## ALFRED NOBEL UNIVERSITY, DNIPROPETROVS'K

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## COURSE BOOK

V.M. SHEVCHENKO

# ACCOUNTING IN FOREIGN COUNTRIES: COURSE BOOK 

## TEXTBOOK

Dnipropetrovs'k
2014

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Навчальний посібник «Облік у зарубіжних країнах: практикум» спрямовано на вивчення методів і процедур, що використовуються у бухгалтерському обліку підприємств у зарубіжних країнах.

Посібник складено відповідно до навчального плану дисципліни «Бухгалтерський облік у зарубіжних країнах» для економічних напрямів. Він складається з 7 блоків. Кожен блок містить питання для обговорення, тести і завдання для самостійної роботи.

Використання навчального посібника в навчальному процесі дозволить ефективно застосувати набуті знання та навички, а також професійні компетенції у сфері бухгалтерського обліку.

## Shevchenko V.M.

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ISBN 978-966-434-296-1
The textbook «Accounting in Foreign Countries: course book» is aimed at the study of methods and procedures used in accounting of businesses in foreign countries.

The textbook has been compiled in accordance with the syllabus of the course «Accounting in Foreign Countries» for the economic directions of study. The textbook consists of 7 units. Each unit includes questions for discussion, tests and assignments for independent work.

Its use in the educational process will enhance both learning and effective application of the acquired knowledge and skills as well as professional competences in accounting.

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## INTRODUCTION

Accounting provides a system of rules and principles that prescribe the format and content of financial statements. Through this consistent reporting, a company's managers and investors can assess the financial health of the firm.

The textbook «Accounting in Foreign Countries: course book» will help students to understand the role of accounting in management of the international activity of an enterprise in foreign countries and make management decisions in business processes. This textbook examines the principal issues concerning concepts, methods and procedures used in accounting of an enterprise in foreign countries. These include the nature and development of accounting principles, accounting terminology and underlying concepts. Topics to be covered include overview of the accounting process and procedures of accounting for preparing the balance sheet of enterprises in foreign countries.

The main aims of the course «Accounting in Foreign Countries» are to give students basic working knowledge about the structure of accounting in foreign counties; help the students develop sufficient understanding of basic concepts; train the students to apply international accounting terminology and methods which are used to prepare international accounting reports of an enterprise.

This course will be taught in two parts. The first part of the module provides an introduction to main principles of accounting, classification of accounting sheets and accounting methods as well as procedures in foreign countries.

The second part of the course includes an overview of the accounting of assets and liabilities of an enterprise as well as determination and calculation of income, costs and earnings of an enterprise in foreign countries. The course discusses the issues concerning the system of financial ratios and legislative regulation of accounting in foreign countries.

On completion of the course the students will be able to:

- highlight the main points of accounting and financial reports of an enterprise in foreign countries;
- determine accounts of the operations;
- use accounting procedures to make management decisions in the activity of an enterprise in foreign countries;
- analyze the ratio of different financial statements in annual reports;
- synthesize some of the recently created knowledge in accounting reports of the enterprise;
- explain how International Financial Reporting Standards have been shaped by real world events;
- evaluate the influence of international organizations on income and earnings of an enterprise;
- measure the profitability of an enterprise's activity in foreign countries;
- conduct independent research on relevant topics within a present time limit;
- express an independent opinion, formulate judgments and knowledge-based conclusions on relevant issues in accounting, including international professional and academic literature.


## Unit 1 MAIN PRINCIPLES OF ACCOUNTING IN FOREIGN COUNTRIES

## TOPICS FOR DISCUSSION

1. Requirements for analytical information.
2. The purpose and ways of harmonization of financial statements.
3. Activities of the International Accounting Standards Committee (IASC).
4. International accounting principles.

## TASKS

### 1.1. Read the definitions of accounting principles and complete them

 with these words.Going Concern Matching Conservatism Objectivity Business Entity Monetary Unit Historical Cost Materiality Accounting Period Consistency Accrual
1.

A business is considered as a separate entity from the owner(s) and should be treated separately. Any personal transactions of its owner should not be recorded in the business accounting book unless the owner's personal transaction involves adding and/or withdrawing resources from the business.
2.

It assumes that an entity will continue to operate indefinitely. In this basis, assets are recorded based on their original cost and not on market value. Assets are assumed to be used for an indefinite period of time and not intended to be sold immediately.
3.

The business financial transactions recorded and reported should be in monetary unit, such as Pound Sterling, US Dollar, Canadian

Dollar, Euro, etc. Thus, any non-financial or non-monetary information that cannot be measured in a monetary unit is not recorded in the accounting books, but instead, a memorandum will be used.
4.

All business resources acquired should be valued and recorded based on the actual cash equivalent or original cost of acquisition, not the prevailing market value or future value. Exception to the rule is when the business is in the process of closure and liquidation.
5.

This principle requires that revenue recorded, in a given accounting period, should have an equivalent expense recorded, in order to show the true profit of the business.
6.

This principle entails a business to complete the whole accounting process of a business over a specific operating time period. It may be monthly, quarterly or annually. For annual accounting period, it may follow a Calendar or Fiscal Year.
7.

This principle states that given two options in the valuation of business transactions, the amount recorded should be the lower rather than the higher value.
8.

This principle ensures consistency in the accounting procedures used by the business entity from one accounting period to the next. It allows fair comparison of financial information between two accounting periods.
9.

Ideally, business transactions that may affect the decision of a user of financial information are considered important or material, thus, must be reported properly. This principle allows errors or violations of accounting valuation involving immaterial and small amount of recorded business transactions.
10.

This principle requires recorded business transactions should have some form of impartial supporting evidence or documentation. Also, it entails that bookkeeping and financial recording should be performed with independence, that's free of bias and prejudice.
11.

This principle requires that revenue should be recorded in the period it is earned, regardless of the time the cash is received. The same is true for expense. Expense should be recognized and recorded at the time it is incurred, regardless of the time that cash is paid.
1.2. Complete the following sentences. Choose the correct words, $A$, $B$ or $C$, to fill each gap.

1. Adjusting entries help to achieve the $\qquad$ principle.
A) matching; B) revenue recognition; C) cost.
2. The cost principle is often described as the $\qquad$ cost principle.
A) matching; B) historical; C) materiality.
3. The concept of $\qquad$ allows for the violation of an accounting principle when the amounts are insignificant.
A) matching; B) conservatism; C) materiality.
4. Full $\qquad$ of information is achieved through the notes to the financial statements.
A) disclosure; B) closing; C) verification.
5. Communicating the significant accounting policies in the first note to the financial statements is related to the full $\qquad$ principle.
A) matching; B) disclosure; C) materiality.
6. Under the $\qquad$ -basis of accounting, revenues are reported on the income statement in the period in which they are earned.
A) matching; B) accrual; C) materiality.

### 1.3. Choose the correct option ( $a, b$ or $c$ ).

1. Because of which principle/guideline will the personal assets of the owner of a company not appear on the company's balance sheet?
a) Cost;
b) Economic Entity;
c) Monetary Unit.
2. Which principle/guideline requires a company's balance sheet to report its land at the amount the company paid to acquire the land, even if the land could be sold today at a significantly higher amount?
a) Cost;
b) Economic Entity;
c) Monetary Unit.
3. Which principle/guideline allows a company to ignore the change in the purchasing power of the dollar over time?
a) Cost;
b) Economic Entity;
c) Monetary Unit.
4. Which principle/guideline requires the company's financial statements to have footnotes containing information that is important to users of the financial statements?
a) Conservatism;
b) Economic Entity;
c) Full Disclosure
5. Which principle/guideline justifies a company violating an accounting principle because the amounts are immaterial?
a) Conservatism;
b) Full Disclosure;
c) Materiality.
6. Which principle/guideline is associated with the assumption that the company will continue on long enough to carry out its objectives and commitments?
a) Economic Entity;
b) Going Concern;
c) Time Period.
7. A very large corporation's financial statements have the dollar amounts rounded to the nearest $\$ 1,000$. Which accounting principle/ guideline justifies not reporting the amounts to the penny?
a) Full Disclosure;
b) Materiality;
c) Monetary Unit.
8. Accountants might recognize losses but not gains in certain situations. For example, the company might write-down the cost of inventory, but will not write-up the cost of inventory. Which principle/ guideline is associated with this action?
a) Conservatism;
b) Materiality;
c) Monetary Unit.
9. Which principle/guideline directs a company to show all the expenses related to its revenues of a specified period even if the expenses were not paid in that period?
a) Cost;
b) Matching;
c) Monetary Unit.
10. When the accountant has to choose between two acceptable alternatives, the accountant should select the alternative that will report less profit, less asset amount, or a greater liability amount. Which principle/guideline is this based upon?
a) Conservatism;
b) Cost;
c) Materiality.

## QUESTIONS FOR SELF-ASSESSMENT

1. What are «generally accepted accounting principles» (or «GAAP»)?
2. What are International Financial Reporting Standards (IFRS)?
3. What is the cost principle?
4. What is the matching principle?
5. What is the full disclosure principle?
6. What is the Materiality Principle?
7. What is the Revenue Recognition Principle?
8. What is the Conservatism Principle?
9. How do the principles affect financial statements?
10. What is periodicity in accounting?
11. What is a natural business year?
12. What does the cost principle mean for a company's income statement?

## TASKS FOR SELF-ASSESSMENT

1.4. Choose the correct option ( $a, b$ or $c$ ).

1. Public utilities' balance sheets list the plant assets before the current assets. This is acceptable under which accounting principle/ guideline?
a) Conservatism;
b) Cost;
c) Industry Practices.
2. A large company purchases a $\$ 250$ digital camera and expenses it immediately instead of recording it as an asset and depreciating it over its useful life. This practice may be acceptable because of which principle/guideline?
a) Cost;
b) Matching;
c) Materiality.
3. A corporation pays its annual property tax bill of approximately $\$ 12,000$ in one payment each December 28. During the year, the corporation's monthly income statements report Property Tax Expense of $\$ 1,000$. This is an example of which accounting principle/guideline?
a) Conservatism;
b) Matching;
c) Monetary Unit.
4. A company sold merchandise of $\$ 8,000$ to a customer in December. The company's sales terms require the customer to pay the company in 30 days. The company's income statement reported the sale in December. This is proper under which accounting principle/ guideline?
a) Full Disclosure;
b) Monetary Unit;
c) Revenue Recognition.
5. Accrual accounting is based on this principle/guideline.
a) Cost;
b) Full Disclosure;
c) Matching.
6. The creative chief executive of a corporation who is personally responsible for numerous inventions and innovations is not reported as an asset on the corporation's balance sheet. The accounting principle/guideline that prevents the corporation from reporting this person as an asset is:
a) Conservatism;
b) Cost;
c) Going Concerns.
7. An asset with a cost of $\$ 120,000$ is depreciated over its useful life of 10 years rather than expensing the entire amount when it is purchased. This complies with which principle/guideline?
a) Cost;
b) Full Disclosure;
c) Matching.
8. Near the end of the current year, a company required a customer to pay $\$ 200,000$ as a deposit for work that is to begin in the following year. At the end of the current year the company reported the $\$ 200,000$ as a liability on its balance sheet. Which accounting principle/guideline prevented the company from reporting the $\$ 200,000$ on its income statement for the current year?
a) Going Concern;
b) Materiality;
c) Revenue Recognition.
9. A retailer wishes to report its merchandise inventory on its balance sheet at its retail value. This would violate which accounting principle/guideline?
a) Cost;
b) Full Disclosure;
c) Monetary Unit.
10. A company borrowed $\$ 100,000$ in December and will make its only payment for interest when the note comes due six months later. The total interest for the six months will be $\$ 3,600$. On the December income statement the accountant reported Interest Expense of $\$ 600$. This action was the result of which accounting principle/guideline?
a) Cost;
b) Matching;
c) Revenue Recognition.

## Unit 2 <br> PROCEDURES OF DRAWING UP A BALANCE SHEET AND FINANCIAL REPORTS IN FOREIGN COUNTRIES

## TOPICS FOR DISCUSSION

1. Structure and elements of financial statements.
2. Balance Sheet.
3. Statement of Cash Flows.
4. Statement of Changes in Equity.
5. Income Statement.
6. Earnings Per Share.

TASKS
2.1. Match each object (1-4) with two of its components (a-d).

| Term | Explanation |
| :--- | :--- |
| 1. INCOME <br> STATEMENT | a. presents assets, liabilities and owners' equity <br> on a specific date. It is also called a Statement <br> of Financial Position |
| 2. STATEMENT OF <br> CHANGES IN EQUITY | b. summarizes information about cash <br> outflows (payments) and inflows (receipts). <br> This statement may also include certain <br> information not related to actual cash flows |
| 3. BALANCE SHEET | c. presents revenues and expenses and <br> resulting net income or net loss for a period of <br> time. This statement is also called a Statement <br> of Operations, an Earnings Statement, or a <br> Profit and Loss Statement (P/L) |
| 4. STATEMENT OF <br> CASH FLOWS | d. shows all changes in owners' equity for a <br> period of time. This statement is also called an <br> Owners' Equity Statement |

2.2. Read the definitions of elements of financial statements and complete them with these words and word combinations.


1. $\qquad$ are the economic resources a business uses to accomplish its main goal (i.e., increase the owners' wealth). There are three characteristics: future probable economic benefit; controlled by the entity; and result from prior events or transactions.
2. $\qquad$ are debts and obligations of an entity, can be short-term (current) or long-term (non-current).
3. $\qquad$ (also called net worth or net assets) is what an entity «owes» to owners, can be called shareholders’ equity in a corporation or owner's equity in a sole proprietorship.
4. $\qquad$ (also called paid-in capital) is a component of shareholders' equity resulting from contributions of capital resources from owners.
5. $\qquad$ is an increase in assets (e.g., cash sale) or decrease in liabilities (e.g., recognition of unearned service revenue as earned revenue) resulting from operating activities of an entity.
6. $\qquad$ are decreases in assets or increases in liabilities that result from operating activities undertaken to generate revenue.
7. $\qquad$ is the excess of revenues over expenses for an accounting period.
8. $\qquad$ are similar to revenues; however, gains result from incidental transactions rather than from operating activities.
9. $\qquad$ are similar to expenses in the way that both decrease assets or increase liabilities; however, losses differ from expenses in that they are caused by incidental transactions, rather than from ordinary operating.
2.3. Read the definitions of asset accounts and complete them with these words and word combinations.
10. $\qquad$
A current asset account which includes currency, coins, checking accounts, and undeposited checks received from customers. The amounts must be unrestricted.
11. 

A current asset account that represents an amount of cash for making small disbursements for postage due, supplies, etc.
3.

A current asset account which contains the amount of investments that can and will be sold in the near future.
4. $\qquad$
A current asset resulting from selling goods or services on credit (on account). Invoice terms such as (a) net 30 days or (b) 2/10, n/30 signify that a sale was made on account and was not a cash sale.
5. $\qquad$
A current asset representing the cost of supplies on hand at a point in time.
6. $\qquad$
A current asset which indicates the cost of the insurance contract (premiums) that have been paid in advance. It represents the amount that has been paid but has not yet expired as of the balance sheet date.
2.4. Choose the correct option ( $a, b, c$ or $d$ ).

1. Another name for the balance sheet is
a) Statement of Operations;
b) Statement of Financial Position.
2. The balance sheet heading will specify a
a) Period of Time;
b) Point in Time.
3. Which of the following is a category or element of the balance sheet?
a) Expenses;
b) Gains;
c) Liabilities
d) Losses.
4. Which of the following is an asset account?
a) Accounts Payable;
b) Prepaid Insurance;
c) Unearned Revenue.
5. Which of the following is a contra account?
a) Accumulated Depreciation;
b) Mary Smith, Capital.
6. What is the normal balance for an asset account?
a) Debit;
b) Credit.
7. What is the normal balance for liability accounts?
a) Debit;
b) Credit.
8. What is the normal balance for stockholders' equity and owner's equity accounts?
a) Debit;
b) Credit.
9. What is the normal balance for contra asset accounts?
a) Debit;
b) Credit.
10. Client Jay pays ABC Co. $\$ 1,000$ in December for ABC to perform services for Jay in 45 days. ABC uses the accrual basis of accounting. In December ABC will debit cash for $\$ 1,000$. What will be the other account involved in the December accounting entry prepared by ABC (and what type of account is it)?
a) Accounts Receivable (asset);
b) Prepaid Services (asset);
c) Service Revenues (revenue);
d) Unearned Revenues (liability).
2.5. An owner contributed $\$ 5,000$ cash into the business. Which of the following correctly represents the cash contribution transaction?
a)

|  |  | Claims |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Assets | $=$ | Liabilities | + | Equity |
| $+\$ 10,000$ | $=$ | $+\$ 10,000$ | + |  |

b)

|  |  | Claims |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Assets | $=$ | Liabilities | + | Equity |
| $+\$ 5,000$ | $=$ | $+\$ 5,000$ | + | $+\$ 5,000$ |

c)

|  |  | Claims |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Assets | $=$ | Liabilities | + | Equity |
| $+\$ 5,000$ | $=$ |  | + | $+\$ 5,000$ |

## Solution

The correctly represented cash contribution transaction: Option c).
!!! Note that the amount of this single transaction is recorded twice. The first time it is recorded as an asset and the second time it is recorded as equity (the asset source). In accounting any transaction is recorded at least twice, as a rule. This rule is known as double-entry bookkeeping.
2.6. Complete the following sentences. Choose the correct word or word combination.

