



Faculty of Administration and Financial
Sciences / Accounting and Business
Administration Departments

COST ACCOUNTING (I)

Third Stage

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CHAPTER ONE
INTRODUCTION TO COST ACCOUNTING
COST ACCOUNTING

Cost Accounting Definition

Cost Accounting is the process of classifying and recording of all the costs incurred in a business in a way that can be used to improve its management. Cost is an amount (cash or the cash equivalent) that has to be paid or given up in order to achieve an object (assets). Cost includes all costs necessary to get an asset in place and ready for use. For example, the cost of an item in inventory also includes the item's freight-in cost. The cost of land includes all costs to get the land ready for its use.

Objectives of Cost Accounting

1. Determining the cost of the produced item.
2. Determination of the selling price.
3. Cost control and cost reduction.
4. Ascertaining the profit or loss of each activity.
5. Assisting management in decision-making.
6. Providing necessary information for planning.
7. Evaluation of performance effectiveness.

Differences between Financial Accounting and Cost Accounting

Point of Differences	Financial Accounting	Cost Accounting
Purpose	It provides information about the financial performance of an entity.	Ascertainment of cost for the purpose of cost control and decision making.
Primary Users	The users of financial accounting statements are external users such as shareholders, creditors, investors, and etc....	The cost accounting information is usually used by internal users such as management.
Rules	IFRS & GAAP	Do not have to follow IFRS & GAAP
Recording	Estimation in recording of financial transactions is not used. It is based on actual transactions only.	In cost accounting, we book actual transactions and compare it with the estimation. Hence costing is based on the estimation of cost as well as on the recording of actual transactions.
Period	Period of reporting of financial accounting is at the end of financial year.	Reporting under cost accounting is done as per the requirement of management or as-and-when-required basis.

Cost Classifications

The basis of classification and the respective costs associated under each of the basis have been presented below:

1. Cost classification according to NATURE or ELEMENTS

- Materials Cost
- Labor Cost
- Expenses

2. Cost classification according to FUNCTION

- Manufacturing Cost
- Marketing Cost
- Administrative Cost

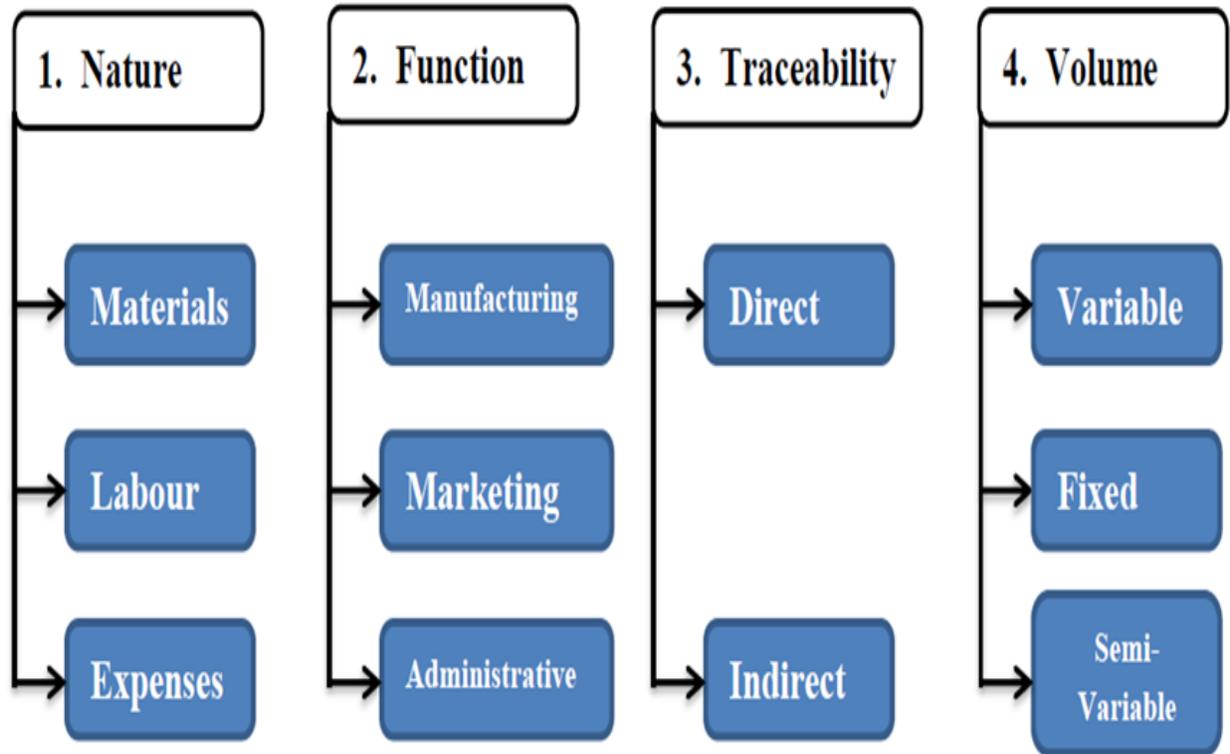
3. Cost classification according to TRACEABILITY

- Direct Cost
- Indirect cost

4. Cost classification according to CHANGE IN VOLUME (*COST BEHAVIOR*)

- Variable Cost
- Fixed Cost
- Semi-Variable (mixed) cost

Classification of Cost



1. Cost classification according to NATURE or ELEMENTS

Materials: Raw materials may be divided into two major classifications: **direct and indirect.**

Direct raw materials are materials that can be directly traced to the finished product. Example; wood in table. **Indirect raw materials** are items that cannot be specifically traced.

