 300,000 miles. Depreciation is computed on a mileage basis. Suppose a new truck is purchased for \$68,000 cash. Its expected residual value is \$5,000. Its mileage during year 1 is 60,000 and during year 2 is 90,000.

1. What is the depreciation expense for each of the two years?
2. Compute the gain or loss if the truck is sold for \$40,000 at the end of year two.

Assignment A-11.2

The Coca-Cola Company balance sheet of December 31, 1999 included the following (\$ in millions):

Property, plant and equipment	\$ 6,471
Less allowances for depreciation	2,204
Net	<u>\$4,267</u>

Note that the company uses "allowance for" instead of "accumulated" depreciation. Assume that on January 1, 2000 some new bottling equipment was acquired for \$2.4 million cash. The equipment had an

expected useful life of 5 years and an expected terminal scrap value of \$200,000. Straight-line depreciation was used.

1. Prepare the journal entry that would be made annually for depreciation.
2. Suppose some of the equipment with an original cost of \$55,000 on January 1, 2000, and an expected terminal scrape value of \$5,000 was sold for \$32,000 cash 2 years later. Prepare the journal entry for the sale.
3. Refer to requirement 2. Suppose the equipment had been sold for \$40,000 cash instead of \$32,000. Prepare the journal entry for the sale.

Assignment A-11.3

ABC Company began business with cash and common stock equity of \$150,000. The same day, December 31, 20X1, the company acquired equipment for \$50,000 cash. The equipment had an expected useful life of 5 years and a predicted residual value of \$5,000. The first year's operations generated cash sales of \$180,000 and cash operating expenses of \$100,000.

1. Prepare an analysis of income and cash flow for the year 20X2. Assume
 - a. straight-line depreciation and
 - b. double declining balance (DDB) depreciation. Assume an income tax rate of 40%. Income taxes are paid in cash. The company uses the same depreciation method for reporting to shareholders and to income tax authorities.
2. Examine your answer to requirement 1. Does depreciation provide cash?
3. Suppose depreciation were tripled under straight-line and DDB methods. How would before tax cash flow be affected?

Assignment A-11.4

A Clinic acquired X-ray equipment for \$29,000 with an expected useful life of 5 years and a \$4,000 expected residual value. Straight-line depreciation was used. The equipment was sold at the end of the fourth year for \$12,000 cash.

1. Compute the gain or loss on the sale. Where and how would the sale appear on the income statement?
2. Show the journal entries for the transaction in requirement 1.
3. Repeat 2, assuming that the cash sales price was \$7,000 instead of \$12,000.

Assignment A-11.5

A zinc mine contains an estimated 900,000 tons of zinc ore. The mine cost \$14.4 million. The tonnage mined during 20X4, the first year of operations, was 120,000 tons.

1. What was the depletion for 20X4?
2. Suppose that in 20X5 a total of 100,000 tons were mined. What depletion expense would be charged for 20X5?

Chapter 12 Current Liabilities

12.1 Introduction to Payrolls



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Payrolls represent the entire amount paid to all employees over a given accounting period. Because employees are very sensitive to payroll errors or any irregularities, payroll systems should assure accurate and timely payments. Accurate records are also required by federal and state government agencies. Payroll expenditures typically have a significant impact on the income statement of a firm. Manual labor, whether skilled or unskilled usually receives remuneration in the form of wages. Wages are usually stated in terms of an hourly rate, weekly rate, or on a piecework basis.

DETERMINING EMPLOYEE EARNINGS

1. Earnings are computed by multiplying hours worked by a hourly rate.
2. When hours worked is less than or equal to 40, Earnings = Hours * Rate ($E = H * R$).
- 3) When a employee works more than forty hours and is entitled to time and a half for each hour worked over forty, the following formula should be used: $E = 40R + 1.5(H - 40)$.

12.2 Introduction to Payrolls



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Salaries are paid to those individuals that hold administrative, executive, managerial or sales positions. Their pay is usually stated on a monthly or annual basis. Payment for work can take the form of property, shelter, food, services, securities, or promissory notes. Salaries and wages are often supplemented by commissions, bonuses, cost-of-living adjustments, profit sharing and/or pension plans. Employers and employees typically meet and agree on a fair salary or wage rate.

12.3 Profit-Sharing Bonuses



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Bonuses are usually based upon the productivity of an individual. Today's companies are relying less on salary and more on bonuses to attract and reward executives. Bonuses can be computed in several different ways, each yielding a different amount. The bonus percentage can be based on income

1. before deducting the bonus and income taxes,
2. after deducting the bonus, but before deducting income taxes,
3. before deducting the bonus, but after deducting income taxes,

4. after deducting the bonus and income taxes.