## Outstanding <br> Ownership <br> Preferred Articles of Incorporation Common ( $\times 2$ ) <br> Stockholders' Equity <br> Par Value

1. To start a corporation in the U.S., it is necessary to file an application in one of the states. The legal document that the state approves is the $\qquad$ .
2. One of the advantages of the corporation form of business as opposed to a partnership form is the ease of transferring $\qquad$ .
3. At a corporation, Assets minus Liabilities is $\qquad$ .
4. Shares of stock that have been issued and have not been reacquired by the issuing corporation are called $\qquad$ shares.
5. If a corporation has issued only one type of stock, it is stock.
6. The type of stock that gets its dividend before the common stock gets its dividend is called $\qquad$ stock.
7. The holders of $\qquad$ stock elect the corporation's board of directors.
8. The par value of $\qquad$ stock usually has no economic significance.
9. The dividend on preferred stock is often expressed as a percentage. To calculate the annual dividend on preferred stock, you multiply the percentage times the $\qquad$ of the preferred stock.

### 2.7. The Earnings Per Share Calculation.

!!! Earnings per share are not part of stockholders' equity. Nonetheless, we are including an introduction to the topic here because the calculation of earnings per share involves the stock of a corporation. Earnings per share must appear on the face of the income statement if the corporation's stock is publicly traded. The earnings per share calculation is the after-tax net income (earnings) available for the common stockholders divided by the weighted-average number of common shares outstanding during that period.

## I. Earnings Available for Common Stock

Let's assume that a corporation has the following stockholders' equity as of December 31:

## Stockholders' Equity

Paid-in capital
$9 \%$ Preferred stock, $\$ 100$ par, 300 shares authorized and issued $\$ 30,000$
Common stock, $\$ 0.10$ par, 10,000 shares authorized, 2,000
shares issued and outstanding 200
Paid-in capital in excess of par-common
Total paid-in capital 49,800

Retained earnings
Total stockholders' equity
$\$ \underline{28,000}$

Additional information:

1. The corporation's accounting year is the calendar year.
2. The corporation's net income after taxes is $\$ 10,000$.
3. The number of shares of common stock outstanding was 600 shares for the first four months of the year. On May 1 the corporation issued additional 900 shares. On October 1 it issued additional 500 shares.
4. The shares of preferred stock were outstanding for the entire year.

The earnings (net income after income taxes) available for the common stockholders is:

| Corporation's net income after income taxes | $\$$ | 10,000 |
| :--- | :---: | :--- |
| Less: Preferred dividend requirement* |  | $\frac{-2,700}{7,300}$ |
| Earnings available for common stock | $\$$ | $\underline{l}$ |

*The preferred dividend requirement is the annual dividend of $\$ 9$ per share ( $9 \%$ multiplied by $\$ 100$ par value) multiplied by 300 shares of preferred stock outstanding.

## II. Weighted-Average Number of Shares of Common Stock

Since the earnings occurred throughout the entire year, we need to divide them by the number of shares that were outstanding throughout the entire year. During the first four months only 600 shares were outstanding, during the next five months 1,500 shares were outstanding, and for the final three months of the year 2,000 shares of common stock were outstanding. This situation requires that we come up with an average number of shares of common stock for the year.

| Shares <br> of Common <br> Outstanding | Months <br> Outstanding | No. of <br> Month <br> Divided by <br> 12 | Weighted <br> Average No. of <br> Common Shares |
| :---: | :---: | :---: | :---: |
| 600 | Jan, Feb, Mar, Apr | $4 / 12$ | 200 |
| 1,500 | May, Jun, Jul, Aug, Sept | $5 / 12$ | 625 |
| 2,000 | Oct, Nov, Dec | $3 / 12$ | 500 |
|  |  |  | 1,325 |

As the calculation shows, the weighted-average number of shares of common stock for the year was 1,325 .

It's a good idea to test this answer to be sure it's reasonable. During five of the months (May - Sep.) the number of shares of common stock outstanding was 1,500 shares. During the remainder of the year, there were more months with less than 1,500 shares outstanding. Thus, the figure of 1,325 looks reasonable.

## III. Earnings per Share of Common Stock

After recognizing the preferred stockholders' required dividend, there was $\$ 7,300$ ( $\$ 10,000$ minus $\$ 2,700$ ) of earnings available for the common stockholders. The $\$ 7,300$ was earned throughout the year, so we need to divide that amount by the weighted-average number of shares of common stock outstanding throughout the year:

The earnings per share (EPS) of common stock $=$ earnings available for common stock divided by the weighted-average number of common shares outstanding:

$$
E P S=\frac{\$ 7,300}{1,325} .
$$

$E P S=\$ \mathbf{5 . 5 1}$ per share of common stock.

## QUESTIONS FOR SELF-ASSESSMENT

1. What are the elements of financial statements?
2. What is an account payable?
3. What is a creditor?
4. What is the statement of financial position?
5. What is a current asset?
6. What is a current liability?
7. What is an owner's equity?
8. What is turnover?
9. What is the purpose of the cash flow statement?
10. What are some examples of financing activities?
11. What is capital stock?
12. What is a dividend and why is it needed?
13. What is the difference between net cash flow and net income?
14. What is the difference between the Cash Flow and Funds Flow statements?
15. Are earnings different from profits?
16. Which financial statement shows a corporation's worth?
17. What is the difference between stocks and bonds?
18. What is the difference between liability and debt?

## TASKS FOR SELF-ASSESSMENT

2.8. There are four parts of the Statement of Cash Flows (or Cash Flow Statement): Operating Activities, Investing Activities, Financing Activities, Supplemental Activities. For each of the following items, indicate which part will be affected. Choose the correct option ( $a, b$ or $c$ ).

1. Depreciation Expense.
a) Operating;
b) Investing;
c) Financing;
d) Supplemental.
2. Proceeds from the sale of equipment used in the business.
a) Operating; b) Investing; c) Financing; d) Supplemental.
3. Declaration and payment of dividends on company's stock.
a) Operating;
b) Investing;
c) Financing;
d) Supplemental.
4. Gain on the Sale of Automobile formerly used in the business.
a) Operating;
b) Investing;
c) Financing;
d) Supplemental.
2.9. For a recent year a corporation's financial statements reported the following:

| Net income | $\$$ |
| :--- | :--- |
| Depreciation expense | 100,000 |
| Increase in accounts receivable | 10,000 |
| Decrease in accounts payable | 30,000 |

Based on the above information, what amount will the corporation report as Cash Provided by Operating Activities on the cash flow statement?
a) $\$ 65,000$;
b) $\$ 125,000$;
c) $\$ 155,000$.
2.10. A corporation reported the following information for the past year:

| Net income | $\$$ |
| :--- | :--- |
| Depreciation expense | 200,000 |
| Gain on sale of truck | 50,000 |
| Proceeds from sale of truck | 8,000 |
| Decrease in accounts receivable | 10,000 |

Assuming these are the only facts, what amount will the corporation report as the Cash Provided by Operating Activities on the cash flow statement?
a) $\$ 225,000$;
b) $\$ 235,000$;
c) $\$ 253,000$.

## Unit 3

CLASSIFICATION OF ACCOUNTING SHEETS IN FOREIGN COUNTRIES

## TOPICS FOR DISCUSSION

1. Accounting documents as accounting information carriers and their classification.
2. Requirements for content and preparation of the documents.
3. The role of accounting documents, their importance in operational activities, financial control and audit.
3.1. Read and decide if the following statements (1-5) are true or false.
4. The source document is the initial input to the accounting process and serves as objective evidence of the transaction.
a) True;
b) False.
5. A well-designed source document form can minimize errors and improve the efficiency of transaction recording.
a) True;
b) False.
6. The source document can be created only in paper format.
a) True; b) False.
7. The source document provides the information required to analyze and classify the transaction and to create the journal entries.
a) True; b) False.
8. The source document doesn't describe the basic facts of the transaction such as its date, purpose, and amount.
a) True; b) False.
3.2. From the following particulars fill in source documents and prepare a Petty Cash Book under Imprest System (Jan., 2013):

Company name: Company «Alfa»
Jan. 1. Received $\$ 400$ as imprest cash from the Chief Cashier.
Jan. 3. Paid postage $\$ 28$.
Jan. 4. Purchased stationery \$48:

- 10 pencils @ $\$ 10$;
- staples stationery/1 pack @ \$8).

Jan. 7. Paid $\$ 72$ for repairs of a computer ( 2 hours).


| Amount \$ |  |
| :--- | :--- |
| Description |  |
| Charged to |  |
| Received <br> by |  |
| Approved |  |

!!! A petty cash voucher is usually a small form that is used to document a disbursement (payment) from a petty cash fund. Petty cash vouchers are also referred to as petty cash receipts and can be purchased from office supply stores.

## PRINTABLE CASH RECEIPT

(Jan. 3, 2013, No 456-2, «Express Delivery»)

|  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- |

!!! Three identical cash receipts are on one page, formatted horizontally with the word "receipt" at the far left as in a payment book. It includes spaces to record installment payments and how they are paid.

BUSINESS RECEIPT (Jan. 4, 2013, No 132/1, XYZ-Company)

!!! A business receipt has a generous blank area for recording quantity, item descriptions, and other details of a purchase.

## RECEIPT FOR SERVICES

Date

| Itern | Hours | Rate | Total |
| :--- | :--- | :--- | :--- |
|  |  |  |  |
|  |  |  |  |

!!! This simple receipt can be used by a business, freelancer, laborer, or anyone who bills by the hour for services rendered.

## PETTY CASH SHEET

!!! Petty cash sheet principally helps you to maintain small cash which usually becomes the victim of ignorance. With the help of a petty cash template, you can divide your cash into two categories that is small and big one. All transactions which belong to petty cash can be recorded on this template and can be balanced multiple times a day.


Authorized Signatures

## PETTY CASH BOOK

!!! It is another Cash Book which is maintained, generally, in large business concerns to reduce the burden of 'Main Cash Book', in which numerous transactions involving petty (small) amounts are recorded. For this purpose, a Petty Cashier is appointed by the Chief Cashier. The Chief Cashier advances a sum of money to the Petty Cashier to enable him to meet petty expenses for a fixed period. The Petty Cashier will record this amount on the Debit Side of the Petty Cash Book while the Chief Cashier will record the same amount on the Credit Side of the Main Cash Book.

| $\begin{array}{\|c} \hline \text { Amount } \\ \text { Received } \\ \$ \end{array}$ | Date | Particulars | $\begin{gathered} \mathrm{V} . \\ \mathrm{No} \end{gathered}$ | Total \$ | Traveling Expenses \$ | Postages \$ | Stationery \$ | Office Expenses \$ | Misc. Expenses \$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
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|  |  | $\begin{array}{\|c\|} \hline \text { Balance } \\ \mathrm{c} / \mathrm{d} \end{array}$ |  |  |  |  |  |  |  |
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|  |  | $\begin{array}{\|c\|} \hline \text { Balance } \\ \mathrm{b} / \mathrm{d} \\ \hline \end{array}$ |  |  |  |  |  |  |  |
|  |  | $\begin{gathered} \hline \text { Cash } \\ \text { received } \end{gathered}$ |  |  |  |  |  |  |  |

[^0]
## QUESTIONS FOR SELF-ASSESSMENT

1. What is a source document?
2. What is Cash Book?
3. What is Petty Cash Book?
4. What are General Forms?
5. What is a Template?
6. What is an Invoice?
7. What is a Purchase Order?
8. What is a Receiving Record?

## TASKS FOR SELF-ASSESSMENT

3.3. From the following particulars prepare a Petty Cash Book under Imprest System (Jan., 2013):

Jan. 1. Received $\$ 200$ as imprest cash from the Chief Cashier.
Jan. 2. Paid $\$ 20$ for a taxi.
Jan. 3. Paid $\$ 20$ for stationery.
Jan. 4. Purchased stationery for $\$ 20$.
Jan. 5. Paid telegram charges $\$ 30$ and bus fare $\$ 5$.
Jan. 6. Bought postage stamps for $\$ 15$.
Jan. 7. Paid $\$ 70$ for repairs of a computer.

| Amount Received \$ | Date | Particulars | $\begin{aligned} & \text { V. } \\ & \text { No } \end{aligned}$ | Total \$ | Traveling Expenses \$ | Postages \$ | Stationery \$ | Office Expenses \$ | $\begin{gathered} \hline \text { Misc. } \\ \text { Expenses } \\ \$ \\ \hline \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
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|  |  | Balance c/d |  |  |  |  |  |  |  |
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|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  | Balance b/d |  |  |  |  |  |  |  |
|  |  | $\begin{gathered} \hline \text { Cash } \\ \text { received } \end{gathered}$ |  |  |  |  |  |  |  |

## Unit 4

ACCOUNTING METHODS AND PROCEDURES IN FOREIGN COUNTRIES

## TOPICS FOR DISCUSSION

1. Accounting Cycle.
2. Special Journals.
3. The General Ledger.
4. Records in the Accounting Journals.

## TASKS

4.1. Complete the following sentences. Choose the correct words, $A$ or B, to fill each gap.

1. A $\qquad$ amount will appear on the left side of a T-account.
A) Debit; B) Credit.
2. When a check is written, a cash account should be $\qquad$ .
A) Debit; B) Credit.
3. Liability accounts will normally have $\qquad$ balances.
A) Debit; B) Credit.
4. Revenue accounts will normally have $\qquad$ balances.
A) Debit; B) Credit.
5. Large corporations should report revenues on their income statements when the $\qquad$ .
A) Cash is Received; B) Revenues Are Earned.
6. Accrued expenses are likely to pertain to transactions that have been paid.
A) Already;
B) Not Yet.
7. Deferred revenues likely involve cash amounts that have been received.
A) Already; B) Not Yet.
8. The book of original entry is the definition of a $\qquad$ .
A) Journal;
B) Ledger.
4.2. Complete the following sentences. Choose the correct word or word combination.

9. The two main methods of bookkeeping and accounting are 1) the cash method, and 2) the $\qquad$ method.
10. $\qquad$ -entry bookkeeping means that every transaction will affect two or more accounts.
11. A listing of the balances in the accounts in order to determine whether debits are equal to credits is a $\qquad$ balance.
12. The listing of accounts that are available for posting transactions is the $\qquad$ of accounts.
13. The bookkeeping or accounting equation is Assets $=$ Liabilities + Owner's $\qquad$ .
14. When a sale is made on credit, the seller will debit the asset account Accounts $\qquad$ .
15. Asset, $\qquad$ , and stockholders' equity accounts are known as balance sheet accounts.
16. The difference between the balance in a company's cash account and its bank statement is documented in the $\qquad$ of the bank statement.
17. A $\qquad$ entry typically removes an accrual-type adjusting entry that had been recorded in the preceding accounting period.
18. Cash and Accounts Receivable are two examples of accounts that are reported on the classified balance sheet under the heading
$\qquad$ assets.
19. The separation of duties is part of the internal $\qquad$ for safeguarding assets.
4.3. Complete the following sentences. Choose the correct word combination.
sales journal ( $\times 2$ )
cash book
purchases returns purchase journal ( $\times 2$ )
20. Credit purchases of goods are recorded in $\qquad$ .
21. Credit sales of goods are recorded in $\qquad$ .
22. Credit purchases of machinery are to be recorded in $\qquad$ .
23. Cash purchases of furniture and fixture are to be recorded in
24. Credit note is the basis of recording $\qquad$ book (journal).
25. Debit note is the basis of recording $\qquad$ book (journal).
26. Invoice is the basis for recording $\qquad$ book (journal).
27. Outward invoice is the basis for recording $\qquad$ book (journal).

### 4.4. Records in the Accounting Journals.

## PURCHASES JOURNAL

## Example:

Enter the following transactions into the purchase journal:

1. Jan. 10, 2013, purchased 400 kg of sugar from S \& sons. @ \$10 per kg on credit.
2. Jan. 15, 2013, purchased 200 liters of mustard oil from R \& Co. @ $\$ 12$ per liter.
3. Jan. 23, 2013, purchased 100 kg of soap from Lever Bros. @ $\$ 10$ per kg.