Labor: labour cost may be divided into two major classifications:

Direct labor costs are those costs that can be directly associated with a finished product. **Or** that portion of labour cost that can be easily traced to a product. **Indirect labor** costs are those costs that are not directly associated with a finished product's total production cost. For example, wages for security guards at a manufacturing plant do not directly go into the product's cost.

Manufacturing Overhead (expenses): Manufacturing overhead consists of all manufacturing costs other than direct materials and direct labour. These costs cannot be easily and conveniently traced to products. Examples include indirect materials, indirect labour, factory utilities and depreciation of factory buildings and equipment.

Example 1: The costs of manufacturing 160 sofas and selling price per unit are as follow:

Materials \$ 4,800

Labor \$ 2,400

Expenses \$ 1,200

Selling Price per unit \$ 75

Required: Compute:

1. **Total cost.**
2. **Cost per unit.**
3. **Cost of each element per unit of sofa.**
4. **Profit or Loss per sofa.**
5. **Total profit or loss.**

Example 2: The following information is cost of manufacturing 1500 units of tablets:

Materials \$ 180,000

Labor \$ 90,000

Expenses \$ 75,000

Selling prices per tablet are as follow:

- 1 – 500 unit at \$245
- 501 – 1000 unit at \$250
- The rest units at \$280

Required: Compute:

1. Total cost
2. Cost per unit
3. Total profit or loss
4. Profit or loss per unit.

Example 3: Costs of producing 300 units of dining tables are:

Materials \$ 28,000 Labor \$ 13,000 Expenses \$ 7,000

Selling prices per dining table \$170

Required: Compute:

1. Total cost.
2. Cost per table.
3. Profit or loss per unit.
4. Total Profit or loss.

Example 4: (classwork) Total cost of manufacturing 5000 pens is \$ 650,000.

Materials cost per unit is \$ 60

Labor cost per unit is \$ 50

Expenses cost per unit \$???

Required: Calculate total cost & cost per unit.

2. Cost classification according to FUNCTION

Manufacturing Costs: All the costs relating to production of goods or services, whether direct or indirect, are included in the production cost Manufacturing (Production) costs can be classified into direct and indirect production costs.

Marketing and Selling Costs: These costs include the costs of making sales, taking customer orders, and delivering the product to customers.

Administrative Costs: These costs include all executive, organizational, and clerical costs that are not classified as production or marketing costs.

Example 1: The following data is cost of producing 10,000 bottles of milk:

Manufacturing costs \$4,000

Administrative Costs \$7,200

Marketing Costs \$1,300

Total revenues from sales are:

\$9000 for 6000 bottles

\$5600 for the other 4000 bottles

Required: Compute:

1. Total Cost and Cost per bottle. 2. Profit or loss for total sale and per bottle.

Example 2: The following cost data is extracted from a factory of manufacturing carpets:

Factory rent	\$ 6,500
Raw materials	\$ 21,000
Factory maintenance	\$ 7,500
Factory workers' wages	\$ 12,000
Salary of factory's supervisor	\$ 5,000
Office rent	\$ 3,500
Managers Salary	\$ 9,000
Office depreciation	\$ 2,500
Advertising costs	\$ 2,000
Selling and delivery costs	\$ 1,000

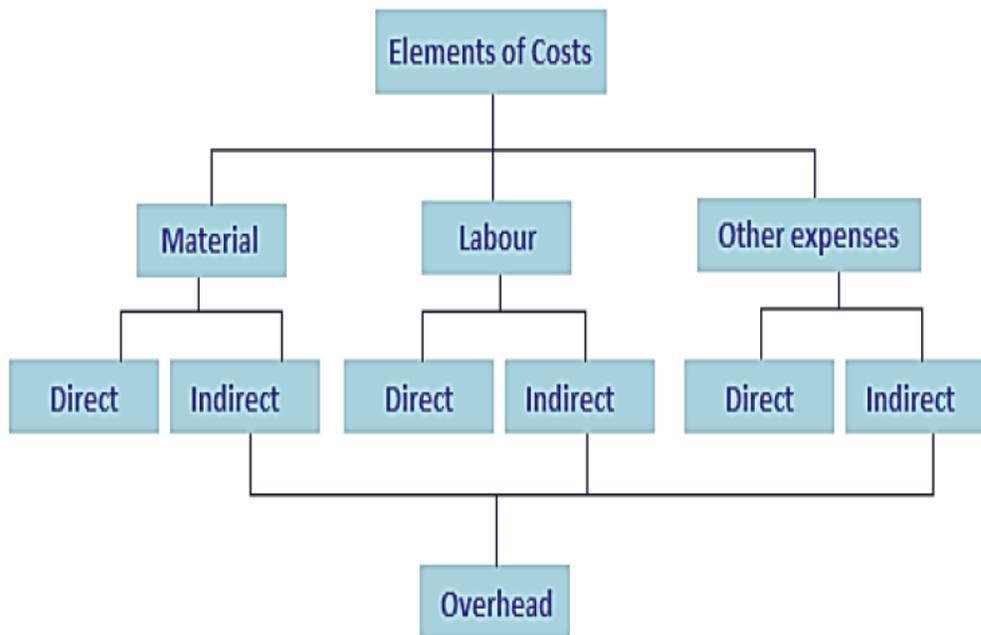
Required:

- 1. Find total of each elements of cost according to the function classification of cost.**
- 2. Compute cost per unit and total cost for 280 carpets.**
- 3. Calculate profit or loss per unit and for total sale, if selling price is \$299 per unit. Assume that total units of sales equals to total units of production.**

3. Cost classification according to TRACEABILITY

Direct costs: are costs that can be easily and conveniently **traced** to a unit of product or other cost objective. Examples: direct material and direct labor.

Indirect costs: are costs cannot be easily and conveniently traced to a unit of product or other cost object. Example: manufacturing overhead.



Costs	Direct	Indirect
Materials	YES	YES
Labour	YES	YES
Expenses	YES	YES
		OVERHEAD

Example 1: The following cost data is for producing 2,000 sets of knives:

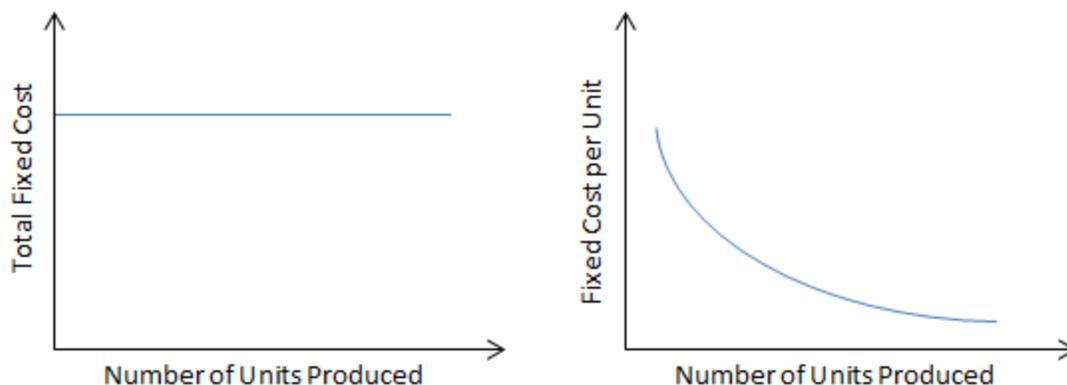
Direct materials	\$ 12,000
Indirect materials	\$ 3,000
Direct labor	\$ 10,000
Indirect labor	\$ 6,000
Direct expenses	\$ 5,000
Indirect expenses	\$ 2,000
Administrative Costs	\$ 8,000
Marketing costs	\$ 3,000

Required: Classify cost data according to Traceability classification then calculate total cost and cost per unit.

4. Cost Classification According to CHANGE IN VOLUME (COST BEHAVIOR).

The classification of a cost as variable or fixed depends on how the cost changes in relation to changes in the level of business activity.

Fixed Cost: Costs that remain constant when there are changes in the level of business activity are fixed costs. Depreciation and rent are costs that typically do not change with changes in business activity. However, with fixed costs, the cost per unit does change when there are changes in production.



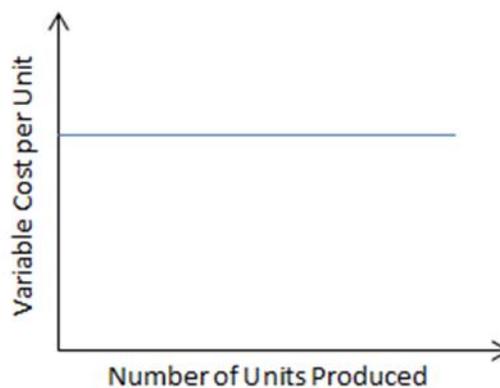
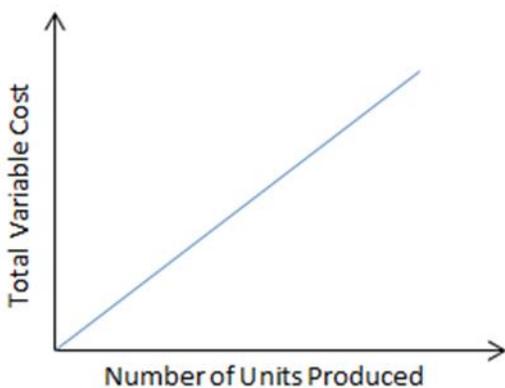
Example 1: Suppose that in the prior month Surge Performance Beverage Company incurred \$20,000 of fixed costs, including \$5,000 of rent, \$6,667 of depreciation, and \$8,333 of other miscellaneous fixed costs. How much fixed cost if the company increases production from 400,000 bottles to 480,000 bottles. And calculate fixed cost per bottle or unit.

Example 2:

Production Units	500	1,000	1,500	2,000
Total Fixed Costs	\$ 6000	6,000	6,000	6,000

Required: Compute Fixed Cost Per Unit.