CALCULATING A BONUS BASED ON INCOME BEFORE DEDUCTING A BONUS OR TAXES

1. Formula: $\text{bonus} = \text{bonus rate} * \text{income}$ ($B = BR * Y$)
2. Example: income = \$75,000, bonus rate = 15%, and tax rate = 43%.
3. Solution: $B = .15(\$75,000) = \$11,250$

12.4 Employee Earnings Deductions



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Gross pay is total earnings of an employee before any deductions. Net pay is the amount an employee receives after all deductions. Deductions are commonly made for federal, state, and local income taxes. While state and local income taxes vary from state to state, all employers must withhold federal income and FICA taxes. Deductions can be made for voluntary items such as health insurance, charitable contributions, pension fund contributions and union dues.

FICA TAXES

The Federal Insurance Contributions Act requires most employers to withhold FICA taxes from their employees. The purpose of FICA taxes is to use them for federal programs that provide medicare benefits, old-age and disability benefits, and survivor benefits. The amount of FICA taxes that may be collected is subject to a ceiling, making it necessary for the employer to keep track of cumulative earnings of each employee.

12.5 Employer's Payroll Tax Liabilities



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Employers can be subject to both federal and state taxes based on the amount of compensation paid to their employees. FICA taxes by the employer are equal to the payments made by an employee. Federal Unemployment Compensation Tax is levied on employers only, and the funds collected are used to provide a temporary relief to individuals unemployed as a result of economic forces beyond their control. State Unemployment Compensation Taxes are paid by employers only.

INCOME TAXES

Most employers are required to withhold federal income taxes. State and local income taxes do not exist everywhere. In areas where they do exist, state/local income taxes should also be withheld. Factors that influence the amount

of income tax deductions are: gross pay, estimated deductions, exemptions claimed, and marital status.

12.6 Payroll Accounting Systems



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The three major components of a payroll system are:

1. payroll register: it is used to assemble and summarize data for each payroll period,
2. employee's earnings record: it provides detailed information for each employee, and
3. payroll checks, direct ATM deposits or cash, usually accompanied by a statement showing all the deductions.

PAYROLL REGISTER

The payroll register is a multicolumn journal used to assemble and summarize payroll data. Information that can typically be found is the following: employee names, total hours worked, regular earnings, overtime earnings, total earnings, tax deductions, net amount paid, check number, and a debit to an expense account. Checks are recorded in the payroll register so no other records need to be maintained on payments. The accuracy of the payroll register can be determined by cross-verification of its columns. The regular and overtime pay columns should always be equal to the salary and wage expense columns.

12.7 Components of the Payroll System



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The payroll register consists of constant and variable elements. Wage rate are typical constant element. Hours worked vary. Information obtained from the payroll register is used for general ledger entries, to issue payroll checks and statements, and to update employees' earnings records. Data from the employees' earnings records are used to prepare wage and tax statements and payroll tax returns. Entries recorded in the general ledger are used to prepare the income statement and balance sheet.

12.8 Payroll System Controls



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Internal controls for payroll systems are similar to those for cash disbursements. A voucher system is recommended. When names are to be deleted or added to the payroll register, they should be supported by a written statement from personnel. Attendance records are taken by personnel to ensure accurate determination of pay, vacation benefits and sick leave benefits. As an extra measure of safety, employee identification cards are often issued and must be presented by employees when receiving paychecks.

12.9 Liabilities for Employee Fringe Benefits



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When employers agree to pay part or all of the costs of fringe benefits, they incur an expense and a liability. Fringe benefits commonly offered by employers are vacations, health insurance, pension plans, life insurance and disability insurance. The cost of the fringe benefits should be properly matched to the period an employee has worked. If the employee has not received the fringe benefit, a liability remains. Depending on when the liability is expected to be paid, it may be classified as either short-term or long-term on the balance sheet.

Mr Jones works as a janitor at XYZ company. He is entitled to take two weeks paid vacation per year after working one full year. On May 5, Mr Jones completes his twelfth month of work, and XYZ company records its vacation pay liability in the following entry

May 5 Vacation pay expense 2,000
 Vacation pay payable 2,000
 To accrue vacation pay for week ending May 5 for Mr Jones

Mr Jones takes his vacation the first two weeks of August. XYZ payroll department enters Mr Jones's salary liability for the first week in the following entry:

Aug 12 Vacation pay payable 1,000
 Salaries payable 800
 Income taxes payable and other payroll liabilities 200
 To record vacation taken by Mr Jones.

Observe that vacation pay liability can only be recorded in this manner if the company uses the accrual method of accounting.

12.10 Liabilities for Employee Fringe Benefits



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Employee pension plans are one of the most important fringe benefits and operating expense, as well as costly and complex. There are many different types of pension plans. If the employee contributes to his/her pension plan, it is called contributory; if he/she does not, it is called noncontributory. In a defined contribution pension plan, the amount contributed by the employer is determined when the pension expense is calculated based on current employee's salary, employee's age and years of employment; the employer has no further liability. Pension plans that are fully funded, are usually managed by banks or pensions funds. In a defined benefit pension plan, the pension expense is estimated based not just on current salary but also expected employee years of service, life expectancy, employee turnover, as well as expected investment fund future income. Actuaries are used to calculate such benefits. The employer must incur an additional contribution liability in a defined benefit pension plan if the amount in the fund is insufficient to make the promised retirement payments; the unfunded pension liability can be quite large. Conversely, in a defined contribution pension plan, the employee bears the investment risk in the pension fund. In the United States, pension plans must comply with the requirements of the Employment Retirement Income Security Act (or ERISA), and employer must make disclosures in the Annual Report.