Purchase Journal (Book)

| Date | Description | Invoice <br> No. | L/F | Details \$ | Amount \$ |
| :---: | :--- | :---: | :---: | :---: | :---: |
| 10.1 .2013 | S \& sons. <br> 400 kg of sugar @ $\$ 10 / \mathrm{kg}$ | -- | CL-8 | 4000 | 4000 |
| 15.1 .2013 | R \& Co. <br> 200 liters mustard oil @ \$12/ <br> liter | -- | CL-10 | 2400 | 2400 |
| 23.1.2013 | Lever Bros. <br> 100 kg of soap @ \$10/kg | -- | CL-14 | 1000 | 1000 |
| Dr. |  | GL-16 |  | 7400 |  |

## SALES JOURNAL

## Example:

Enter the following transactions into the sales journal:

1. June 4, 2013, sold on credit to O:

10 tables @ \$150
30 chairs @ \$100
2. June 11, 2013, sold on credit to S:

1 dining table @ $\$ 1,500$
3. June 30, 2013, sold on credit to T restaurant:

100 chairs @ \$150
20 tables @ \$200
4. The trader offers a trade discount at the following rates:

Sales up to $\$ 2,000-5 \%$
Sales over \$2,000-10\%

## Sales Journal (Book)

| Date | Description | Invoice No. | L/F | Details \$ | Amount \$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 4.6.2013 | 0. <br> 10 tables @ \$150 <br> 30 chairs @ \$100 <br> Less a $10 \%$ trade discount | 135 | $\begin{gathered} \text { DL- } \\ 15 \end{gathered}$ | 1500 3000 ------- 4500 450 | 4050 |
| 11.6.2013 | S. <br> 1 dining table @ \$1500 <br> Less a $5 \%$ trade discount | 136 | $\begin{gathered} \text { DL- } \\ 17 \end{gathered}$ | $\begin{gathered} 1500 \\ 75 \end{gathered}$ | 1425 |
| 30.6.2013 | T restaurant. <br> 100 chairs @ \$150 <br> 20 tables @ \$200 <br> Less a $10 \%$ trade discount | 137 | $\begin{gathered} \text { DL- } \\ 19 \end{gathered}$ | 15000 4000 ------- 19000 1900 | 17100 |
| 30.6.2013 | Sales account Cr. |  | $\begin{gathered} \text { GL- } \\ 30 \end{gathered}$ |  | 22575 |

## PURCHASES RETURNS OR RETURNS OUTWARDS JOURNAL

## Example:

Enter the following transactions in the purchases returns journal and post them to the ledger accounts:

- Jan.5, 2013, returned to Sunshine Biscuit Co.:

10 cases of biscuits @ $\$ 125$ per case for damage in transit;

- Jan. 18, 2013, returned to S Stores:

3 bags of sugar @ $\$ 500$ per bag since it was not according to the order;

- Jan. 26, 2013, returned to P Flour Mills:

10 bags of flour @ \$200 per bag since it was not according to specification, less a discount of $5 \%$.

Solution:
Purchases Returns Journal (Book)

| Date | Description | Debit <br> Note <br> No. | L/F | Details <br> $\$$ | Amount <br> $\$$ |
| :---: | :--- | :---: | :---: | :---: | :---: |
| 5.1 .2013 | Sunshine Biscuit Co. <br> 10 cases of biscuits @ \$125 per <br> case <br> (Being damaged in transit) | ----- | CL. 8 | 1250 | 1250 |
| 18.1 .2013 | S Stores <br> 3 bags of sugar @ \$500 per bag <br> (Not according to the order) | ----- | CL. 12 | 1500 | 1500 |
| 26.1 .2013 | P Flour Mills <br> 10 bags of flour @ \$200 per bag <br> Less discount 5\% <br> (Not according to <br> specification) | ----- | CL. 16 | 2000 <br> 100 <br> ------ | 1900 |
| 31.1 .2013 | Purchases returns A/C <br> Cr. |  | GL. 18 | 4650 |  |

## SALES RETURNS OR RETURNS INWARDS JOURNAL

## Example:

Enter the following transactions in the sales returns or returns inwards journal and post them to the ledger accounts:

- Feb. 3, 2013, received back from Q Bros.:

5 bundles of shirts @ $\$ 2,000$ per bundle for inferior quality. Less a trade discount of $10 \%$;

- Feb. 10, 2013, Mr. A returned 10 bales of cloth @ $\$ 2,500$ per bale since it was not according to order;
- Feb. 27, 2013, Returned by M. R 25 pairs of stock @ $\$ 20$ per pair for wrong size. Less a discount of $10 \%$.

Solution:
Sales Returns Journal (Book)

| Date | Description | Debit <br> Note <br> No. | L/F | Details \$ | $\begin{gathered} \text { Amount } \\ \$ \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 3.2.2013 | Q Bros. 5 bundles of shirts @ \$2,000 per bundle Less a trade discount of $10 \%$ (Goods being of inferior quality) | ----- | CL. 15 | $\begin{gathered} 10,000 \\ 1000 \\ ------ \\ --- \end{gathered}$ | 9000 |
| 10.2.2013 | Mr. A 10 bales of cloth @ $\$ 2,500$ per bale: <br> (Not according to the order) | -- | $\begin{gathered} \text { CL. } \\ 19 \end{gathered}$ | 25000 | 25000 |
| 27.2.2013 | M. R <br> 25 pairs of socks @ \$20/pair Less a discount of $10 \%$ (Being goods not according to size) | ----- | $\begin{gathered} \text { DL. } \\ 25 \end{gathered}$ | $\begin{gathered} 500 \\ 50 \end{gathered}$ | 450 |
| 29.2.2013 | Sales returns A/C Cr . |  | $\begin{gathered} \text { GL. } \\ 30 \end{gathered}$ |  | 34450 |

## THE GENERAL LEDGER

## Example:

Enter the following transactions in the journal and post them into the ledger:

| 2013 |  |
| :--- | :--- |
| Jan. 1 | Mr. Javed started business with cash $\$ 100,000$ |
| 2 | He purchased furniture for $\$ 20,000$ |
| 3 | He purchased goods for $\$ 60,000$ |
| 5 | He sold goods for cash $\$ 80,000$ |
| 6 | He paid salaries $\$ 10,000$ |

Solution:
Journal

| Date | Particular | L.F | Amount | Amount |
| :---: | :---: | :---: | :---: | :---: |
| 2013 |  |  |  |  |
| Jan. 1 |  | $\begin{gathered} 9 \\ 11 \end{gathered}$ | 100,000 | 100,000 |
| 1 | 2 | 3 | 4 | 5 |
| 2 | Furniture A/C......................................... Cash A/C (Being furniture purchased for cash) | $\begin{gathered} 13 \\ 9 \end{gathered}$ | 20,000 | 20,000 |
| 3 | ```Purchases A/C..............................Dr. Cash A/C (Goods purchased for cash)``` | $\begin{gathered} 15 \\ 9 \end{gathered}$ | 60,000 | 60,000 |
| 5 |  | $\begin{aligned} & 9 \\ & 17 \end{aligned}$ | 80,000 | 80,000 |
| 6 | ```Salaries A/C.``` <br> ```Cash A/C Return \\ (Salaries paid)``` | $\begin{aligned} & 19 \\ & 9 \end{aligned}$ | 10,000 | 10,000 |

## The general ledger

## Cash Account

| Date | Particular | J.R | Amount | Date | Particulars | J.R | Amount |
| :---: | :--- | :---: | :---: | :---: | :--- | :---: | :---: |
| 2013 |  |  |  | 2013 |  |  |  |
| Jan.1 | Capital A/C | 1 | 100,000 | Jan.2 | Furniture A/C | 1 | 20,000 |
| Jan.5 | Sales A/C | 1 | 80,000 | Jan.3 | Purchases A/C | 1 | 60,000 |
|  |  |  |  | Jan.6 | Salaries A/C | 1 | 10,000 |
|  |  |  |  |  | Balance $c / d$ |  | 90,000 |
|  | Total |  | $\mathbf{1 8 0 , 0 0 0}$ |  | Total |  | $\mathbf{1 8 0 , 0 0 0}$ |

## Capital Account

| Date | Particular | J.R | Amount | Date | Particulars | J.R | Amount |
| :---: | :--- | :---: | :---: | :---: | :--- | :---: | :---: |
| 2013 |  |  |  | 2013 |  |  |  |
| Jan.6 | Balance $c / d$ |  | 100,000 | Jan.1 | Cash A/C | 1 | 100,000 |
|  | Total |  | $\mathbf{1 0 0 , 0 0 0}$ |  | Total |  | $\mathbf{1 0 0 , 0 0 0}$ |

Furniture Account

| Date | Particular | J.R | Amount | Date | Particulars | J.R | Amount |
| :---: | :--- | :---: | :---: | :---: | :--- | :---: | :---: |
| 2013 |  |  |  | 2013 |  |  |  |
| Jan.2 | Cash A/C | 1 | 20,000 | Jan.6 | Balance $c / d$ |  | 20,000 |
|  | Total |  | $\mathbf{2 0 , 0 0 0}$ |  | Total |  | $\mathbf{2 0 , 0 0 0}$ |

Purchases Account

| Date | Particular | J.R | Amount | Date | Particulars | J.R | Amount |
| :---: | :--- | :---: | :---: | :---: | :--- | :--- | :--- |
| 2013 |  |  |  | 2013 |  |  |  |
| Jan.3 | Cash A/C | 1 | 60,000 | Jan. 6 | Balance $c / d$ |  | 60,000 |
|  | Total |  | $\mathbf{6 0 , 0 0 0}$ |  | Total |  | $\mathbf{6 0 , 0 0 0}$ |

Sales Account

| Date | Particular | J.R | Amount | Date | Particulars | J.R | Amount |
| :---: | :--- | :---: | :---: | :---: | :--- | :---: | :---: |
| 2013 |  |  |  | 2013 |  |  |  |
| Jan.6 | Balance c/d |  | 80,000 | Jan. 5 | Cash A/C | 1 | 80,000 |
|  | Total |  | $\mathbf{8 0 , 0 0 0}$ |  | Total |  | $\mathbf{8 0 , 0 0 0}$ |

Salaries Account

| Date | Particular | J.R | Amount | Date | Particulars | J.R | Amount |
| :---: | :--- | :---: | :---: | :---: | :--- | :--- | :--- |
| 2013 |  |  |  | 2013 |  |  |  |
| Jan.6 | Cash $A / C$ | 1 | 10,000 | Jan.6 | Balance $c / d$ |  | 10,000 |
|  | Total |  | $\mathbf{1 0 , 0 0 0}$ |  | Total |  | $\mathbf{1 0 , 0 0 0}$ |

## QUESTIONS FOR SELF-ASSESSMENT

1. What is a journal?
2. What is a general Journal?
3. What is a recurring journal entry?
4. What is a monthly close?
5. What is a purchases book or purchases journal?
6. What is a sales book or sales journal?
7. What is a purchases returns book or purchases returns journal?
8. What is a sales returns book or sales returns journal?
9. What is a sales returns book or sales returns journal?

10 . What is a bills receivable book?
11. What is a bills payable book?
12. What is a cash book or cash journal?
13. What is a petty cash book?
14. What is an account?
15. What are closing entries?
16. What is an account?
17. What are adjusting entries?

## TASKS FOR SELF-ASSESSMENT

### 4.5. Fill in the form with the given information:

You are a bookkeeper for Q Bros. A customer has just shopped in your store on 9/16/2013 and purchased the following items:

- 3 pairs of socks for a total of $\$ 12.00$;
- 2 men's shirts for a total of $\$ 55.00$.

This makes the total sale $\$ 67.00$. The sales tax in your state is $6 \%$ for a total of $\$ 4.02$ in sales tax. The sales total is $\$ 71.02$. The customer plans to buy these items for cash. Here is the bookkeeping entry you would make, hopefully using your computer accounting software, to record the journal transaction.

Here is how the entry would look:
Sales Journal Entry - Cash Receipts for 9/16/2013

|  | Debit | Credit |
| :--- | :---: | :---: |
| Cash in Checking |  |  |
| Sales |  |  |
| Sales Tax Collected |  |  |

### 4.6. Fill in the form with the given information:

You are a bookkeeper for Q Bros. Your store is having a sale and everything is $10 \%$ off. A customer has just shopped in your store on $9 / 16 / 2013$ and purchased the following items:

- 3 pairs of socks for a total of $\$ 12.00$;
-2 men's shirts for a total of $\$ 55.00$.
This makes the sub-total sale $\$ 67.00$, not including the discount. The sales tax in your state is $6 \%$ for a total of $\$ 4.02$ in sales tax and a $\$ 6.70$ discount. The sales total is $\$ 71.02$. Here is the bookkeeping
entry you would make, hopefully using your computer accounting software, to record the journal transaction.

Here is how the entry would look:
Sales Journal Entry - Discount Sale - 9/16/13

|  | Debit | Credit |
| :--- | :---: | :---: |
| Cash in Checking | \$ |  |
| Sales Discount |  |  |
| Sales |  |  |
| Sales Tax Collected |  |  |

## Unit 5

ACCOUNTING OF ASSETS
AND LIABILITIES OF BUSINESSES IN FOREIGN COUNTRIES

## TOPICS FOR DISCUSSION

1. Accounting for Inventory.
2. The inventory cost flow methods:
a. First in First Out (FIFO).
b. Last in First Out (LIFO).
c. Average Cost Method (AVCO).
3. The methods of depreciation of fixed assets:
a. Straight Line Method of Depreciation.
b. Sum of the Years' Digits Method of Depreciation.
c. Reducing Balance Method of Depreciation.
d. Units of Production Depreciation Method.
4. Disposal of Fixed Assets.
5. Account of Liabilities.

## TASKS

### 5.1. Which of the following are examples of fixed assets?

1. Cars on display at a showroom.
2. Machine installed at a factory.
3. Employees with more than one year of service remaining before their retirement.
5.2. An asset is purchased on 1st July 2013 for \$90,000. The asset has 3 years of useful life at the end of which it is not expected to have any salvage value. How much depreciation expense should be charged in the accounting year ending on 31st December 2014 according to the sum of the years' digits method?
4. $\$ 22,500$;
5. $\$ 15,000$;
6. $\$ 37,500$;
7. $\$ 30,000$;
8. $\$ 45,000$.
5.3. «Alfa» Company, a construction company, purchases raw materials for use in its ongoing projects. Which of the following may be included in the cost of inventory?
9. Non-refundable import tariff.
10. Construction costs incurred in building shed for safe storage of inventory at construction sites.
11. Warehousing costs for storage of inventory.
12. Transportation charges paid for the delivery of inventory at the company's warehouse.
13. Sales tax on purchase of inventory.
5.4. Which of the following is true regarding Straight Line Depreciation?
14. It prevents bias in situations when the pattern of economic benefits from an asset is hard to estimate.
15. Once straight line depreciation charge is determined, it is not revised subsequently.

> 5.5. Which of the following is true regarding Reducing Balance Method of depreciation?
> 1. It results in higher reported profits in the early years of an asset's life.
> 2. It is a more suitable method for depreciating assets that generate higher economic benefits later in their useful life.
> 3. It must be applied where an asset is expected to face technological obsolescence relatively quickly.
5.6. «Alfa» Company sells leather jackets. Due to the seasonal nature of the business, «Alfa» Company sells its merchandise as soon as possible to avoid the risk of downward fluctuation in prices towards the end of the winter season. Which of the following methods is the most suitable for the valuation of «Alfa» Company's inventories?

1. LIFO Method.
2. FIFO Method.
3. Average Cost Method.
4. Actual Unit Cost Method.

### 5.7. Illustration of the inventory cost flow methods.

## Example of FIFO cost flow method

When a sale takes place, two entries are usually made in accounting books. One is for revenue recognition and the other one is for expense (cost of sales or cost of goods sold) recognition. In our example, the revenue recognition entry has the same sales amount regardless of the cost flow method which is $\$ 10,800$ for 270 goods. The revenue recognition increases both assets (Cash) and equity (by increasing Sales Revenue). This is as asset source transaction.

The cost of goods sold will be different under different cost flow methods. Under FIFO, the cost of goods sold is determined by adding up the costs of 270 goods acquired first. The cost of the first 270 units available on hand is calculated as follows:

## Cost of goods sold under FIFO

| Beginning Inventory | 100 units x \$15 | $=$ | $\$ 1,500$ |
| :--- | :---: | :---: | :---: |
| Purchase One | 120 units $\times \$ 18$ | $=$ | $\$ 2,160$ |
| Purchase Two | 50 units $\times \$ 20$ | $=$ | $\$ 1,000$ |
| Total | 270 units |  | $\$ 4,660$ |

The recognition of cost of goods sold decreases assets (Inventory) and equity (by increasing Cost of Goods Sold). The 30 units from the second purchase remain in the Inventory account.

The gross margin and net income equal $\$ 6,140(\$ 10,800-\$ 4,660)$. The gross margin and net income are the same in this simplified case because there are no other expenses besides the cost of goods sold. To determine the income tax expense, we need to multiple the net income by the income tax rate. The rate is $30 \%$, so the income tax is $\$ 1,842$ $(\$ 6,140 \times 30 \%)$. The effect of the income tax payment is a decrease in assets (Cash) and equity (by increasing Income Tax Expenses).

## Example of LIFO cost flow method

Under LIFO, the cost of goods sold is calculated by using the costs of goods purchased last. The computation is shown below.

Cost of goods sold under LIFO

| Purchase Two | 80 units x \$20 | $=$ | $\$ 1,600$ |
| :--- | :---: | :---: | :---: |
| Purchase One | 120 units x \$18 | $=$ | $\$ 2,160$ |
| Beginning Inventory | 70 units x \$15 | $=$ | $\$ 1,050$ |
| Total | 270 units |  | $\$ 4,810$ |

The 30 units from the beginning inventory remain in the Inventory account. The net income is determined by subtracting the cost of goods sold from sales: $\$ 5,990(\$ 10,800-\$ 4,810)$. The income tax to be paid is $\$ 1,797(\$ 5,990 \times 30 \%)$.