Variable Cost: Costs that increase or decrease in production to increase or decrease in the level of business activity are **variable costs**. Material and direct labor are generally considered to be variable costs, because in many situations they fluctuate in proportion to changes in production (business activity). However, the variable cost per unit does not change. It remains the same per unit.



Example 1: Suppose that for Surge Performance Beverage Company the cost of bottles, ingredients, water and labor are variable costs and in the prior month when production was 400,000 bottles, costs were \$120,000 for bottles, \$32,000 for ingredients, \$12,000 for water and \$24,000 for labor. How much variable cost should the company plan on for the current month if production is expected to increase by 20 percent. And calculate variable cost per bottle or unit.

Example 2:

Production Units	1,000	2,000	3,000	4,000	5,000
Total Variable Costs	\$ 20,000	40,000	60,000	80,000	100,000

Required: Compute Variable Cost Per Unit.

Behavior of Cost (Changeable with level of activity!!!)		
Cost	In Total	Per Unit
Variable	YES	NO
Fixed	NO	YES

Variable Costs	Direct Material	
	Direct Labor	
	Direct Expense	(Cost of transporting materials)
	Variable Overhead	(Indirect materials _ Electricity)
	Variable Marketing	(Sales and marketing commissions)
Fixed Costs	Fixed Overhead	(Rent and Utilities)
	Fixed Marketing	(Advertisement costs)
	Administrative Cost	(Salary and Office rent)

Note: all direct costs are variable costs, BUT not all variable costs are direct.

Example 3: The following cost information, which in thousand dollars, is to produce 3000 lady hand bags in one month:

Raw materials 9, Direct labor 6, Indirect materials 4, Fixed overhead 7, Variable overhead 5, Fixed marketing costs 6, Variable marketing cost 3, Administrative costs 8.

Required:

1. **Compute total cost and cost per unit.**
2. **When production volume rises to 4,000 bags during the same period, calculate total cost and cost per unit.**
3. **When production volume declines to 2,000 bags during the same period, calculate total cost and cost per unit.**

Example 4: Dukan industrial company produced 1,000 units of external hard drive in a month. Selling price per unit was \$ 75. In order to increase the level of production and sales to 1,500 units per month, the industry decided to reduce selling price to \$ 65.

Data of total costs for 1,000 units is as follow:

Direct labor.....	\$ 8,000
Fixed overhead.....	\$ 9,000
Variable marketing costs.....	\$ 12,000
Direct materials.....	\$ 6,000
Administrative costs.....	\$ 12,000
Variable overhead.....	\$ 10,000
Fixed marketing costs.....	\$ 6,000
Direct expenses.....	\$ 4,000

Requirements:

- 1. On the basis of change-in-volume cost classification, calculate total costs and cost per unit when level of production is:**
 - a. 1,000 units**
 - b. 1,500 units**
- 2. Extract profit or loss per unit and for total sales for both of 1,000 and 1,500 units of production, if the productions were sold completely.**

Example 5: Cost data of producing 400 units of bags follows:

- Marketing costs is \$ 8,400 which %60 represents the variable part of marketing costs.
- Total administrative expenses are \$ 8,640.
- Other indirect expenses are \$ 10,000 which %60 represents the fixed overhead costs.

Other costs are per unit as follows:

Direct expenses \$ 3.4

Direct labor \$ 8

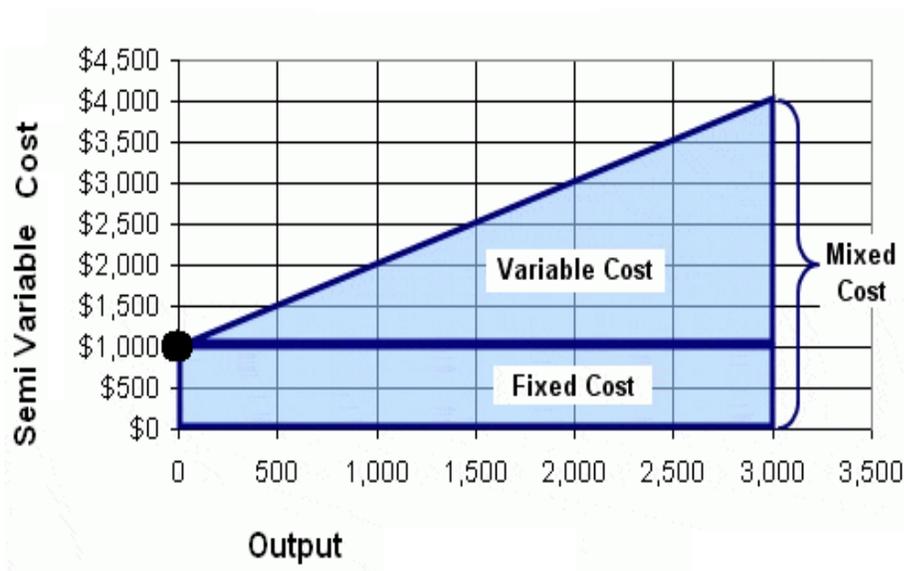
Direct materials \$ 6

Requirements:

On the basis of cost classification according to change in volume, calculate total costs and cost per unit:

- 1. When level of production is 400 units.**
- 2. When level of production rises to 600 units.**

Mixed or Semi Variable Cost: A semi-variable cost is a cost that contains both fixed and variable cost elements. The fixed element of the cost will be incurred repeatedly over time, while the variable element will only be incurred as a function of activity volume. Thus, a base-level cost will be always being incurred, irrespective of volume, as well as an additional cost that is based only on volume.