Individual pension plans are increasingly common because the employee sets up, funds and controls one's own pension plan, rather than leaving the moneys under the control of the employer or a bank.

12.11 Notes Payable & Interest Expense



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Promissory notes are commonly issued for goods purchased on account or when a bank extends a short-term loan. Notes issued by banks can be interest-bearing or non-interest bearing. Non-interest bearing notes deduct the interest from the face value (or maturity value) of the note from the amount loaned to the borrower. An interest bearing note requires payment of both the principal and interest accrued at maturity. An adjusting entry is necessary whenever interest is paid a day other than the end of the financial periods.

ABC company bought ten tonnes of steel from XYZ company on credit on May 1 for \$10,000 with term 2/10 Net30. On May 30, ABC issues and sends a 90 day 10% promissory note to XYZ company. On August 31, ABC pays the \$10,000 note and an interest of \$250 ($10,000 \times 10\% \times 90/360$).

The entries at ABC company are

May 1 Raw materials inventory 10,000
Accounts payable 10,000

May 30 Accounts payable 10,000
Notes payable 10,000

Aug 31 Notes payable 10,000
Interest expense 250
Cash 10,250

The entries at XYZ company are

May 1 Accounts receivable 10,000
Sales 10,000
Cost of goods sold 7,000
Cost of goods sold 7,000

May 30 Notes receivable 10,000
Accounts receivable 10,000

Aug 31 Cash 10,250
Notes receivable 10,000
Interest revenue 250

Note that ABC could have issued a non-interest bearing 90 day promissory note of \$10,250 on May 30 for its liability of \$10,000. The implied interest in such non-interest bearing note is known as discount rate.

12.12 Product Warranty Liabilities



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To record a product warranty liability, Debit Product Warranty Expense and credit Product Warranty Payable (AT THE TIME OF SALE). When a product is replaced, debit Product Warranty Payable and credit Inventory. The amount recorded for product warranty liabilities is estimated, and adjustments may be necessary if more or less goods are actually replaced or repaired.

12.13 Review Questions



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- R- ac12-1: What is payroll?
- R- ac12-2: How are employee earnings determined?
- R- ac12-3: Distinguish between earnings of different types of employees.
- R- ac12-4: When are bonuses paid?
- R- ac12-5: What is the accounting treatment of bonuses?
- R- ac12-6: What are employee earnings deductions?
- R- ac12-8: What is employer's payroll tax liability?
- R- ac12-9: How is an employee income tax dealt with in employer's accounting?
- R- ac12-10: What are the three components of a payroll system?
- R- ac12-11: What is the purpose of a payroll register?
- R- ac12-12: Describe how the components of a payroll system may vary.
- R- ac12-13: Outline the major payroll system controls.
- R- ac12-14: How are fringe benefits accounted for?
- R- ac12-15: How are notes payable used for purchases?
- R- ac12-16: What is product warranty? How is it accounted for?

12.14 Assignments for Principles of Accounting I



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Assignment A-12.1

DaimlerChrysler, one of the world's largest automakers, had the following items on its June 30, 1999 balance sheet when it was formed by the merger of Daimler Benz and Chrysler. (German marks in millions)

Cash and cash equivalents	DM 9,099
Trade liabilities	15,786
Inventories	14,985
Additional paid-in capital	17,329
Accrued liabilities	37,695
Financial liabilities	64,488
Other liabilities	10,286
Deferred taxes	5,192
Deferred income	4,510

Prepare the liabilities section of DaimlerChrysler's balance sheet. And separate the accounts as current and long-term liabilities.

Assignment A-12.2

During 20X6 a Company had sales of \$800,000. The company estimates that the cost of servicing products under warranty will average 3% of sales.

1. Prepare journal entries for sales revenue and the related warranty expense for 20X6. Assume all sales are for cash.
2. The liability for warranties was \$11,400 at the beginning of 20X6. Expenditures (all in cash) to satisfy warranty claims during 20X6 were \$20,400, of which \$4,500 was for products sold in 20X6. Prepare the journal entry for the warranty expenditures.
3. Compute the balance in the Liability for Warranties account at the end of 20X6.

Assignment A-12.3

For the week ended September 28, a manufacturer company had a total payroll of \$200,000. Three items were withheld from employees' paycheck: federal tax of 7.1% of payroll; income tax which average 21% of the payroll; and employees' savings that are deposited in their Credit Union, which are \$10,000. All three items were paid on September 30.

1. Use the balance sheet equation to analyze the transactions on September 28 and September 30.
2. Prepare journal entries for the recording of the recording of the items in requirement 1.
3. In addition to the payroll, the company pays payroll taxes of 9%, health insurance premiums of \$12,000 and contributions to the

employees' pension fund of \$16,000. Prepare journal entries for the recognition and payment of these additional expenses.