## Example of average cost method

Under this method, the average cost per unit needs to be calculated first. This is done by dividing the cost of goods available for sale by the number of units available for sale.

## Data for calculating average cost

| The cost of goods available for sale: |
| :--- |
| $100 \times \$ 15+120 \mathrm{v} \$ 18+80 \times \$ 20=\$ 5,260$ |
| The number of goods available for sale: |
| $100+120+80=300$ units |

Based on the above information, the average cost per unit is $\$ 17.53$, rounded to a cent: $\$ 5,260 \times 300$ units.

Next, to determine the cost of goods sold the number of goods sold is multiplied by the average cost. In our example, the cost of goods sold is $\$ 4,733.1$ ( $\$ 17.53 \times 270$ units). The net income is $\$ 6,066.9$ ( $\$ 10,800-\$ 4,733.1$ ) and the income tax is $\$ 1,820.07(\$ 6,066.9 \times$ $30 \%$ ).

### 5.8. Illustration of the methods of depreciation of fixed assets.

## Straight Line Method of Depreciation:

!!! Straight line method is also known as fixed installment method and original cost method. This method is very simple and conceptually appropriate to employ. This is one of the most widely used methods for the calculation of depreciation charge. By this method, the number of years of use is estimated and the cost is then divided by the number of years to give the depreciation charge each year. Under this method the amount of depreciation will be equal each year, since depreciation is charged at fixed rate on cost of asset. This is the special feature of this method.

## Formula:

Depreciation charge under this method is calculated by using the following formula:

| $\frac{\text { Cost less salvage value }}{\text { Estimated service life }}=\quad$Depreciation <br> charge |
| :---: | :---: |

## Example:

Assume a machine was bought for $\$ 500,000$ and we thought we would keep it for four years and then sell it for $\$ 50,000$ (salvage value), the depreciation to be charged each year would be calculated as follows:

| Cost less salvage value <br> Estimated service life <br> $500,000-\$ 50,000^{*}$ <br>  <br> $*$ Salvage value | $=\quad$Depreciation <br> charge |
| :--- | :--- | :--- |

## Advantages:

1. Straight line method or fixed installment method is very easy to employ because of its simplicity.
2. The asset can be written off to zero value under this method.
3. This method is useful for providing depreciation on leasehold property, patent right, trade mark, copyright etc.

## Disadvantages:

There are two major objections to the straight line method. These are:

1. This method assumes the same economic usefulness of the asset each year.
2. The repair and maintenance expenses are essentially same each period.

Another problem in the use of straight line method or fixed installment method of depreciation is that its use results in distortion in the rate of return analysis (income/assets). The following example shows how the rate of return increases, given constant revenue flows, because the asset's book value decreases.

| Year | Depreciation | Book value | Income after <br> depreciation expenses | Rate of return <br> (income/assets) |
| :---: | :---: | :---: | :---: | :---: |
| 0 |  | $\$ 500,000$ |  |  |
| 1 | $\$ 90,000$ | $\$ 410,000$ | $\$ 100,000$ | $24.4 \%$ |
| 2 | $\$ 90,000$ | $\$ 320,000$ | $\$ 100,000$ | $31.2 \%$ |
| 3 | $\$ 90,000$ | $\$ 230,000$ | $\$ 100,000$ | $43.5 \%$ |
| 4 | $\$ 90,000$ | $\$ 140,000$ | $\$ 100,000$ | $71.4 \%$ |
| 5 | $\$ 90,000$ | $\$ 50,000$ | $\$ 100,000$ | $200.0 \%$ |

## Sum of the Years' Digits Method of Depreciation

!!! The sum of the years' digits method was introduced by American accountants. It is an improvement over diminishing balance method of depreciation. Here also the depreciation charge constantly reduces. This method is normally applied to fairly long live assets. Unlike the diminishing balance method, a constantly decreasing rate is applied on the original cost. Hence the original book value is, like the straight line method, reducible to zero. The determination of the rate of depreciation is very simple. It simply sums up the years in an asset's lifespan to be used as denominator, and reverses the individual year numbers to be used as numerator.

## Example:

Suppose the cost, residual value and life of the asset are:

| Cost | $\$ 75,000$ |
| :--- | :--- |
| Residual value | $\$ 3,000$ |
| Life of the asset | 8 Years |

The denominator will be:

$$
1+2+3+4+5+6+7+8=36
$$

The numerators from the first to the 8th year will respectively be:

$$
8+7+6+5+4+3+2+1 .
$$

Applying the rate to the depreciable cost 'original cost - residual value', i.e. $\$ 72,000$, the depreciation charges for the first eight years will be:

| Year | Opening <br> book <br> value | Depreciable <br> cost | Rate | Depreciation | Total <br> depreciation | Written <br> down <br> value |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 75,000 | 72,000 | $8 / 36$ | 16,000 | 16,000 | 59,000 |
| 2 | 59,000 | 72,000 | $7 / 36$ | 14,000 | 30,000 | 45,000 |
| 3 | 45,000 | 72,000 | $6 / 36$ | 12,000 | 42,000 | 33,000 |
| 4 | 33,000 | 72,000 | $5 / 36$ | 10,000 | 52,000 | 23,000 |
| 5 | 23,000 | 72,000 | $4 / 36$ | 8,000 | 60,000 | 15,000 |
| 6 | 15,000 | 72,000 | $3 / 36$ | 6,000 | 66,000 | 9,000 |
| 7 | 9,000 | 72,000 | $2 / 36$ | 4,000 | 70,000 | 5,000 |
| 8 | 5,000 | 72,000 | $1 / 36$ | 2,000 | 72,000 | 3,000 |

## Formula:

The sum of year's digits can be easily computed by the following formula:

$$
S=n(n+1) / 2,
$$

where $S=$ sum of years;
$\boldsymbol{n}=$ number of years of useful life of assets.
Let's apply it when $\mathrm{n}=8$ years:

$$
S=8(8+1) / 2=72 / 2 \text { or } 36 .
$$

## Reducing Balance Method of Depreciation

!!! Under the reducing balance method, the depreciation is charged at a fixed rate like the straight line method (also known as the fixed installment method). But the rate is not calculated on cost of an asset as it is done under the fixed installment method - it is calculated on the book value of an asset. The book value of an asset is obtained by deducting depreciation from its cost. The book value of an asset gradually reduces on account of charging depreciation. Since the depreciation rate is applied on reducing balance of an asset, this method is called reducing balance method or diminishing balance method.

## Example:

Suppose the cost of an asset is $\$ 1,000$ and the rate of depreciation is $10 \%$ p.a.

| Cost of asset | 1,000 |
| :--- | :---: |
| Depreciation: |  |
| 1st year: $10 \%$ of 1,000 | 100 |
|  | $\overline{900}$ |
| Book value | 90 |
| 2nd year: $10 \%$ of 900 | $\overline{810}$ |
|  | 81 |
| Book value | $\overline{729}$ |
| 3rd year: $10 \%$ of 810 |  |
|  |  |
| Book value |  |
|  |  |
| and so on...... |  |

Under the fixed installment method the amount of annual depreciation remains the same but under the reducing balance method the amount of annual depreciation gradually reduces.

This method is especially suitable to assets with long life, e.g., plant and machinery, furniture, motor car etc.

Under this method the real cost of using an asset is the depreciation and repair expenses so this method gives better results because in early years when repair expenses are less the depreciation is more. As the asset gets older repair charges on it increase and the amount of depreciation decreases. So the combined effect of both these costs remains almost constant on the profit and loss each year.

The great weakness of this method is that it takes very long time to write off an asset to approximately nil, unless a very high rate is used, in which case the burden on earlier years shall be excessive. This method is used by income tax authorities for granting depreciation allowance to assess.

## Formula for the Calculation of Depreciation Rate:

The calculation of correct rate of depreciation is very important under this method. The following formula should be applied under given conditions.

When the cost of an asset, residual value and useful life of an asset is given:

$$
r=1-(S / C)^{1 / n}
$$

where $\boldsymbol{r}=$ Rate of depreciation;
$\boldsymbol{n}=$ Estimated useful life of an asset;
$\boldsymbol{S}=$ Residual value after the expiry of useful life;
$\boldsymbol{C}=$ Original cost of an asset.

## Example 2:

If $n=3$ years, $S=64,000$ and $C=1,000,000$, calculate the rate of depreciation:

$$
r=1-(64,000 / 1,000,000)^{1 / 3}=1-40 / 100=60 / 100=60 \% .
$$

## Disposal of Fixed Assets

Company purchased a machine for $\$ 2000$ on 1st January 2011 which had its useful life of 5 years and an estimated residual value of $\$ 500$. The machine was being depreciated on straight line basis. However, Company decided to sell the asset on1 January 2013 for $\$ 1500$ in order to raise cash for the purchase of a new machine.

The disposal of the fixed asset will be recorded as follows:

1. Record cash received or the receivable arising from the sale:

- Debit;
- Cash;
- \$1500.

2. Remove the asset from the balance sheet:

- As a fixed asset is recognized in the balance sheet at the Net Book Value (i.e. Cost less Accumulated Depreciation), the machine will be removed from the accounts of Company in two parts:
- First, the Machine Cost must be removed by crediting the ledger:
- Credit;
- Machine Cost;
- \$2000.
- Second, the Accumulated Depreciation in respect of the machine must be removed by debiting the ledger:
- Debit;
- Accumulated Depreciation;
- \$600;
- Accumulated Depreciation: $(2000-500) / 5 \times 2$ years;
- The combined effect of the above two transactions would be to remove the machine's net book value of $\$ 1400(2000-600)$ from the balance sheet;
- The combined effect of the above two transactions would be to remove the machine's net book value of $\$ 1400(2000-600)$ from the balance sheet.

3. Recognize the resulting gain or loss on the sale of machine:

- Company received $\$ 1500$ for an asset with a balance sheet worth of $\$ 1400$. It therefore earned a gain of $\$ 100$. The gain will be recorded as follows:
- Credit;
- Gain on Disposal;
- \$100.

The accounting entries will appear in the Company's ledger accounts as follows:

| Machine Cost |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Debit |  | $\$$ | Credit |  | $\$$ |
| 2011 | Cash | 2000 | 2013 | Disposal | 2000 |
|  |  | 2000 |  |  | 2000 |


| Accumulated Depreciation |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Debit |  | $\$$ | Credit |  | $\$$ |  |
| 2013 | Disposal | 600 | 2011 | Income <br> Statement | 300 |  |
|  |  |  | 2012 | Income <br> Statement | 300 |  |
|  |  | 600 |  |  | 600 |  |


| Cash Book |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Debit |  | $\$$ | Credit |  | $\$$ |  |
| 2013 | Disposal | 1500 | - | - | - |  |


| Disposal Account |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Debit | $\$$ | Credit | $\$$ |  |
| 2013 | Machine cost | 2000 | 2013 | Cash | 1500 |
|  | Income Statement (Gain) | 100 |  | Accumulated <br> Depreciation | 600 |
|  |  | 2100 |  |  | 2100 |

Disposal Account acts as a control account for the entries involving the disposal of fixed assets. Balances from all relevant fixed
asset accounts are pooled into the disposal account and the balancing figure is the gain or loss on disposal which is transferred to the income statement.

## Account of long-term liabilities

!!! Long term liabilities are obligations that are due for one year or longer after the end of the period. Since the time value of money can be large, long term liabilities are often valued at their present value, while current liabilities are at nominal value.

At the beginning of the year, the firm has a loan of $\$ 10,000$. The interest rate is $5 \%$. At the end of the year, $\$ 500$ of interest is paid.

The journal entry of the interest expense:

| T-account | Debit | Credit |  |
| :--- | :---: | :---: | :---: |
| Interest expense | 500 |  |  |
| Cash |  | 500 |  |

Then, the firm decides to sell a machine and use the proceeds of 4,000 to partially pay down the loan.

The journal entry of this payment:

| T-account | Debit | Credit |  |
| :--- | :--- | :--- | :--- |
| Note payable | 4,000 |  |  |
| Cash |  | 4,000 |  |

## !!! Key points:

- long term liabilities are (normally) valued at present value;
- when a liability is interest-bearing, the passing in time will result in interest expenses;
- when money is paid (or products delivered/services rendered), the liability is reduced.


## QUESTIONS FOR SELF-ASSESSMENT

1. What are the ways to value inventory?
2. What is the difference between liability and debt?
3. What is the proper use of the words lend and borrow?
4. What are accruals?
5. What is the meaning of net assets?

6 . Where is a contingent liability recorded?
7. What is historical cost?
8. What is a creditor?
9. What is reported as property, plant and equipment?
10. Why does LIFO usually produce a lower gross profit than FIFO?
11. What is the cost of sales?
12. What is FIFO?
13. What is the difference between cost and expense?
14. What is a contra asset account?
15. Why isn't land depreciated?
16. How are fully depreciated assets reported on the balance sheet?
17. What is book value?

## TASKS FOR SELF-ASSESSMENT

5.9. Determine the cost of goods sold by LIFO method based on the original data.

470 goods have been sold. Their cost is:

1. Beginning Inventory: 270 units $\times \$ 15$;
2. Purchase One: 100 units $\times \$ 18$;
3. Purchase Two: 100 units $\times \$ 20$.
5.10. Determine the cost of goods sold by FIFO method based on the original data.

470 goods have been sold. Their cost is:

1. Beginning Inventory: 270 units $\times \$ 15$;
2. Purchase One: 100 units $\times \$ 18$;
3. Purchase Two: 100 units $\times \$ 20$.
5.11. Determine the cost of goods sold by the weighted-average cost flow method based on the original data.

470 goods have been sold. Their cost is:

1. Beginning Inventory: 270 units $\times \$ 15$;
2. Purchase One: 100 units $\times \$ 18$;
3. Purchase Two: 100 units $\times \$ 20$.
5.12. Calculate the depreciation on fixed assets using the method of straight line of depreciation based on the original data.

The machine was bought for $\$ 800,000$ and we thought we would keep it for eight years and then sell it for $\$ 80,000$ (salvage value).
5.13. Calculate the depreciation on fixed assets using sum of the years' digits method of depreciation based on the original data.

The machine was bought for $\$ 800,000$ and we thought we would keep it for eight years and then sell it for $\$ 80,000$ (salvage value).
5.14. The construction company buys raw materials such as sand and clay in bulk and stores it in a central warehouse from where materials are issued to project sites as required. Which of the following methods is most appropriate for valuing inventory?

1. Actual Unit Cost Method;
2. LIFO Method;
3. FIFO Method;
4. AVCO Method.

## Unit 6

DETERMINATION AND CALCULATION OF INCOME, COSTS AND EARNINGS OF A BUSINESS IN FOREIGN COUNTRIES

## TOPICS FOR DISCUSSION

1. Accounting and accrued income.
2. Accounting and accrued expense.
3. Accounting and prepaid income.
4. Accounting and prepaid expense.
5. Cost-volume-profit (CVP) analysis (the equation technique and break-even point; the contribution of margin technique in CVP analysis).

TASKS
6.1. Choose the correct option ( $a, b$ or $c$ ).

1. Which of the following would not be included in a product's cost for inventory valuation for the financial statements?
a) Factory Supplies;
b) Quality Control;
c) Interest Expense.
2. Which would be the least favorable basis for allocating manufacturing overhead for a factory with automated equipment and a significant variation of services by its indirect labor?
a) ABC ;
b) Direct Labor Hours;
c) Machine Hours.
3. Which would be the most favorable basis for allocating manufacturing overhead for a factory with automated equipment and a significant variation of services by its indirect labor?
a) ABC ;
b) Direct Labor Hours;
c) Machine Hours.
4. Activity-based costing will provide greater accuracy when allocating costs than a manufacturer's machine hours when its products and customers are $\qquad$ diverse.
a) Less;
b) More.
5. When using machine hours for allocating manufacturing overhead (instead of activity-based costing), a low-volume item requiring a significant amount of special handling will be assigned too
$\qquad$ manufacturing overhead.
a) Little;
b) Much.
6. In ABC the assumption is that $\qquad$ use resources or cause costs.
a) Activities;
b) Products.

### 6.2. Choose the correct option (True or False).

1. Activity based costing is considered to be a traditional costing method.
a) True;
b) False.
2. Under ABC , indirect manufacturing costs are predominantly assigned on the basis of direct machine hours.
a) True;
b) False.
3. The cost to set up production equipment is best allocated directly to products via machine hours.
a) True;
b) False.
4. Setup cost is an example of a batch-level cost.
a) True;
b) False.
5. Manufacturing costs are often organized in the general ledger by function and department. When applying activity-based costing, these manufacturing costs will be sorted by activities.
a) True;
b) False.
6. In activity-based costing, the manufacturing overhead cost per unit will depend partially on the number of units in a batch.
a) True;
b) False.
7. If products are uniform and customers are similar in their demands, activity-based costing may not offer a significant advantage over machine hours when assigning overhead.
a) True;
b) False.
8. A product with a high gross profit could be an unprofitable product.
a) True;
b) False.
9. Activity-based costing can be used to allocate SG\&A expenses in order to assist management with pricing and other marketing decisions.
a) True;
b) False.
6.3. «Alfa» Company has a year end of 31st December 2012. Which of the following transactions and events should result in the recognition of accrued income in «Alfa» Company's financial statements? Explain your answer.
a) «Alfa» Company receives rent income in advance. Rent for the first quarter of 2013 is due on 31st December 2012.
b) «Alfa» Company receives interest of $\$ 10,000$ on bank deposit for the month of December 2012 on 3rd January 2013.