To segregate semi variable cost into fixed cost and variable cost is necessary because with this, we can add fixed cost proportion in total fixed cost and variable cost proportion in total variable cost. So, with following method, we can carry out this.

1. **High - Low method (This method is widely used in accounting)**
2. **Scatter graph method**
3. **regression analysis (least squares) Method**
4. **Level of production Method**

According to level of activity method, variable cost will be calculated with following method.

Change in Semi Variable Cost

Variable Cost Per Units = -----

Change in Production Volume

As the level of usage of a semi-variable cost item increases, the fixed component of the cost will not change, while the variable component will increase. The formula for this relationship is:

Total Cost = Total Fixed Cost + Total Variable Cost

Total Cost = Total Fixed Cost + (Variable Cost per unit * Number of units of production)

$Y = a + bx$

Example 1: The following data shows maintenance expenses and level of activity of a manufacturing company for the period of 1/1 to 30/6:

Months	1	2	3	4	5	6
<i>Level of activity/ Hr</i>	15,000	12,000	18,000	17,500	20,000	14,000
<i>Maintenance Exp.</i>	50,000	41,000	59,000	57,500	65,000	47,000

Requirements: Separate the maintenance cost into the fixed and variable components using high-low method.

CHAPTER TWO

COST SHEET (COST STATEMENT)

When costing information is set out in the form of a statement, it is called “Cost Sheet”. It is usually adopted when there is only one main product and all costs almost are incurred for that product only. The information incorporated in a cost sheet would depend upon the requirement of management for the purpose of control.

COST SHEET (COST STATEMENT)

Details	Total cost	Cost per unit
Direct materials	xxx	xxx
Direct Labor	xxx	xxx
Direct Expenses	xxx	xxx
Prime cost	Xxx	Xxx
Add Factory overhead	xxx	xxx
Work Cost or Factory cost	Xxx	Xxx
Add Office & Administration overhead	xxx	xxx
Cost of Production	Xxx	Xxx
Add Selling & Distribution overhead	xxx	xxx
Total cost (or) cost of sales	Xxx	Xxx

COST SHEET (COST STATEMENT)

Details	Total cost	Cost per unit
Opening stock of Raw material	xxx	xxx
Add: purchase of Raw material	xxx	xxx
Less: closing stock of Raw material	xxx	xxx
Raw materials consumed	xxx	xxx
Direct Labor	xxx	xxx
Direct Expenses	xxx	xxx
Prime cost	Xxx	Xxx
Add Factory overhead	xxx	xxx
Opening stock of work in progress	xxx	xxx
Less: closing stock of work in progress	xxx	xxx
Work Cost or Factory cost	Xxx	Xxx
Add Office & Administration overhead	xxx	xxx
Cost of Production	Xxx	Xxx
Add: Opening stock of finished goods	xxx	xxx
Less: Closing stock of finished goods	xxx	xxx
Cost of goods sold	Xxx	Xxx
Add Selling & Distribution overhead	xxx	xxx
Total cost (or) cost of sales	Xxx	Xxx
Profit	xxx	xxx
Sales	Xxx	Xxx

** By grouping the above elements of cost, the following divisions of cost are obtained.*

1. Prime cost = Direct Materials + Direct Labor + Direct Expenses

2. Works or Factory Cost = Prime Cost + Works or Factory Overheads

3. Cost of Production = Works Cost + Administration Overheads

4. Total Cost or Cost of Sales = Cost of Production + Selling and Distribution Overheads

** The difference between the cost of sales and selling price represents profit or loss.*

Example 1: Find the Prime Cost, Works or Factory Cost, Cost of production, total Cost and profit from the following:

Direct Materials \$20,000, Direct Labor \$10,000, Factory Expenses \$7,000, Administration Expenses \$5,000, Selling Expenses \$7,000 and Sales \$60,000.

Example 2: Find the Prime Cost, Works or Factory Cost, Cost of production, total Cost and profit from the following:

Factory Expenses \$35,000, Selling Expenses \$35,000, Sales \$300,000, Administration Expenses \$25,000, Direct Materials \$100,000 and Direct Labor \$50,000.

Example 3: From the following particulars of a manufacturing company Prepare cost statement showing:

a) Cost of materials used b) Prime cost c) works cost d) cost of production

e) Percentages of works expenses to wages, percentages of general expenses to works cost.