Solution: b) «Alfa» Company receives interest of \$10,000 on bank deposit for the month of December 2012 on 3rd January 2013.
!!! Financial statements are prepared under the Accruals Basis of accounting which requires that income and expense must be recognized in the accounting periods to which they relate rather than on cash basis. An exception to this general rule is the cash flow statement whose main purpose is to present the cash flow effects of transaction during an accounting period.
«Alfa» Company will recognize interest income of $\$ 10,000$ in the financial statements of year 2012 even though it was received in the next accounting period as it relates to the current period. Following accounting entry will need to be recorded to account for the interest income accrued:

| Date | Particular | L.F | Amount | Amount |
| :---: | :--- | :---: | :---: | :---: |
| 2012 |  | 10,000 | 10,000 |  |
| Dec. 31 | Interest Income Receivable <br> Interest on Bank Deposit (Income) <br> (The interest income accrued) |  |  |  |

On the date of receipt of interest (i.e. 3rd January of the next year) following accounting entry will need to be recorded in the subsequent year:

| Date | Particular | L.F | Amount | Amount |
| :---: | :--- | :---: | :---: | :---: |
| 2013 |  |  | 10,000 | 10,000 |
| Jan. 3 | Bank <br> Interest Income Receivable <br> (The interest income receivable) |  |  |  |

6.4. «Alfa» Company has a year end of 31st December 2012. Which of the following transactions and events should give rise to accrued expense in «Alfa» Company's financial statements? Explain your answer.
a) «Alfa» Company receives rent income in advance. Rent for the first quarter of 2013 is due on 31st December 2012.
b) «Alfa» Company pays loan interest of $\$ 10,000$ for the month of December 2012 on 3rd January 2013.

Solution: b) «Alfa» Company pays loan interest of \$10,000 for the month of December 2012 on 3rd January 2013.
!!! Accrued expense is expense which has been incurred but not yet paid.

Expense must be recorded in the accounting period in which it is incurred. Therefore, accrued expense must be recognized in the accounting period in which it occurs rather than in the following period in which it will be paid.
«Alfa» Company will recognize interest expense of $\$ 10,000$ in the financial statements of 2012 even though it was paid in the next accounting period as it relates to the current period. Following accounting entry will need to be recorded to account for the interest expense accrued:

| Date | Particular | L.F | Amount | Amount |
| :---: | :--- | :---: | :---: | :---: |
| 2012 |  |  |  |  |
| Dec. 31 | Interest Expense <br> Interest Payable <br> (The interest expense accrued) | 10,000 | 10,000 |  |

On the date of payment of interest (i.e. 3rd January of the next year) following accounting entry will need to be recorded in the subsequent year:

| Date | Particular | L.F | Amount | Amount |
| :---: | :--- | :---: | :---: | :---: |
| 2013 |  |  | 10,000 | 10,000 |
| Jan. 3 | Interest Payable <br> Cash <br> (The interest Payable) |  |  |  |

6.5. «Alfa» Company has a year end of 31st December 2012. Which of the following transactions and events should recognize a liability of \$10,000 in «Alfa» Company's financial statements? Explain your answer.
a) «Alfa» Company pays loan interest of $\$ 10,000$ for the month of December 2012 on 3rd January 2013.
b) «Alfa» Company receives rent income in advance. Rent for the first quarter of 2013 is due on 31st December 2012.

Solution: b) «Alfa» Company receives rent income in advance. Rent for the first quarter of 2013 is due on 31st December 2012.
!!! Prepaid income is revenue received in advance but which is not yet earned. Income must be recorded in the accounting period in which it is earned. Therefore, prepaid income must not be shown as income in the accounting period in which it is received but instead it must be presented as such in the subsequent accounting periods in which the services or obligations in respect of the prepaid income have been performed.
«Alfa» Company will recognize a liability of \$10,000 in the financial statements of 2012 in respect of the prepaid income to acknowledge its obligation to make the office space available to the tenant in the following year. Following accounting entry will be recorded in the books of «Alfa» Company in 2012:

| Date | Particular | L.F | Amount | Amount |
| :---: | :--- | :---: | :---: | :---: |
| 2012 |  |  | 10,000 | 10,000 |
| Dec. 31 | Cash <br> Prepaid Rent Income (Liability) <br> (Acknowledge obligation) |  |  |  |

The prepaid income will be recognized as income in the next accounting period to which the rental income relates. The following accounting entry will be recorded in 2013:

| Date | Particular | L.F | Amount | Amount |
| :---: | :--- | :---: | :---: | :---: |
| 2013 |  |  |  |  |
| Mar. 31 | Prepaid Rent Income (Liability). <br> Rent Income (Income Statement) <br> (The Rent Income) | 10,000 | 10,000 |  |

6.6. «Alfa» Company has a year end of 31st December 2012. Which of the following transactions and events should lead to recognition of prepaid expense in «Alfa» Company's financial statements? Explain your answer.
a) «Alfa» Company receives rent income in advance. Rent for the first quarter of 2013 is due on 31st December 2012.
b) «Alfa» Company pays advance rent to its landowner of $\$ 10,000$ on 31st December 2012 in respect of office rent for the following year.

Solution: b) «Alfa» Company pays advance rental of \$10,000 to its landowner on 31st December 2012 in respect of office rent for the following year.


#### Abstract

!!! Prepaid expense is expense paid in advance but which has not yet been incurred. Expense must be recorded in the accounting period in which it is incurred. Therefore, prepaid expense must not be shown as expense in the accounting period in which it is paid but instead it must be presented as such in the subsequent accounting periods in which the services in respect of the prepaid expense have been performed.


«Alfa» Company will recognize an asset of $\$ 10,000$ in the financial statements of 2012 in respect of the prepaid expense to recognize its right to use office space in the following year. The following accounting entry will be recorded in the books of «Alfa» Company in 2012:

| Date | Particular | L.F | Amount | Amount |
| :---: | :--- | :---: | :---: | :---: |
| 2012 |  |  | 10,000 | 10,000 |
| Dec. 31 | Prepaid Rent <br> Cash <br> (Prepaid Expense) |  |  |  |

The prepaid expense will be recognized as expense in the next accounting period to which the rental expense relates. The following accounting entry will be recorded in 2013:

| Date | Particular | L.F | Amount | Amount |
| :---: | :--- | :---: | :---: | :---: |
| 2013 |  |  |  | 10,000 |
| $\ldots$ | Rent Expense (Income Statement) <br> Prepaid Rent <br> (The Rent Expense) | 10,000 |  |  |

6.7. Match each object (1-3) with two of its components (a-c).

| Term | Explanation |
| :---: | :--- |
| 1. Scatter-graph method | a. When using this method, the highest point and the <br> lowest point are used to create the cost formula. The <br> high point is defined as the point with the highest <br> activity and the low point is defined as the point with <br> the lowest activity. |


| Term | Explanation |
| :--- | :--- |
| 2. High-low method | b. This method involves estimating the fixed and <br> variable elements of a mixed cost visually on a graph. |
| 3. Method of least <br> squares | c. This method requires the use of 30 or more past <br> data observations for both the activity level (in units) <br> and the total costs. |

6.4. Illustration of the methods for separating mixed costs.

## Example of high-low method:

Let us assume that «Alfa» Company incurred the following costs during the past six months:

Total costs of «Alfa» Company over the past six months

| Month | Vales Production | Total Cost |
| :--- | :---: | :---: |
| July | 10,000 | $\$ 44,000$ |
| August | 15,000 | $\$ 60,000$ |
| September | 23,000 | $\$ 85,000$ |
| October | 21,000 | $\$ 75,000$ |
| November | 19,000 | $\$ 70,000$ |
| December | 28,000 | $\$ 98,000$ |

The lowest level of production was in July and the highest level of production was in December. The difference between the number of units produced and the difference between the total cost at the highest and lowest levels of production are shown below:

|  | Production | Total Cost |
| :--- | :---: | :---: |
| Highest Level | 28,000 units | $\$ 98,000$ |
| Lowest Level | 10,000 units | $\$ 44,000$ |
| Difference | $\mathbf{1 8 , 0 0 0}$ units | $\mathbf{\$ 5 4 , 0 0 0}$ |

As the total fixed cost does not change with changes in the production volume, the difference in the total costs represents the change in the total variable costs. So, if we divide the difference in the total costs by the difference in the production levels, we will have an estimate of the variable cost per unit:

$$
\text { Variable Cost per Unit }=\$ 54,000 \div 18,000 \text { units }=\$ 3 .
$$

The variable cost per unit is $\$ 3$. The fixed cost will be the same at both the highest and lowest levels of production because fixed costs don't change. In order to estimate the fixed costs, we have to subtract the estimated total variable cost from the total cost:

```
Total Cost = Variable Cost per Unit x Units of Production + Fixed Cost.
```

Highest level:
$\$ 98,000=\$ 3 \times 28,000+$ Fixed Cost,
Fixed Cost $=\$ 14,000$.

Lowest level:
$\$ 44,000=\$ 3 \times 10,000+$ Fixed Cost,
Fixed Cost $=\$ 14,000$.

The fixed costs equal $\$ 14,000$. Knowing the fixed costs and the variable cost per unit we can estimate the total costs for the planned production level by using the formula below:

$$
T=F+V \times N,
$$

where $\boldsymbol{T}$ is the total cost;
$\boldsymbol{F}$ is the fixed cost;
$V$ is the variable cost per unit;
$N$ is the number of units to be produced.
Using the formula presented above and the fixed cost and variable cost per unit, we obtain the following formula for our example:

$$
T=\$ 14,000+\$ 3 \times N .
$$

## Example of scatter-graph method:

Let us again use the example of «Alfa» Company and review their activities for the past six months. The first step is to plot the points on a graph. Then draw a line that most closely represents a straight line composed of all the data points. The graph using data points is given below.

Scatter Graph Method


Fig. 6.1. Scatter graph of the results of «Alfa» Company activities for the six months

The point where this line intersects the vertical axis is the fixed costs, or $\$ 14,000$ in our case. The angle (slope) of the line can be calculated to give a fairly accurate estimate of the variable cost per unit. We can see from the graph that production of 20,000 valves will cost Friends Company $\$ 75,000$ and production of 25,000 valves will cost $\$ 90,000$. Knowing this information we can calculate the variable cost per unit:

$$
\frac{\mathrm{Y} 2-\mathrm{Y} 1}{\mathrm{X} 2-\mathrm{X} 1}=\frac{\$ 90,000-\$ 75,000}{25,000-20,000}=\frac{\$ 15,000}{5,000}=\$ 3 .
$$

When the two variables become known, we can use them in the cost formula:

$$
\boldsymbol{Y}=\boldsymbol{F}+\boldsymbol{V} \times X,
$$

where $F$ is the fixed cost;
$V$ is the variable cost per unit;
X is the production level.
So, the cost formula looks like this:

$$
\boldsymbol{Y}=\$ 14,000+\$ 3 \times \boldsymbol{X} .
$$

Using this formula we can calculate the total costs of activity in the range of 10,000 to 28,000 valves per month and then separate them into fixed and variable components. For example, assume that production of 24,000 valves is planned for the next period. Using the formula we can determine that the total costs would be:

$$
\boldsymbol{Y}=\$ 14,000+\$ 3 \times 24,000=\$ 86,000 .
$$

$\$ 14,000$ is fixed and $\$ 72,000$ is variable, for a total of $\$ 86,000$ $(\$ 14,000+\$ 72,000)$.
6.4. Determine the level of sales necessary to cover all expenses of the base of the equation technique in CVP analysis.

We have just seen how to calculate the volume of minimum sales in units and dollars to break-even (i.e., have zero profits). What if we want to know how many valves have to be sold to earn a $\$ 30,000$ profit? What about a $\$ 40,000$ profit?

The answer can be found by using the same equation we used before:

$$
\text { Sales }=\text { Variable Costs }+ \text { Fixed Costs }+ \text { Profits } .
$$

Note that:

$$
\begin{gathered}
\text { Sales }=\text { Sales Price per Unit } \times \text { Unit Sales, } \\
\text { Variable Costs }=\text { Variable Cost per Unit } \times \text { Unit Sales. }
\end{gathered}
$$

If we replace Sales and Variable Costs in the equation, we will get the following result:
Selling Price per Unit $\times$ Unit Sales $=$ Variable Costs per Unit $\times$ Unit Sales + + Fixed Costs + Profits.

When we further rearrange the equation, we will obtain the following:

$$
\text { Unit Sales }=\quad \frac{\text { Fixed Costs }+ \text { Profits }}{- \text { Variable Costs per Unit }}
$$

Using this formula, we can calculate how many units should be sold to generate $\$ 30,000$ in profits for «Alfa» Company:

$$
\text { Unit Sales }=\frac{\$ 10,000+\$ 30,000}{\$ 5-\$ 3}=20,000 \text { units. }
$$

The same formula can be used when the target profit is $\$ 40,000$ :

$$
\text { Unit Sales }=\frac{\$ 10,000+\$ 40,000}{\$ 5-\$ 3}=25,000 \text { units. }
$$

The 20,000 and 25,000 units can be converted to dollars as follows: $\$ 100,000(\$ 5 \times 20,000$ units) and $\$ 125,000(\$ 5 \times 25,000$ units), respectively.

We can check our answers for the desired $\$ 30,000$ and $\$ 40,000$ profits by using the same formula we applied before:

| Selling Price per Unit $\times$ Unit Sales |
| :---: |
| - |
| Variable Costs per Unit $\times$ Unit Sales |
| - |
| Fixed Costs |
| $=$ |
| Profits |

For the 20,000 units sold, the profits will be calculated as follows:
Profits $=\$ 5 \times 20,000-\$ 3 \times 20,000-\$ 10,000=\$ 30,000$.
And for the 25,000 units sold, the profits can be determined as shown below:

Profits $=25,000 \times \$ 5-25,000 \times \$ 3-10,000=\$ 40,000$.
In both cases, we arrived at the desired level of profits and this proves that our calculations were correct.

Now when we know that we've got to sell 20,000 units (or generate $\$ 100,000$ in sales) to earn the $\$ 30,000$ profits and 25,000 units (or $\$ 125,000$ ) to make $\$ 40,000$ of profits, «Alfa» Company can assess (a) if it is possible considering the market situation; (b) what level of sales is more realistic in the company's situation; (c) what amount of resources the company needs; and (d) if «Alfa» Company needs to hire more employees to generate a desired level of profits.
6.5. Determine the level of sales necessary to cover all expenses of the base of the contribution margin technique in CVP analysis.

Another method used in CVP analysis is contribution margin technique.

Let's start with the definition of contribution margin.

Contribution margin may be calculated in total or per unit. The calculation of a contribution margin in total is as follows:
Contribution = Sales - Variable Costs.

The calculation of a contribution margin per unit is similar to the contribution calculation in total, except that all amounts are divided by the number of units:
$\underset{\text { Per Unit }}{\text { Contribution }}=\frac{\text { Sales - Variable Costs }}{\text { Unit Sales }}=\underset{\text { per Unit }}{\text { Selling Price }}-\underset{\text { per Unit }}{\text { Variable Costs. }}$.
For example, let's assume the following data are available for «Alfa» Company:

| Sales (15,000 units x \$5) | $\$ 75,000$ |
| :--- | ---: |
| Variable costs (15,000 units x \$3) | $\$ 45,000$ |
| Fixed costs | $\$ 10,000$ |
| Number of units sold | 15,000 |
| Sales price per unit | $\$ 5$ |
| Variable cost per unit | $\$ 3$ |

Contribution margin is calculated by using the earlier formula: Contribution $=$ Sales - Variable Costs $=\$ 75,000-\$ 45,000=\$ 30,000$.

Contribution is $\$ 30,000$, which is the amount remaining after variable costs to contribute toward (cover) fixed costs and profits.

The contribution margin per unit can be determined as shown below:

$$
\text { Contribution per Unit }=\frac{\$ 75,000-\$ 45,000}{15,000}=\$ 5-\$ 3=\$ 2 .
$$

This $\$ 2$ per valve contributes toward (covers) fixed costs and profits.

## Contribution margin ratio in CVP analysis

!!! Contribution margin ratio is the contribution margin divided by the sales amount. It is the percent of sales dollars available to cover fixed costs. Once fixed costs are covered, the next dollar of sales results in a company's profits.

Contribution margin ratio is expressed as a percent.
Contribution Margin Ratio $=\frac{\text { Sales }- \text { Variable Costs }}{\text { Sales }} \times \mathbf{1 0 0 \%}$.
Based on the figures from the example of Friends Company, the contribution margin ratio will comprise:
\$75,000-\$45,000
Contribution Margin Ratio $=\quad \$ 75,000 \quad \times 100 \%=40 \%$.
The $40 \%$ calculated above means that fixed costs and profits represent $40 \%$ of total sales (because the contribution margin is fixed costs plus profits, or sales less variable costs).

## Contribution margin technique in CVP analysis and break-even point

Now that we know what contribution margin and contribution margin ratio are we can use them in CVP analysis to calculate the break-even point for our «Alfa» Company example. Recall that break-even is a situation when profits equal zero. This means that contribution in this case equals fixed costs only:

Contribution $=$ Fixed Costs + Profits $=$ Fixed Costs $+0=$ Fixed Costs.
To calculate the break-even point in units, we can use the following formula:

$$
\text { Break-even Sales in Units }=\frac{\text { Fixed Costs }}{\text { Contribution per Unit }} .
$$

Recall that contribution contributes toward (covers) fixed costs. Based on this, the equation above can also be read as «How many units do we need to sell to cover all fixed costs and have zero profit?».

To calculate the break-even point in dollars, we will use a similar formula, but will now apply the contribution margin ratio:

$$
\text { Break-even Sales in Dollars }=\frac{\text { Fixed Costs }}{\text { Contribution Margin Ratio }} .
$$

The equation above can also be read as «How much sales, in dollars, do we need to generate to cover all fixed costs and have a zero profit?»

Using these break-even formulas, the break-even sales for Friends Company can be calculated as follows:

$$
\text { Break-even Sales in Units }=\frac{\$ 10,000}{\$ 2}=5,000 \text { units. }
$$

If the company sells 5,000 units, it has neither loss nor profit. We can check this calculation by determining the profit when 5,000 units are sold:

Profits $=$ Sales - Variable Costs - Fixed Costs $=5,000 \times \$ 5-$ $-5,000 \times \$ 3-\$ 10,000=0$.

The company will make a loss if it sells fewer than 5,000 units and will generate a profit if the sales exceed 5,000 units.

The amount of break-even sales in dollars can be determined as shown below:

$$
\text { Break-even Sales in Dollars }=\frac{\$ 10,000}{40 \%}=\$ 25,000 .
$$

The break-even sales in dollars can also be determined by multiplying the 5,000 units for break-even by the selling price per unit: $5,000 \times \$ 5=\$ 25,000$. As you can see, the result is the same (i.e., $\$ 25,000$ ).

## QUESTIONS FOR SELF-ASSESSMENT

1. What is the accrued income?
2. What is the accrued expense?
3. What is the prepaid income?
4. What is the prepaid expense?
5. Can a fully depreciated asset be revalued?
6. What is the difference between financial accounting and management accounting?
7. What is the difference between accounts payable and accrued expenses payable?
8. Where is a contingent liability recorded?
9. What is interest expense?
10. Are liabilities always a bad thing?
11. What is a deferred credit?
12. What are accrued expenses and when are they recorded?
13. What is the difference between a cost and an expense?
14. What order of inventory classification reflects the manufacturing process?
6.5. A company produces towels. The following data show the company's activities during the last six months:

| Month | Total Production (Units) | Total Cost (\$) |
| :--- | :---: | :---: |
| January | 4,000 | 55,500 |
| February | 6,000 | 84,000 |
| March | 9,000 | 98,000 |
| April | 8,500 | 93,000 |
| May | 9,500 | 105,000 |
| June | 7,300 | 88,000 |

The company uses the high-low method to estimate the variable cost per unit and the fixed cost component of mixed costs.

Which of these cost formulae presented below is correct for the company (i.e. $T$ - Total cost, $N$ - Number of units to be produced)?
a) $\mathrm{T}=19,500+9 \times \mathrm{N}$;
b) $\mathrm{T}=9+19,500 \times \mathrm{N}$;
c) $\mathrm{T}=9 \times \mathrm{N}$;
d) $\mathrm{T}=49,500+9 \times \mathrm{N}$.
6.6. Determine what the profit of the company in 2013 is, if the company sells three (3) types of products.

The following data are available:

|  | Product A | Product B | Product C |
| :--- | :---: | :---: | :---: |
| Share in physical volume sold, \% | $60 \%$ | $30 \%$ | $10 \%$ |
| Contribution margin ratio | 0.5 | 0.4 | 0.2 |
| Fixed costs total, \$ | $\$ 12,000$ |  |  |

In 2013 the company sold its products for a total of $\$ 65,000$.
a) $\$ 28,600$;
b) $\$ 20,500$;
c) $\$ 16,600$;
d) $\$ 12,050$.

## Unit 7

SYSTEM OF FINANCIAL RATIOS

## TOPICS FOR DISCUSSION

1. Common-size analysis:
a. Vertical common-size analysis.
b. Horizontal common-size analysis.
2. Financial ratio analysis:
a. Activity ratios.
b. Liquidity ratios.
c. Solvency ratios.
d. Profitability ratios.

## TASKS

7.1. Choose the correct option (True or False).

1. Liquidity ratios measure the degree of protection of long-term suppliers of funds.
a. True;
b. False.
2. The ideal way to compare income statement figures, such as sales, to balance sheet figures, such as receivables, is to use a measure of the average for the balance sheet figures.
a. True;
b. False.
3. Absolute figures usually have more meaning than ratio comparisons.
a. True;
b. False.
4. In order to determine the meaning of a ratio, some kind of comparison, such as an industry average or trend analysis, is helpful.
a. True;
b. False.
5. Different accounting methods can cause some ratios to differ substantially.
a. True;
b. False.
6. A service firm will usually have a low amount of inventory, consisting primarily of supplies.
a. True;
b. False.
7. Typically, the largest expense to a manufacturing firm is cost of goods sold.
a. True;
b. False.
8. The descriptive information in annual reports is not useful in statement analysis; only the financial statements themselves are of value.
a. True;
b. False.
9. Based on the terms of the credit and the purpose, the objectives of financial statement analysis by creditors will vary.
a. True;
b. False.
10. Financial statement analysis is a judgmental process.
a. True;
b. False.
11. Common-size analysis involves expressing comparisons in percentages.
a. True;
b. False.
12. When performing year-to-year change analysis, a meaningful percent change cannot be computed when one number is positive and the other number is negative.
a. True;
b. False.

### 7.2. Choose the correct option ( $a, b, c, d$ or $e$ ).

1. Statements in which all items are expressed only in relative terms (percentage of a base) are termed:
a) Vertical Statements;
b) Horizontal Statements;
c) Funds Statements;
d) Common-Size Statements;
e) none of the answers is correct.
2. Which of the following can offer a type of comparison in financial statement analysis?
a) past ratios and figures;
b) industry averages;
c) statistics of competitors;
d) all of the answers are correct;
e) none of the answers is correct.
3. Which of the following would not be a user of financial statements?
a) management;
b) bankers;
c) employee unions;
d) investment analysts;
e) all of the above are users.
4. Suppose you are comparing two firms in the steel industry. One firm is large and the other is small. Which type of numbers would be most meaningful for statement analysis?
a) Absolute numbers would be most meaningful for both the large and small firm;
b) Absolute numbers would be most meaningful in the large firm; relative numbers would be most meaningful in the small firm;
c) Relative numbers would be most meaningful for the large firm; absolute numbers would be most meaningful for the small firm;
d) Relative numbers would be most meaningful for both the large and small firm, especially for interfirm comparisons;
e) It is not meaningful to compare a large firm with a small firm.
5. Liquidity ratios can be used:
a) to measure the degree of protection of long-term suppliers of funds;
b) to measure borrowing capacity;
c) to measure the earning ability of a firm;
d) to measure the firm's ability to meet its current obligations;
e) to measure the worth of the firm.
7.3. Based on the vertical common-size statement:
a) prepare a vertical common-size analysis of this statement for each year, using sales as the base;
b) comment briefly on the changes between the two years, based on the vertical common-size statement.

Comparative income statements for 2013 and 2012 follow.

|  | $\underline{2013}$ | $\underline{2012}$ |
| :--- | :---: | :---: |
| Sales | $\$ 9,434,000$ | $\$ 7,862,000$ |
| Cost of Sales | $\underline{7,075,400}$ | $\underline{5,660,640}$ |
| Gross Profit | $\$ 2,358,600$ | $\$ 2,201,360$ |
| Operating Expenses | $\underline{1,367,690}$ | $\underline{1,365,060}$ |
| Operating Income | $\underline{\$ 90,910}$ | $\$ 836,300$ |
| Interest Expense | $\$ 833,410$ | $\underline{126,000}$ |
| Earnings Before Tax | $\underline{\$ 400,000}$ | $\underline{310,300}$ |
| Income Taxes | $\underline{\$ 433,410}$ | $\underline{\$ 393,100}$ |
| Net Income |  |  |

## Solution:

a)

|  | 2013 | 2012 |
| :---: | :---: | :---: |
| Sales | 100.0\% | 100.0\% |
| Cost of Sales* | 75.0 | 72.0 |
| Gross Profit | 25.0 | 28.0 |
| Operating Expenses | 14.5 | 17.4 |
| Operating Income | 10.5 | 10.6 |
| Interest Expense | 1.7 | 1.6 |
| Earnings Before Tax | 8.8 | 9.0 |
| Income Taxes | 4.2 | -4.0 |
| Net Income | 4.6\% | 5.0\% |

Cost of Sales*:
2013

$$
\text { Cost of Sales }=\frac{\$ 7,075,400}{\$ 9,434,000} \times 100 \%=75.0 \% .
$$

$$
\text { Cost of Sales }=\frac{\$ 5,660,640}{\$ 7,862,000} \times 100 \%=72.0 \%
$$

b) Cost of sales as a percentage of sales has risen substantially. This increase is nearly offset by a decline in operating expense. Interest expense and taxes have both risen slightly in relation to sales.
7.4. Using 2010 as the base year, perform a horizontal, common-size analysis. Comment on the results of the horizontal common-size analysis.
«XYZ» Company, a manufacturer of infants’ blocks, presented the following data in its last annual report (this trend analysis begins with the year of formation, 2010).

|  | 2013 | 2012 | 2011 | 2010 |
| :--- | :---: | :---: | :---: | :---: |
| Sales | $\$ 61,000$ | $\$ 41,000$ | $\$ 25,000$ | $\$ 13,000$ |
| Cost of Sales | $\$ 41,300$ | $\$ 28,175$ | $\$ 17,201$ | $\$ 9,000$ |
| Net Income | $\$ 9,919$ | $\$ 6,412$ | $\$ 3,850$ | $\$ 2,000$ |
| Cases of Blocks Shipped | 33,126 | 22,681 | 13,900 | 7,400 |

## Solution:

|  | 2013 | 2012 | 2011 | 2010 |
| :--- | :---: | :---: | :---: | :---: |
| Sales | 469.2 | 315.4 | 192.3 | $100.0 \%$ |
| Cost of Sales* | 458.9 | 313.1 | 191.1 | $100.0 \%$ |
| Net Income | 496.0 | 320.6 | 192.5 | $100.0 \%$ |
| Cases of Blocks Shipped | 447.6 | 306.5 | 187.8 | $100.0 \%$ |

Cost of Sales*:
2011
Cost of Sales $=\frac{\$ 17,201}{\$ 9,000} \times 100 \%=191.1 \%$.

2012

$$
\text { Cost of Sales }=\frac{\$ 28,175}{\$ 9,000} \times 100 \%=313.1 \%
$$

$$
\text { Cost of Sales }=\quad \frac{\$ 41,300}{\$ 9,000} \times 100 \%=458.9 \%
$$

Comment on the results: Sales have risen rapidly. The cost of sales has risen more slowly than sales. Also, there has been a much faster rise in net income than in sales. The cases of blocks shipped have increased more slowly than sales dollars, indicating a rise in selling price or an improved mix of sales towards more expensive blocks.
7.5. Match the statements to the type of a firm and explain your choice.

The following are simplified, vertical, common-size balance sheets for three firms - a retailer, a service firm, and a manufacturer.

| Assets | Firm $\boldsymbol{A}$ | Firm $\boldsymbol{B}$ | Firm $\boldsymbol{C}$ |
| :--- | :---: | :---: | :---: |
|  |  |  |  |
| Cash | $6.1 \%$ | $8.1 \%$ | $8.7 \%$ |
| Receivables | 23.2 | 4.4 | 12.1 |
| Inventory | 31.1 | 1.5 | 24.5 |
| Total Current Assets | 60.4 | 14.0 | 45.3 |
| Plant, Property, and Equipment (net) | 30.3 | 83.4 | 51.8 |
| Investments | 9.3 | 2.6 | 2.9 |
| Total Assets | $\mathbf{1 0 0 . 0 \%}$ | $\mathbf{1 0 0 . 0} \%$ | $\mathbf{1 0 0 . 0} \%$ |
|  |  |  |  |
| Liabilities and Stockholders' Equity |  |  |  |
|  |  |  |  |
| Total Current Liabilities | $29.3 \%$ | $11.5 \%$ | $21.6 \%$ |
|  |  |  |  |
| Long-Term Debt | 18.1 | 24.8 | 37.8 |
|  |  |  |  |
| Total Stockholders' Equity | 52.6 | 63.7 | 40.6 |
| Total Liabilities and Stockholders' Equity | $\mathbf{1 0 0 . 0 \%}$ | $\mathbf{1 0 0 . 0 \%}$ | $\mathbf{1 0 0 . 0 \%}$ |

## Explain:

a) Firm $\boldsymbol{A}$ is the retailing firm, due to the heavy investment in receivables and inventory with limited fixed assets. The store facilities may be rented.
b) Firm $\boldsymbol{B}$ is the service firm, due to the limited inventory.
c) Firm $\boldsymbol{C}$ is the manufacturing firm, due to the combined heavy investment in inventory and fixed assets. Also, it uses substantial longterm debt.
7.5. During the year ended December 31, 2013, «ABC» Corporation sold goods costing \$324,000. Its average stock of goods during the same period was $\$ 23,432$. Calculate the company's inventory turnover ratio.

Inventory turnover ratio is calculated using the following formula:

$$
\text { Inventory Turnover Ratio }=\quad \frac{\text { Cost of Goods Sold }}{\text { Average Inventory }} .
$$

> !!! Inventory turnover ratio is used to measure the inventory management efficiency of a business. In general, a higher value of inventory turnover indicates better performance and lower value means inefficiency in controlling inventory levels. A lower inventory turnover ratio may be an indication of over-stocking which may pose risk of obsolescence and increased inventory holding costs.

## Solution:

$$
\text { Inventory Turnover Ratio }=\frac{\$ 324,000}{\$ 23,432}=13.83 .
$$

7.6. Net credit sales of Company A during the year ended June 30, 2013 were \$644,790. Its accounts receivable as of July 1, 2012 and June 30, 2013 were $\$ 43,300$ and $\$ 51,730$ respectively. Calculate the receivables turnover ratio.

Accounts receivable turnover is calculated using the following formula:

Receivables Turnover Ratio =
Net Credit Sales
Average Accounts Receivable
!!! Accounts receivable turnover measures the efficiency of a business in collecting its credit sales. However, a normal level of receivables turnover is different for different industries. Also, very high values of this ratio may not be favourable, if achieved by extremely strict credit terms since such policies may repel potential buyers.

## Solution:

$$
\begin{gathered}
\text { Average Accounts Receivable }=\frac{\$ 43,300+\$ 51,730}{2}=\$ 47,515 . \\
\text { Receivables Turnover Ratio }=\frac{\$ 644,790}{\$ 47,515}=13.57 .
\end{gathered}
$$

7.7. Calculate quick ratio (acid test ratio) of a company which has assets and liabilities in the year ended December 31, 2013:

| Cash | $\$ 34,390$ |
| :--- | :---: |
| Marketable Securities | 12,000 |
| Accounts Receivable | 56,200 |
| Prepaid Insurance | 9,000 |
| Total Current Assets | 111,590 |
| Total Current Liabilities | 73,780 |

Quick ratio is calculated using the following formula:

$$
\text { Quick Ratio }=\frac{\text { Cash }+ \text { Marketable Securities }+ \text { Receivables }}{\text { Current Liabilities }} .
$$

!!! Quick ratio or Acid Test ratio is the ratio of the sum of cash and cash equivalents, marketable securities and accounts receivable to the current liabilities of a business.

It measures the ability of a company to pay its debts by using its cash and near cash current assets (i.e. accounts receivable and marketable securities).

## Solution:

$$
\text { Quick ratio }=\frac{\$(34,390+12,000+56,200)}{\$ 73,780}=1.39
$$

Or:

$$
\text { Quick ratio }=\frac{\$(111,590-9,000)}{\$ 73,780}=1.39 .
$$

7.8. Calculate debt-to-equity ratio of a business which has total liabilities of \$3,423,000 and shareholders' equity of \$5,493,000.

Debt-to-equity ratio is calculated using the following formula:

$$
\text { Debt-to-Equity Ratio }=\quad \frac{\text { Total Liabilities }}{\text { Shareholders' Equity }} \cdot
$$

!!! Debt-to-equity ratio is the ratio of total liabilities of a business to its shareholders' equity. It is a leverage ratio and it measures the degree to which the assets of the business are financed by the debts and the shareholders' equity of a business.

## Solution:

$$
\text { Debt-to-Equity Ratio }=\frac{\$ 3,423,000}{\$ 5,493,000}=\mathbf{0 . 6 2} .
$$

7.9. Calculate total asset turnover, fixed asset turnover and working capital turnover ratios of a company which had:

- total assets of \$100;
- total fixed assets of \$60;
- net working capital of $\$ 20$.