Stock of material 1-1-2019 \$ 25,000

Stock of finished goods 1-1-2019 \$ 51,000

Purchase of materials \$ 575,000

Production wages \$ 390,000

Works overhead charges \$ 86,000

Office and General charges \$ 72,000

Stock of materials 31-12-2019 \$ 30,000

Stock of finished goods 31-12-2019 \$ 48,000

Sale of finished goods \$ 1,220,000

Example 4: From the following information for the month of January, prepare a cost sheet:

Direct material	\$ 57,000
Direct wages	28,500
Factory rent	2,500
Plant repairs and maintenance	1,000
Plant depreciation	1,250
Factory heating and lighting	400
Factory manager's salary	2,000
Advertisement	1,500
Office salaries	1,600
Office rent	500
Telephone and postage	200
Printing and stationary	100
Legal charges (office)	150
Office manager's salaries	1,500
Salesmen's salaries	2,500
Showroom rent	500
Sales	116,000

Cost Theories

These methods can be applied to determine unit product costs:

1. Total cost theory
2. Direct cost theory
3. Variable cost theory
4. Absorption cost theory

1. Total cost theory

<i>Total cost theory</i>	=	<i>direct costs</i>	+	<i>indirect costs</i>
	=	<i>variable costs</i>	+	<i>fixed costs</i>

Cost sheet according to the total cost theory

<i>Cost sheet for the year ended December 31, 20^{xx}</i>			
Details	Subtotal	Sub total	Total
<i>Beginning raw materials</i>		<i>xxx</i>	
<i><u>cost of purchases:</u></i>			
<i>purchases raw materials</i>	<i>xxx</i>		
<i>- Purchases returns</i>	<i>(xx)</i>		
<i>- Purchases allowance</i>	<i>(xx)</i>		
<i>- Purchases discount</i>	<i>(<u>xx</u>)</i>		
<i>Net purchases</i>	<i>xxx</i>		
<i>+ purchases expenses</i>	<i><u>xxx</u></i>		
<i>Cost of purchases</i>		<i><u>xxx</u></i>	
<i>Raw materials available for use</i>		<i>xxx</i>	
<i>–Ending raw materials</i>		<i>(<u>xxx</u>)</i>	
<i>Raw materials used in to production</i>			<i>xxx</i>
<i>Direct labour</i>			<i>xxx</i>
<i>Direct expenses</i>			<i><u>xxx</u></i>
<i>Prime cost</i>			<i>xxx</i>
<i>+ <u>manufacturing overhead</u></i>			
<i>Indirect materials</i>		<i>xxx</i>	
<i> Indirect labour</i>		<i>xxx</i>	
<i>Insurance, factor</i>		<i>xxx</i>	
<i> Machine rental</i>		<i>xxx</i>	
<i> Utilities, factory</i>		<i>xxx</i>	
<i> Depreciation, factory</i>		<i>xxx</i>	
<i> Property taxes, factory</i>		<i>xxx</i>	
<i>Total manufacturing costs</i>		<i><u>xxx</u></i>	

Manufacturing cost			<u>xxx</u>
+ Beginning work in process			xxx
- Ending work in process			xxx
Cost of goods manufactured			<u>(xxx)</u>
+ Beginning finished goods			xxx
- Ending finished goods			xxx
Cost of goods sold			<u>(xxx)</u>
<u>Marketing costs:</u>			xxx
Advertising costs			
Selling and delivery costs		xxx	
Workers' wages of sale		xxx	
Total marketing costs		<u>xxx</u>	
Cost of Sales			<u>xxx</u>
<u>Administrative cost:</u>			xxx
Administration workers' wages			
Stationary		xxx	
Other administrative cost		xxx	
Total administrative cost		<u>xxx</u>	
Total cost			<u>xxx</u>
			xxx

Note: Purchases expenses such as (purchases commission, freight in, import duties, and insurance on purchases).

Income statement according to total cost theory

<i>Income statement for the year ended December 31, 20^{xx}</i>		
Details	Subtotal	Amount
<i>Total Sales Revenue</i>		xxx
- Sales returns	xx	
- Sales allowance	xx	
- Sales discount	xx	
		<u>(xxx)</u>
<i>Net Sales</i>		xx
- Cost of sales		<u>(xxx)</u>
Gross profit or loss		xxx
-Administrative costs		<u>(xxx)</u>
Net profit or Loss		Xxx

Example 1: Consider the following cost data, which is for one of the manufacturing company's activities:

direct materials at the beginning of the period (16,000), direct materials purchased during the period (50,000), transfer of materials purchased (4000), direct materials at the end of the period (8000), direct labour (45,000), direct factory services (7000), indirect wages (10,000), indirect materials (4000), factory insurance (6000), factory machinery maintenance (3000), lost time in the factory (1000), factory lighting (1000), factory rent (5000), factory equipment depreciation (3000), Factory drivers (2000), goods in operation at the beginning of the period (12000), goods in operation at the end of the period (10,000), finished goods at the beginning of the period (18000), finished goods at the end of the period (16000), commission of sales agents (6000) Showroom rent (10,000), advertising (4000), administration salaries (9000), administration stationery (3000), other administrative expenses (6000), sales revenue (240,000).

Requirement: *Prepare cost sheet and income statement, according to the total cost theory.*

Example 2: Consider the following cost data, which is for one of the manufacturing company's activities:

Direct materials	25000
Indirect materials	5000
Direct labour	20000
Indirect wages	2000
Direct expenses	1000
Indirect expenses	1000
Marketing costs	3000
Administration costs	6000

The company sold and produced (17000) units and the selling price was (5\$) per unit.

Requirement: Prepare cost sheet and income statement, for the year ended Dec. 31, 2018 and according to the total cost theory.