During the financial year (FY) 2013 it generated sales of $\$ 200$ with cost of Goods Sold (COGS) of $\$ 160$ and its total assets as of 30 December 2013 were $\$ 120$. During the year it charged depreciation of $\$ 10$ and there were no fixed asset additions during the year. Current assets and current liabilities were $\$ 50$ and $\$ 30$ as of the year end.

Following formulae are used to calculate each of the asset turnover ratios:

$$
\begin{aligned}
\text { Total Asset Turnover Ratio } & =\frac{\text { Net Sales }}{\text { Average Total Assets }} ; \\
\text { Fixed Asset Turnover Ratio } & =\frac{\text { Net Sales }}{\text { Average Fixed Assets }} ; \\
\text { Working Capital Turnover Ratio } & =\frac{\text { Net Sales }}{\text { Average Net Working Capital }} .
\end{aligned}
$$

## Solution:

Average total assets $=(100+120) / 2=\$ 110$, sales are $\$ 200$ so total asset turnover is $\$ 200 / \$ 110=1.82$. If the industry average total asset turnover ratio is 1.2 , we can conclude that the company has used its asset more effectively in generating revenue.

Opening fixed assets were $\$ 60$, closing fixed assets are $\$ 60$ $\$ 10=\$ 50$. Average fixed assets are hence $(\$ 60+\$ 50) / 2=\$ 55$. This gives us fixed asset turnover of $\$ 200 / \$ 55=3.63$

Opening working capital is $\$ 20$, closing working capital is $\$ 20$ ( $\$ 50-\$ 30$ ); this gives us average working capital of $\$ 20$ and resulting working capital turnover ratio of $\$ 200 / \$ 20=10$.

Asset turnover ratio should be looked at together with the company's financing mix and its profit margin for a better analysis as discussed in DuPont analysis.

## QUESTIONS FOR SELF-ASSESSMENT

1. What is solvency?
2. What is liquidity?
3. What is turnover?
4. What is the debt-to-total assets ratio?
5. What is the fixed asset turnover ratio?
6. What is financial audit and financial analysis?
7. How do you do a financial analysis if financial statements are not provided?
8. What is the scope of financial economics and financial analysis?
9. How does financial condition analysis differ from financial statement analysis?
10. What is the free cash flow ratio?
11. What is the working capital ratio?
12. What is a liquidity ratio?
13. What is the acid test ratio?
14. What are common-size financial statements?
15. What is the difference between vertical analysis and horizontal analysis?
16. What is the quick ratio?

## TASKS FOR SELF-ASSESSMENT

7.10. Coverage shows a company's ability to meet its financial obligations. The most common coverage ratios are debt and debt to equity ratios. Which of the following is not a component of debt and debt to equity ratios?
a) Shareholder's Equity;
b) Earnings before Interest and Taxes (EBIT);
c) Total Liabilities;
d) Total Assets.
7.11. Calculate the inventory turnover ratio of the business from the given information, if:

- cost of goods sold of a retail business during a year was \$84,270;
- its inventory at the beginning and at the end of the year was $\$ 9,865$ and $\$ 11,650$ respectively.
7.12. Calculate quick ratio from the following information:

| Cash | $\$ 21,720$ |
| :--- | :---: |
| Treasury Bills | 18,500 |
| Accounts Receivable | 15,930 |
| Prepaid Rent | 6,500 |
| Inventory | 17,240 |
| Total Current Assets | 79,890 |
| Total Current Liabilities | 52,960 |

7.13. Calculate a debt-to-equity ratio of a business which has total liabilities of $\$ 4,562,000$ and shareholders' equity of $\$ 9,568,000$.
7.14. Net credit sales of Company $Z$ during the year ended June 30, 2013 were $\$ 744,790$. Its accounts receivable on July 1, 2012 and June 30, 2013 were $\$ 63,500$ and $\$ 72,860$ respectively. Calculate the receivables turnover ratio.

## APPENDICES

Balance Sheet: Retail/Wholesale - Sole Proprietor
!!! This balance sheet form is designed for a sole proprietorship that is in the retail or wholesale business.


[^1]Learn more about fnancial statements at www.AccountingCoach.com.

## Balance Sheet: Services - Corporation

## !!! Presenting a proper balance sheet for a corporation engaged in providing services is easy with our specialized form.

Balance Sheet: Services
(Regular corporation, no preferred stock)

Company Name: $\qquad$
Balance Sheet*
As of midnigit on this date:
'The balonce shoot is also known as the Santement of Firancial Posison


## Balance Sheet: Retail/Wholesale - Corporation

!!! Presenting a proper balance sheet for a company is a corporation involved in retail or wholesale operations.

| Balance Sheet: Retail/Wholesale <br> (Pegular corporation, no preferred stock) |  | (4) AccouningCoach com - Form S2 |  |
| :---: | :---: | :---: | :---: |
| Company Name: |  |  |  |
| Balance Sheet* |  |  |  |
| As of michight on this date: $\qquad$ <br> The balanceshed is also known as the Statement of Francial Poalion |  |  |  |
|  |  |  |  |
| ASSETS | LIABILITIES \& STOCKHOLDERS' EQUITY |  |  |
| Current assets | Current liabilities |  |  |
| Cash \& cash equivalents | \$ | Notes payable | \$ |
| Temporary investments |  | Accounts payable |  |
| Accounts receivable - net |  | Wages payable |  |
| Inventory |  | Accrued expenses |  |
| Prepaid expenses |  | Customer deposits |  |
| Total current assets |  | Total current liabilities |  |
| Investments (long-term) | Long-term liabilities |  |  |
|  | Notes payable |  |  |
| Property, plant \& equipment |  | Bonds payable |  |
| Land |  | Total long-term liabilifes |  |
| Land improvements |  |  |  |
| Buildings | TOTAL LIABILITIES |  |  |
| Equipment |  |  |  |
| Furniture \& fixtures |  |  |  |
| Subtotal |  |  |  |
| Less: Accum depreciation | ( ) |  |  |
| Prop, plant \& equip - net |  |  |  |
| STOCKHOLDERS' EQUITY |  |  |  |
| Intangible assets | Common stock |  |  |
| Goodwill | Retained earnings |  |  |
| Trade names |  | Less : Treasury stock | $)$ |
| Total intangible assets | TOTALSTOCKHOLDERS' EQUITY |  |  |
| Other assets |  |  |  |
| TOTAL ASSETS | \$ | TOTAL LIAB \& STKHRS' EQUITY | \$ |

[^2]Learn more about financial statements at www.AccourtingCoach.com.

## Balance Sheet: Manufacturer - Corporation

!!! This form will assure that a manufacturing corporation is presenting a professional balance sheet, including a footnote for listing the amounts of materials, work-in-process and finished goods.

Balance Sheet: Retail/Wholesale © AccountngCoach.com - Form S2
(Regular corporaton, no preferred stock)
$\qquad$

## Balance Sheet*

As ol midnight on this date:
The batanceshed is al 90 Known as the Statement of Friancial Podition

ASSETS
Current assets

| Cash \& cash equivalents | $\$$ |
| :--- | :--- |
| Temporary investments |  |
| Accounts receivable - net |  |
| Inventory |  |
| Prepaid expenses |  |
| Total current assets |  |
| Investments (long-term) |  |




LIABILITIES \& STOCKHOLDERS' EQUITY
Current liabilities

| Notes payable | $\$$ |
| :--- | :--- |
| Accounts payable |  |
| Wages payable |  |
| Accrued expenses |  |
| Customer deposits |  |
| Total current liabilities |  |

Long-term liabilities
Notes payable $\qquad$
Bonds payable
Total long-term liabilities

TOTAL LIABILITIES

STOCKHOLDERS' EQUITY

| Common stock |  |
| :--- | :--- |
| Retained earnings |  |
| Less : Treasury stock | $($ |
| TOTAL STOCKHOLDERS' EQUITY |  |

TOTAL LIAB \& STKHRS' EQUITY \$

[^3]
## Income Statement: Retail/Wholesale - Sole Proprietor, Multiple-Step

## !!! This form is designed for a sole proprietorship involved in retail or wholesale operations.

| Income Statement: Retail/Wholesale <br> © AccountingCoach.com - Form S 11 <br> (Sole proprietor, multiple-step format) |  |  |  |
| :---: | :---: | :---: | :---: |
| Company Name: |  |  |  |
| Income Statement* |  |  |  |
| For the __** Ending | *** |  |  |
| 'The income staternent is also known as the Statemert of Oporations, Profit and Loss Smatement. and P8LL "Irsert the time pariod covereat. Morth, Two Monts, Six Monts, Year, 52 woeles, 13 wedks, eto. "'Irsert the ending date of the tme period corereat Uune 30, 2013; Decomber 31, 2012;00. |  |  |  |
| Net sales | \$ | S |  |
| Cost of goods sold (from below) |  | COGS |  |
| Gross profit |  | GP | (S - COGS) |
| Operating expenses |  |  |  |
| SG\&A expenses excluding depreciation (Form S16) |  |  |  |
| SG\&A depreciation and amortization (Form S16) |  |  |  |
| Other operating exp: |  |  |  |
| Total operating expenses |  | OE |  |
| Operating income |  | Ol | (GP - OE) |
| Nonoperating or other income or (expense) |  |  |  |
| Nonoperating income/gain: |  |  |  |
| Interest expense | ( ) |  |  |
| Other nonoperating exp: $\quad \square \quad$ ( |  |  |  |
| Loss: __ ( ) |  |  |  |
| Total nonoperating or other income or (expense) $\quad \mathrm{NOI}$ |  |  |  |
| Net income | \$ | NI | $(\mathrm{Ol}+\mathrm{NOI})$ |
| Cost of goods sold |  |  |  |
| Inventory at beginning of period | \$ |  |  |
| Add: Purchases of merchandise during period |  |  |  |
| Less: Purchase returns, discounts, allowances |  |  |  |
| Add: Freight-in |  |  |  |
| Cost of goods a vailable |  |  |  |
| Less: Inventory at end of period |  |  |  |
| Cost of goods sold | \$ | COGS |  |

See Filled-In Form S11 for an illustration.
Learn more about financial statements at www.AccountingCoach.com.

## Income Statement: Retail/ Wholesale - Corporation, Single-Step

## !!! This form is designed for a corporation involved in retail or wholesale operations.



| Net sales | \$ | S |  |
| :---: | :---: | :---: | :---: |
| Cost of goods sold (from below) |  | COGS |  |
| Gross profit |  | GP | (S-COGS) |
| Operating expenses |  |  |  |
| SG\&A expenses excluding depreciation (Form S16) |  |  |  |
| SG\&A depreciation and amortization (Form S16) |  |  |  |
| Other operating exp: |  |  |  |
| Total operating expenses |  | OE |  |
| Operating income |  | Ol | (GP-OE) |
| Nonoperating or other income or (expense) |  |  |  |
| Nonoperating income/gain: |  |  |  |
| Interest expense | $(\mathrm{l}$ |  |  |
| Other nonoperating exp: | $1 \quad 1$ |  |  |
| Loss: | $1$ $1$ |  |  |
| Total nonoperating or other income or (expense) |  | NOI |  |
| Net income | \$ | NI | $(\mathrm{Ol}+\mathrm{NOI})$ |


| Cost of goods sold |
| :--- |
| Inventory at beginning of period |
| Add: Purchases of merchandise during period |
| Less: Purchase returns, discounts, allowances |
| Add: Freight-in |
| Cost of goods available |
| Less: Inventory at end of period |
| Cost of goods sold |

See Filled-In Form S11 for an illustration.
Learn more about financial statements at www.AccountingCoach.com.

## Income Statement: Services - Corporation

!!! If your corporation provides services, this form will allow you to quickly and easily prepare a professional-looking income statement.


## Income Statement: Manufacturer - Corporation, Single-Step

## !!! This form has the captions and descriptions for a single-step income statement.

Income Statement: Manufacturer © AccountingCoach.com - Form S8
(Regular corporaton, single-step format, no preferred stock)
Company Name:
Income Statement*
For the
** Ending
***
'The income statement is also kevown as the Statomert of Oporations. Proft and Loss Sestement, and P\&L.
"Hesert the time period covered: Month, Two Mortse, Six Monts, Year, 52 woele, 13 woeks, ote
${ }^{* \prime I}$ Insert the ending date of the time period corerod: لune 30, 2013; December 31, 2012; 0to.
Revenues and gains

Sales
Other revenues/gains:
Total revenues and gains
Expenses and losses
Cost of goods sold (from below)
SG\&A expenses excluding depreciation (Form S16)
SG\&A depreciation and amortization (Form S16)
Other operating exp: $\qquad$
Interest expense
Other nonoperating exp: $\qquad$
Loss:
Total expenses and losses
Income before income taxes
Income tax expense
Net income

Cost of goods sold
Finished goods in ventory at beginning of period
Add: Cost of goods manufactured (Form S6)
Cost of finished goods available for sale
Less: Finished goods inventory at end of period
Cost of goods sold
EXP

|  | NIB4T | (R-EXP) |
| :--- | :---: | :--- | :--- |
|  | IT |  |
|  | NIAT | (NIB4T - IT) |

$\$$
$\qquad$
$\xrightarrow{R}$

COGS

$\qquad$
$\qquad$
$\qquad$
$\square$
$\$$
$\qquad$
$\qquad$
$\$$
COGS

See Filled-In Form S8 for an illustration.
Learn more about financial statements at www.AccountingCoach.com.

## Statement of Cash Flows: Sole Proprietor, Indirect Method

> !!! If your company is a sole proprietorship, you can use this form to prepare the important statement of cash flows.

Statement of Cash Flows
(Sole proprietor, indirect method)


Cash flows from operating activities

| Net income | $\$$ |  |
| :---: | :---: | :---: |
| Add back: Depreciation \& amortization |  |  |
| Add back: Loss on disposal of fixed assets |  |  |
| Deduct: Gain on disposal of fixed assets |  |  |
| Add lor decreases in currert assels: |  |  |
| Accounts receivable |  |  |
| Inventory |  |  |
| Other current assets (other than cash) |  |  |
| Deduct for increases in current assels: |  |  |
| Accounts receivable |  |  |
| Inventory |  |  |
| Other current assets (other than cash) |  |  |
| Add lar increases in curent lisbilijes: |  |  |
| Accounts payable |  |  |
| Other current liabilities |  |  |
| Deduat for decreases in current liablises: |  |  |
| Accounts payable |  |  |
| Other current liabilities |  |  |
| Cash flows from operating activities |  | OA |
| Cash flows from investing activities |  |  |
| Add: Proceeds from sale of long-term assets |  |  |
| Deduct: Capital expenditures |  |  |
| Deduct: Purchase of other long-term assets |  |  |
| Cash flows from investing activities |  | IA |
| Cash flows from financing activities |  |  |
| Deduct: Owner's draws |  |  |
| Add: Investment by owner |  |  |
| Add: Issuance of long-term debt |  |  |
| Deduct: Repayment of long-term debt |  |  |
| Cash flows from financing activities |  | FA |
| Change in cash and cash equivalents | \$ | Net $(O A+I A+F A)$ |
| Cash and cash equivalents at beginning of period |  |  |
| Cash and cash equivalents at end of period | \$ |  |

## Statement of Cash Flows: Corporation, Indirect Method

## !!! If your company is a corporation, you can use this form to prepare the important statement of cash flows.



See Filled-In Form S17 for an illustration.
Learn more about the statement of cash flows at www.AccountingCoach.com.

## Statement of Owner's Equity: Sole Proprietor

!!! With this form you will learn the major causes of the change in the owner's equity section of a sole proprietorship's balance sheet.

Statement of Owner's Equity

Name of Company:

## Statement of Changes in Owner's Equity

For the ime period covering these dates:

| Balance of owner's equity at end of previous period | \$ | BOE |
| :---: | :---: | :---: |
| Add: Investments by owner | \$ | INV |
| Deduct: Withdrawals by owner | \$ | WD |
| Subtotal | \$ | ST (BOE + INV - WD) |
| Add: Net income (subtract net loss) during current period | \$ | NI |
| Balance of owner's equity at end of current period | \$ | EOE (ST + NI) |

Other comprehensive income, beginning balance
Add/Deduct: Other comprehensive income/loss for period
Other comprehensive income, ending balance
$\$$
$\$$
$\$ \mathrm{OCl}$

Notes for Other Comprehensive Income (OCI):
Examples of other comprehensive income (or loss) include foreign currency translation adjustments, certain pension liability adjustments, unrealized holding gains, and the income tax expense which pertains to the comprehensive income items.

## Simple Invoice Template

!!! It is a very straight-forward printable invoice. It has room for dates, descriptions, and prices.

Your Company Name
Address, City, State/Province, Post/Zip Code
Tel: (111) 1234-5678, Fax: (111) 1234-1234,
Email: yourname@yoursite.com,
Website: www.yoursite.com],
Tax Registration Number: 242314254235
Your Logo
Here
Here

INVOICE

| Bill To | Deliver To |  |
| :--- | :--- | :--- |
| [Customer Name] | [Customer Name] | Invoice No\#: [1001] |
| [Address] | Date: 6 марта 2014 |  |
| [City, State, Post Code] | [City, State, Post Code] | Your Ref \#: |
| [Country] | Our Ref \#: |  |
| Attention: [Contact Person] | [Country] |  |
| Attention: [Contact Person] | Terms: [COD] |  |


| Description | Quantity | Unit Price | Amount |
| :--- | :--- | :--- | :--- |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

Terms \& Conditions:

- Please make all cheques payable to: [Your Company Name]


## Business Invoice Template

!!! It is a printable invoice for a business. It has room for detailed purchase information such as prices and quantity.