2. Direct cost theory

Cost sheet according to the direct cost theory

<i>Cost sheet for the year ended December 31, 20^{xx}</i>	
Details	Amount
<i>Direct material</i>	Xx
<i>Direct labour</i>	xx
<i>Direct expenses</i>	<u>xx</u>
Prime cost	<u>xx</u>
+ <i>Beginning work in process</i>	xx
- <i>Ending work in process</i>	<u>(xx)</u>
Direct cost of goods manufactured	xx
+ <i>Beginning finished goods</i>	xx
- <i>Ending finished goods</i>	<u>(xx)</u>
Direct cost of goods sold	xx
<u>Marketing costs:-</u>	
<i>Direct marketing costs</i>	<u>xx</u>
Direct cost of Sales	xx

Income statement according to direct cost theory

<i>Income statement for the year ended December 31, 20^{xx}</i>		
Details	Subtotal	total
<i>Sales/ Revenue</i>		xxxx
- <i>Direct cost of sales</i>		<u>(xxx)</u>
Gross profit or loss		xxx
<u>Indirect costs:-</u>		
- <i>Indirect manufacturing costs</i>	xx	
- <i>Indirect marketing costs</i>	xx	
- <i>Administrative costs</i>	<u>xx</u>	
<i>Total indirect cost</i>		<u>(xx)</u>
Net profit or Loss		xxxx

Example 1: The following information provided by a company for the period from 1/6/2018 to 30/9/2018 as follows: direct materials at the beginning of the period (11000), direct materials purchased during the period (29000), direct materials at the end of the period (6000), direct wages (8000), direct factory services (5000), indirect wages (2400), factory machinery maintenance (1600), factory rent (3000), transportation abroad (400), goods in operation at the beginning of the period (8400), goods in operation at the end of the period (5400), finished goods at the beginning of the period (7000), finished goods at the end of the period (6000), sales agents commission (1600), lighting for exhibitions (400), advertising (2000), maintenance of distribution cars (600), administrative costs (10,000).

Requirement: *Prepare cost sheet and income statement, for the four months and according to the direct cost theory. Noting that sales agents 'commission is considered direct marketing expenses, sales revenue (80,000).*

Example 2: Sam manufacturer produced 10,000 units of product X during 2013. The following costs had been recorded (all in \$):

Costs	Direct costs	Indirect costs
Materials consumed	30,000	4,000
Labour	50,000	6,000
Expenses	21,000	9,000
Marketing	5,000	15,000
Administrative	10,000	

Costs of inventories were as follow:

Inventories	01/01/2013	31/12/2013
Work-in-process	90,000	10,000
Finished goods	100,000	60,000

Selling price per unit is \$40.

Requirements: According to *the direct cost theory*, prepare: A cost sheet and income statement for the year ended December 31, 2013.

3. Variable cost theory

Variable cost theory = Direct costs + Indirect variable costs

Cost sheet according to the variable cost theory

<i>Cost sheet for the year ended December 31, 20^{xx}</i>		
Details	Subtotal	Inclusive total
<i>D. materials</i>	<i>xx</i>	
<i>D. labour</i>	<i>xx</i>	
<i>D. expenses</i>	<u><i>xx</i></u>	
Prime cost		<i>xx</i>
<u><i>Manufacturing overhead:/ variable</i></u>		
<i>Indirect Materials</i>	<i>xx</i>	
<i>indirect Labour</i>	<i>xx</i>	
<i>indirect Expenses</i>	<u><i>xx</i></u>	
<i>Total manufacturing overhead/ variable</i>		<u><i>xx</i></u>
Variable manufacturing costs		<i>xx</i>
+ <i>Beginning work in process</i>		<i>xx</i>
- <i>Ending work in process</i>		<u><i>(xx)</i></u>
Variable cost of goods manufactured		<i>xx</i>
+ <i>Beginning finished goods</i>		<i>xx</i>
- <i>Ending finished goods</i>		<u><i>(xx)</i></u>
Variable cost of goods sold		<i>xx</i>
<u><i>Marketing costs:-</i></u>		
<i>Direct marketing costs</i>		<i>xx</i>
<i>Indirect variable marketing costs</i>		<u><i>xx</i></u>
<i>Variable cost of Sales</i>		<i>xxx</i>

Income statement according to variable cost theory

<i>Income statement for the year ended December 31, 20^{xx}</i>		
Details	Subtotal	Inclusive total
<i>Sales Revenue</i>		xxxx
<i>- Variable cost of sales</i>		<u>(xxx)</u>
<i>Contribution Margin</i>		xxx
<i>Fixed costs:</i>		
<i>- Fixed manufacturing costs</i>	xx	
<i>- Fixed marketing costs</i>	xx	
<i>- Administrative costs</i>	<u>xx</u>	
<i>Total fixed cost</i>		<u>(xx)</u>
<i>Net profit or Loss</i>		xxxx

Example 1: The following cost information (in \$) has been extracted from the book of Rawa Co. for 2013 financial year.

16,000 Beginning raw materials, 50,000 purchases of raw materials, 4000 freight in, 8000 ending raw materials, 47000 direct labour, 7000 direct expenses, 10000 indirect labour (%60 including variable), 4000 indirect materials (% 50 including variable), 6000 factory insurance (%30 including fixed), 12000 beginning work in process, 10000 ending work in process, 18000 beginning finished goods, 16000 ending finished goods, 6000 sales agents Commission(%100 variable), 14000 advertising exp. (%50 including variable), 9000 Management staff salaries, 6000 Other administrative expenses, 240000 sales revenue.

Requirements: According to the variable cost theory, prepare:

1. A cost sheet for the year ended Dec. 31, 2013.
2. An income statement for the year ended Dec. 31, 2013.

Example 2: The following cost information (in \$) has been extracted from the book of Aro Co. for 2015. Aro Corporation produces a special type of educational toys for children.

Costs	Direct	Indirect	
		Variable	Fixed
Materials	25,000	4,500	3,250
Labour	16,000	8,000	2,500
Expenses	13,000	7,500	15,250
Marketing	11,000	2,000	16,000
Administrative		8,000	

Information regarding inventories was shown in this table:

Inventories	Beginning	Ending
Work-in-process	70,000	10,000
Finished goods	50,000	30,000

Requirements: According to the variable cost theory, prepare:

1. A cost sheet for the year ended Dec. 31, 2013.
2. An income statement for the year ended Dec. 31, 2013 if you know that total sales was \$260,000.

4. Absorption cost theory

Absorption cost theory = direct costs + Indirect variable costs + Indi. fixed absorption cost

Cost sheet according to the absorption cost theory

Cost sheet for the year ended December 31, 20××		
Details	Subtotal	Inclusive total
<i>D. materials</i>	<i>xx</i>	
<i>D. labour</i>	<i>xx</i>	
<i>D. expenses</i>	<u><i>xx</i></u>	
<i>Prime cost</i>		<i>xx</i>
<u><i>Manufacturing overhead:</i></u>		
<i>Indirect variable manufacturing costs</i> <i>(Materials, labour, and Expenses)</i>	<i>xx</i>	
<i>Indirect fixed absorption manufacturing costs</i> <i>(Materials, labour, and Expenses)</i>	<u><i>xx</i></u>	
<i>Total manufacturing overhead</i>		<u><i>xx</i></u>
<i>Total manufacturing costs</i>		<i>xx</i>
+ <i>Beginning work in process</i>		<i>xx</i>
- <i>Ending work in process</i>		<u><i>(xx)</i></u>
<i>Cost of goods manufactured</i>		<i>xx</i>
+ <i>Beginning finished goods</i>		<i>xx</i>
- <i>Ending finished goods</i>		<u><i>(xx)</i></u>
<i>Cost of goods sold</i>		<i>xx</i>
<u><i>Marketing costs:-</i></u>		
<i>Direct marketing costs</i>		<i>Xx</i>
<i>Indirect variable marketing costs</i>		<i>xx</i>
<i>Indirect fixed absorption marketing costs</i>		<u><i>xx</i></u>
<i>Cost of sales</i>		<i>xxx</i>

Income statement according to absorption cost theory

<i>Income statement for the year ended December 31, 20^{xx}</i>		
Details	Subtotal	Inclusive total
<i>Sales Revenue</i>		xxxxx
<i>- Cost of sales</i>		<u>(xxx)</u>
<i>Contribution Margin</i>		xxx
<i>Fixed unabsorption costs:</i>		
<i>- Fixed unabsorption manufacturing costs (Material, Labour, and Expenses)</i>	xx	
<i>- Fixed unabsorption marketing costs (Material, Labour, and Expenses)</i>	xx	
<i>- Administrative costs</i>	<u>xx</u>	
<i>Total fixed cost</i>		<u>(xx)</u>
<i>Net profit or Loss</i>		xxxxx

Example 1: This information has been taken from the book of Jihan Co. for 2013. Jihan Corporation produces a special type of educational toys for children. All amounts are in dollar.

Costs	Direct	Indirect	
		Variable	Fixed
Materials	25,000	4,500	3,250
Labour	16,000	8,000	2,500
Expenses	13,000	7,500	15,250
Marketing	11,000	2,000	16,000
Administrative		8,000	

Information regarding inventories was shown in this table:

Inventories	Beginning	Ending
Work-in-process	70,000	10,000
Finished goods	50,000	30,000

Other information:

Details	2013
Capability of produce and sell	12,500
Size of production and sales	10,000
Selling price per unit	\$ 12

Requirements: According to the absorption cost theory:

1. Prepare a cost sheet for the year ended Dec. 31, 2013.
2. Prepare an income statement for the year ended Dec. 31, 2013.

Example 2: The following cost information (in \$) has been extracted from the book of Dana Co. for 2020 financial year.

Direct material 300,000 , direct labour 200,000, Indirect variable manufacturing costs 100,000, Indirect fixed manufacturing costs 250,000, Opening stock of finished goods 80,000, Closing stock of finished goods 160,000, Indirect variable marketing costs 180,000, Indirect fixed marketing costs 150,000, Administrative costs 100,000, Sales 1,800,000.

Other information:

Capability of sell	10,000
Size of sales	9,000

Size of production	10,000
Production capacity (capability of production)	12,500

Note: there is no opening and closing stock of work in process.

Requirements: According to the Absorption cost theory, prepare:

1. A cost sheet for the year ended Dec. 31, 2020.
2. An income statement for the year ended Dec. 31, 2020.