## Bank Reconciliation

> !!! This form lists the usual adjustments needed for the bank balance and the usual adjustments for the general ledger balance. This userfriendly form also indicates the journal entries required by the reconciliation.

Bank Reconciliation for Account $\qquad$ (c) AccouningCoach.com-Form G4

| Ending Balance on Bank Statement Dated |  |
| :--- | :--- |
| Adjustments to Bank Statement Balance: |  |
| Add: Deposits in transit (See Note 1 below) |  |
| Subtract: Outstanding checks listed on Form G5. (Also see Note 2 below.) | $+\infty$ |
| Adjusted Balance on Bank Statement |  |


| Balance per Accounting Records or Check Register (as of date of bank statement): <br> Adjustments to be Entered in Accounting Records: |  | \$ |
| :---: | :---: | :---: |
|  |  |  |
| Add : Additions found on bank statement that are not in accounting records: |  |  |
| Interest from bank | (debit Cash, credit Interest Revenue) | +\$ |
| Other: | (debit Cash, credit | +\$ |
| Other: | (debit Cash, credit | + \$ |
| Subtract: Deductions found on bank statement that are not in accounting records: |  |  |
| Bank service charges | (debit Miscellaneous Expense, credit Cash) | - \$ |
| NSF checks | (debit Accounts Receivable, credit Cash) | - \$ |
| NSF check bank lees | (debit _ , credit Cash) | - \$ |
| Other: | (debit _ , credit Cash) | - \$ |
| Other: | (debit _ credit Cash) | - \$ |
| Adjusted Balance per Ac | ing Records (as of date of bank statement) | \$ |

The bank statement is reconciled when the amounts shown as $\mathbf{A}$ and $\mathbf{B}$ are identical.

Note 1. Deposits in transit are amounts received by the company as of the date of the bank statement but not yet appearing on the bark statement.

Note 2. Checks written as of the date of the bank stalement but not yet appearing on any bank statement (previous or current). Use Form G5 to list the check numbers and amounts of the outstanding checks.

See Filled-In Form G4 for an illustration.
Learn more about bank reconciliation at www.AccountingCoach.com.

## Check Request Form

!!! Obtaining the necessary information from people who need a check issued just got easier. This check request form provides space for the account numbers to be charged, the date that the check is needed, approvals, and instructions for special handling.

## Check Request Form © AccountingCoach.com - Form ©6



Date approved $\qquad$

Please attach supporting documents.
Special Handling: $\qquad$
Other: $\qquad$

Check Request Form
© AccountingCoach.com - Form G6


## Please attach supporting documents.

Special Handling: $\qquad$
Other: $\qquad$

## Money Counter's Tally

!!! Accounting for the ending cash is standardized with this form. Reviewing the ending cash is simpler, faster, and more accurate when the amounts are organized.


| Money Counter's Tally | Q Accuntingcascheam. Fom 612 |
| :---: | :---: |
| Day \& Date: |  |
| mag Max | naw |
| Comments: |  |
| Currency |  |
| \$100's \$ _ . 00 |  |
| \$50's \$ _ . . 00 |  |
| \$20's \$ _ . . 00 |  |
| \$10's \$ _ . 00 |  |
| \$5's \$ . 00 |  |
| \$2's \$ _ . 00 |  |
| \$1's \$ _ . 00 |  |
| Total currency | \$ . . 00 |
| Coins |  |
| Pennies \$ |  |
| Nickels \$ |  |
| Dimes \$ _ .-- |  |
| Quarters \$ |  |
| Hall-dolars \$ |  |
| Other \$ |  |
| Total coins | \$ |
| Checks \$ |  |
| \$ . |  |
| Todil fom lis: \$ |  |
| Total checks | \$ |
| Credit Card | \$ |
| Coupons | \$ |
| Other: | \$ |
| Total incuuding slarting cash | \$ |
| Less: starting cash | . \$ |
| Net receipts | \$ |

## Depreciation: Straight-line Method

## !!! To calculate the method of depreciation is most commonly used on an organization's financial statements.

## Depreciation: Straight-line Method ©AccountingCoach - Form D1 <br> Depreciation is the allocation of the cost of a plant or fixed asset (equipment, building, truck, etc.) to expense over the useful life of the asset. Straight-line depreciation means the same amount of depreciation expense for each full year. <br> Straight-line depreciation expense for a full year = (Cost of the asset minus the expected salvage value) divided by the years of useful life

Calculation of straight-line depreciation expense for one full year:

| Cost of asset | \$ | C |
| :---: | :---: | :---: |
| minus Expected salvage value | \$ | ES |
| = Depreciable cost | \$ | DC (C-ES) |
| Years of useful life |  | YRS |
| Depreciation expense for full year | \$ | DE (DC/YRS) |

or
Alternative calculation of straight-line depreciation expense for one full year:

| Depreciable cost (from above) | $\$$ | DC |  |  |
| :--- | :--- | :--- | :--- | :--- |
|  |  | $\%$ | SR | (from below) |
| times Asset's straight-line depreciation rate |  | DE | (DC $\times$ SR) |  |



Notes:
The depreciation recorded in the general ledger and reported on the fin ancial statements is usually different from the amounts reported on the company's tax retum.

DE Plant assets purchased in the middle of the accounting year will have one-half of a year's depreciation expense in the year it is acquired.

SR Calculation of straight-line depreciation rate per year:
Constant 100\%
divided by Years of asset's useful life YRS

Straight-line depreciation rate per year $\qquad$ SR ( $100 \%$ / YRS)

An as set with a 25 year life will have a straight-line depreciation rate of $4 \%$ per year ( $100 \% / 25$ yrs.). An asset with a 5 year life will have a straight-line depreciation rate of $20 \%$ per year ( $100 \% / 5 \mathrm{yrs}$.).

See Filled-In Form D1 for an illustration.
Learn more about depreciation at www.AccountingCoach.com

## Depreciation: Sum of the Years' Digits Method

> !!! This form provides the lines in which you enter amounts for calculating the sum of the years' digits method of depreciation.

## Depreciation: Sum of the Years' Digits Method

Depreciation is the allocation of the cost of a plant or fixed asset (equipment, building, truck, etc.) to expense over the useful life of the asset. The sum of the years' digits (SYD) method is an accelerated method of depreciation. This means that the amount of depreciation expense in the early years of the asset's life is greater than the amount using the straight-line method. The depreciation expense in later years will be less than the original straight-line amount. The total depreciation expense over the life of the asset will be the same under any depreciation method: cost minus the estimated salvage value.

Sum of the years' digits (SYD) depreciation expense for one full year of the asset's life = Asset's depreciable cost times (asset's years of life remaining at the beginning of the year divided by the sum of the years' digits)

Calculation of the sum of the years' digits (SYD) depreciation expense for one full year:

| Cost of asset | \$ | C |
| :---: | :---: | :---: |
| minus Estimated salvage value | \$ | ES |
| = Depreciable cost | \$ | DC (C-ES) |
| times SYD fraction |  | F (see below) |
| = Depreciation expense for full year | \$ | DE ( $\mathrm{DC} \times \mathrm{F}$ ) |

Journal entry for a full year's depreciation:
debit Depreciation expense
credit Accumulated depreciation $\quad$ DE
$\qquad$ DE

## Notes:

F The SYD fraction has as its denominator the total of the digits from 1 through the number of years of the asset's life. For example, if an asset has a 5 -year life, the denominator will be 15 $(1+2+3+4+5)$. If an asset's life is 10 years, the denominator will be $55(1+2+3+4+$ $5+6+7+8+9+10$ ).

The numerator in the SYD fraction will be the number of years of life remaining as of the beginning of the year. For example, an asset with a 5 -year life will have a numerator of 5 at the time it is placed into service. At the beginning of the second year of the asset's life, its numerator will be 4 , and so on.

This means that the depreciation expense in the first year of a 5 -year asset's life will be $5 / 15$ of the asset's depreciable cost. The second year will be $4 / 15$; the third year will be $3 / 15$; the fourth year will be $2 / 15$; and the fifth year will be $1 / 15$.

The SYD fraction for an asset with a 10 -year life will be $10 / 55$ in the first year of the asset's life, $9 / 55$ in its second year, $8 / 55$ in its third, and so on.

See Filled-In Form D3 for an illustration.
Learn more about depreciation at www.AccourkingCoach.com.

## Inventory: Estimating Lost or Missing Amounts

!!! This form, along with the form Inventory: Estimating Using the Gross Profit Method, helps you determine the approximate cost of inventory that is missing. This is done by comparing two amounts: 1) the estimated cost of inventory that is expected to be on hand, compared to 2 ) the cost of the actual inventory that is on hand.

Inventory: Estimating Lost or Missing Amounts
(-A) AcountingCoach.com - Form G10
(by using the gross profit method)

The amount of missing inventory can be estimated by using the gross profit method or the retail method. The missing amounts of inventory could be due to shoplifting, theft by employees, fire loss, or other causes.

The gross profit method uses an assumed gross profit percentage or gross margin ratio (gross profit dollars divided by the sales dollars).

The difference between the estimated inventory under the gross profit method and the actual inventory on hand is the estimated cost of missing in ventory.

| Calculation of the estimated cost of missing inventory. |  |  |  |
| :--- | :--- | :--- | :--- |
| Estimated ending inventory at cost (calculated on Form G9) | $\$$ | EST |  |
| Minus: Actual ending inventory at cost from physical inventory | $\$$ | ACT |  |
| Estimated cost of missing inventory | MISS (EST - ACT) |  |  |

## Standard Costing: Direct Materials Price Variance

!!! This form helps you to compare two amounts: 1) the actual cost that a company paid to suppliers for materials, compared to 2 ) the company's standard cost of those materials. The difference is the favorable or unfavorable purchase price variance for the materials received.

## Direct Materials Price Variance

© AccountingCoach.com - Form G15
(Computed at time of purchase for stanclard cosing.)

This form assumes that the unit of measure is a pound (lb.). However, it could be gallons, liters, board feet, etc. This form assumes that the price variance of the materials is recorded at the time of purchase (not at the time of use).

Example: A company uses one raw material with a standard cost of \$ $\qquad$ per pound. The purchase price variance is recorded at the time that the material is placed into its materials inventory at the standard cost. The company ordered and received $\qquad$ pounds of material at an actual cost of \$ $\qquad$ per lb.


See Filled-In Form G15 for an illustration.
Learn more about standard costing at www.AccountingCoach.com.

## Standard Costing: Direct Materials Usage Variance

!!! This form gives you the layout to calculate the usage variance associated with materials. The important first step guides you to calculate the quantity of materials that should have been used for the good output. The remaining steps are clearly presented so that you can easily see the materials usage variance.

Direct Materials Usage Variance
(For Standard Costing)

This form assumes that the unit of measure is a pound (lb.). However, it could be gallons, liters, board feet, elc.

Example: A company has one raw material with a standard cost of $\$$ $\qquad$ per pound. The standard for manufacturing each unit of output/product is $\qquad$ lbs of material. The material has a standard cost of
$\qquad$ per lb . During the current period $\qquad$ units of output were manufactured. The actual lbs. of materials used to produce the $\qquad$ units of output amounled to $\qquad$ bs.


See Filled-In Form G16 for an illustration.
Learn more about standard costing at www.AccountingCoach.com.

## Working Capital to Total Assets

!!! Calculating the working capital to total assets ratio is easy when you enter your company amounts on the lines next to our preprinted descriptions.

Working capital turnover ratio $=$ Total net sales or revenues for the year divided by the average working capital during the year

## Calculation of working capital turnover ratio includes:

Total revenues from the income statement for the year ended $\qquad$ .

Average working capital is computed from the balance sheets during the year.


## Notes:

The working capital ratio is also known as net working capital to net sales .
S Total net sales or revenues are taken directly from the income statement for the period noted above.

AWC Since the average amount of working capital during the year is needed, you will need to first compute the amount of working capital on each balance sheet. Working capital is the amount of current assets minus the amounts of current liabilities (Form R1).

Next, you need to compute the average amount of working capital during the year. If the amount of working capital is approximately the same each period, a simple average of the amount at the beginning of the year and the amount at the end of the year will be sufficient. If the amount of working capital varies significantly from month to month, a 13 -month average should be used. See Form G3.

## Contribution Margin Calculations

## !!! This form makes certain that you subtract all of a company's variable costs from its revenues when calculating the contribution margin.

## Contribution Margin Calculations

Total contribution margin in $\$=$ Total sales or revenues minus all variable costs and expenses

```
Calculation of the total contribution margin in dollars* for the following
    time period:
```

$\qquad$

``` (month, year, etc.)
Total sales or revenues S
    minus all variable costs and expenses
$
                                S
V
    = Total contribution margin in dollars $ CM$ (S - V)
```

Contribution margin ratio $=$ Total contribution margin in dollars divided by total sales or revenues


Notes:

* A contribution margin per unit can be calculated by dividing the total amounts by the number of units. (If there are various types of units, the result is an average amount per unit.)

V Total variable costs and expenses include:

Variable cost of goods sold
Variable selling expenses
Variable administrative expenses
Total variable costs and expenses
$\qquad$

## High-low Method

!!! This form allows you to quickly determine how much of a cost is fixed and how much will vary as volume changes. The highlow calculation will be helpful in calculating some of the amounts needed for determining the break-even point and for forecasting changes in profits.

## High-low Method

© AccounfingCoach com - Form B7
The high-low method is a technique for estimating the variable and fixed cost components of mixed costs. The first step is to determine the approximate variable rate per unit of activity (such as units of output, units of input, miles driven, etc.). The second step is to determine the approximate amount of fixed costs during a time period (year, month, week, etc.).

## Calculation of the variable cost rate

If the fixed costs do not change as the levels of activity change, the change in the total costs is assumed to be the change in total variable costs. Therefore, the variable cost rate is the change in the total costs divided by the change in the units of activity.
Change in total costs:
Total costs at the high level of activity
minus Total costs at the low level of activity
= Change in total costs

| $\$$ | HC |
| :--- | :--- | :--- |
| $\$$ | LC |

## Change in total units of activity:

Total units at the high level of activity
HU
minus Total units at the low level of activity $\quad$ LU
$=$ Change in total units of activity $\quad \xlongequal{=}$ (HU-LU)

## Variable cost rate:

Change in total costs
\$ vc
divided by the change in total units of activity
$=$ Variable cost rate


U
$\$$ VR (VC/U)

| Calculation of the total fixed costs |  |  |
| :---: | :---: | :---: |
| Total costs at the high* level of activity | \$ | HC |
| Total units at the high* level of activity |  | HU |
| Variable cost rate | \$ | VR (from above) |
| Total amount of variable costs at high level of activity | \$ | HVC (HU $\times$ VR) |
| Total amount of fixed costs | \$ | F (HC - HVC) |

[^4]
## Cash Flow to Debt Ratio

> !!! This form instructs you how to relate a company's cash flow from operations to the company's liabilities. The resulting ratio indicates a company's ability to pay its obligations.

## Cash Flow to Debt Ratio

Cash flow to debt ratio $=$ Net cash flows from operating activities divided by the average total liabilities during the year

## The calculation of cash flow to debt ratio includes:

Net cash flows from operating activities from the statement of cash flows for the year ended $\qquad$ -.
Average total liabilities computed from the balance sheets during the year.

| Net cash flows from operating activities | \$ |  | OA |  |
| :---: | :---: | :---: | :---: | :---: |
| divided by the average amount of liabilities | \$ |  | AL |  |
| = Cash flow to debt ratio |  | :1 | CFD | ( $\mathrm{OA} / \mathrm{AL}$ ) |

## Notes:

OA Net cash flows from operating activities is also referred to as net cash from operations. It is the total of the items reported in the first section of the statement of cash flows.

AL The total amount of liabilities is reported at the end of the liability section on the balance sheet. Since the average amount of total liabilities during the year is required, you will need to look at the balance sheet amounts throughout the year. If the changes are not significant, you can compute a simple average of the beginning of the year amount and the end of the year amount. If the amount of total assets has changed significantly, Form G3 can be used to compute a 13 -month average.

CFD The cash flow to debt ratio indicates an organization's ability to pay its liabilities from its cash flows from operations.

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## ОБЛІК У ЗАРУБІЖНИХ КРАЇНАХ:

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[^0]:    !!! Balance $\mathbf{c} / \boldsymbol{d}=$ carried down $=$ the closing balance, also known as carry forward.

    Balance $\mathbf{b} / \boldsymbol{d}=$ brought down $=$ the opening balance, also known as brought forward.

[^1]:    See Filled-In Form S3 for an illustration.

[^2]:    See Filled-In Form S2 for an illustration.

[^3]:    See Filled-In Form S2 for an illustration.
    Learn more about financial statements at www.AccountingCoach.com.

[^4]:    Notes:
    VC Variable costs are those costs that change in proportion to a change in activity or volume.
    The total costs on an accrual basis must be aligned with the units of activity. For example, the electricity used between the meter reading dates indicated on the utility bill must be aligned with the machine hours occurring between the meter reading dates.

