

Accounting

Q What is accounting?

➡ Accounting is the process of recording financial transactions pertaining to a business. The accounting process includes summarizing, analyzing, and reporting these transactions to oversight agencies, regulators, and tax collection entities.

➡ Accounting is the recording of financial transactions along with storing, sorting, retrieving, summarizing, and presenting the results in various reports and analyses. Accounting is also a field of study and profession dedicated to carrying out those tasks.

Types of accounting

Q Types of accounting

➡ Financial Accounting

➡ Cost Accounting

➡ Management Accounting

➡ Managerial Accounting

Q) Financial Accounting

⇒ Financial Accounting is the process of identifying, recording, classifying, summarizing and preparing financial statements (income statement, owner's equity statement and balance sheet) and interpreting the result from the business transactions.

Financial accounting is the process of preparing financial statements that companies use to show their financial performance and position to people outside the company, including investors, creditors, suppliers and customers. "Financial account is based on past."

Q) Cost Accounting

⇒ Cost Accounting is a method of managerial accounting which aims to capture the total production cost of a business by measuring the variable costs of each production phase as well as fixed costs, such as a lease expense.

"Cost accounting is responsible only for calculation and control of cost of production".

* cost accounting is sometimes used to assist decision-making by management within a business, whereas financial accounting is usually used by outside investors or creditors.

Management Accounting

⇒ Management Accounting is that accounting which provides necessary accounting information to the management authority for taking better decision for the business organization.

Management accounting provides relevant and useful information to people inside the business, such as employees, managers, owners and auditors. It provides information for decision making and company strategy.

Chapter - 02

Managerial Accounting and Cost Concepts

Comparison of Financial and Managerial Accounting

Accounting

- Recording
- Estimating
- Organizing
- Summarizing

Financial and Operational Data

Financial Accounting

- Reports to those outside the organization:

Owners
Creditors
Tax authorities
Regulators

- Emphasizes financial consequences of past activities
- Emphasizes objectivity and verifiability.
- Emphasizes summary data concerning the entire organization.

Managerial Accounting

- Reports to those inside the organization for:

Planning
Directing and motivating
Controlling
Performance evaluation

- Emphasizes decisions affecting the future.

- Emphasizes relevance.

- Emphasizes detailed segment reports about departments, products and customers.

- Emphasizes precision.
- Must follow GAAP.
- Mandatory for external reports

- Emphasizes timeliness.
- Need not follow GAAP.
- Not mandatory.

4 General Cost classification

4.1 Manufacturing cost

→ Manufacturing costs are the costs incurred during the production of a product.

Most manufacturing companies separate manufacturing costs into "three" broad categories:

- Direct materials

- Direct labour

- Manufacturing overhead

Indirect manufacturing cost or
factory overhead or
factory burden.

4.1.1 Direct Materials

→ Direct materials is the physical items built into a product. The materials that go into the final product are called "raw materials".

For example: the direct materials for a baker includes flour, eggs, yeast, sugar, oil and water.

• Direct Labour

→ Direct Labour is production or services labour that is assigned to a specific product, cost center, or work orders. Direct Labour consists of labour costs that can be easily (i.e. physically and conveniently) traced to individual units of product.

• Manufacturing Overhead

→ Manufacturing overhead, the third element of manufacturing cost, include all manufacturing costs except direct materials and direct labour.

Manufacturing overhead includes items such as "indirect materials", "indirect labour", maintenance and repairs on production equipment; and heat and light, property taxes, depreciation, and insurance on manufacturing facilities.

* Indirect materials are included as a manufacturing overhead.

* Indirect labour is also treated as part of manufacturing overhead. Indirect labour includes the labour cost of janitors, supervisors, material handlers, and night security guards.

□ Non-manufacturing Costs

- ⇒ Non-manufacturing costs are expenditures not associated with product costs.
- Non-manufacturing costs are often divided into two categories:
 - Selling costs
 - Administrative costs

● Selling Costs

- Selling costs include all costs that are incurred to secure customer orders and get the finished product to the customer.
- These costs are sometimes called order-getting and order-filling costs.
- Examples of selling cost includes advertising, shipping, sales travel, sales commissions, sales salaries and costs of finished goods warehouses.

● Administrative Costs

- Administrative costs include all costs associated with the general management of an organization rather than with manufacturing or selling.
- Examples of administrative costs include executive compensation, general accounting, secretarial, public relations, and similar costs involved in the overall, general administration of the organization as a whole.

- * Non-manufacturing costs are also often called selling, general and administrative (SG&A) costs or just "selling and administrative costs".

Product costs or, Inventoriable costs

⇒ Product costs include all costs involved in acquiring or making a product. In the case of manufactured goods, these costs consists of "direct materials", "direct labours" and "manufacturing overhead".

Period costs

⇒ Period costs are all the costs that are not product costs. All selling and administrative expenses are considered to be period costs.

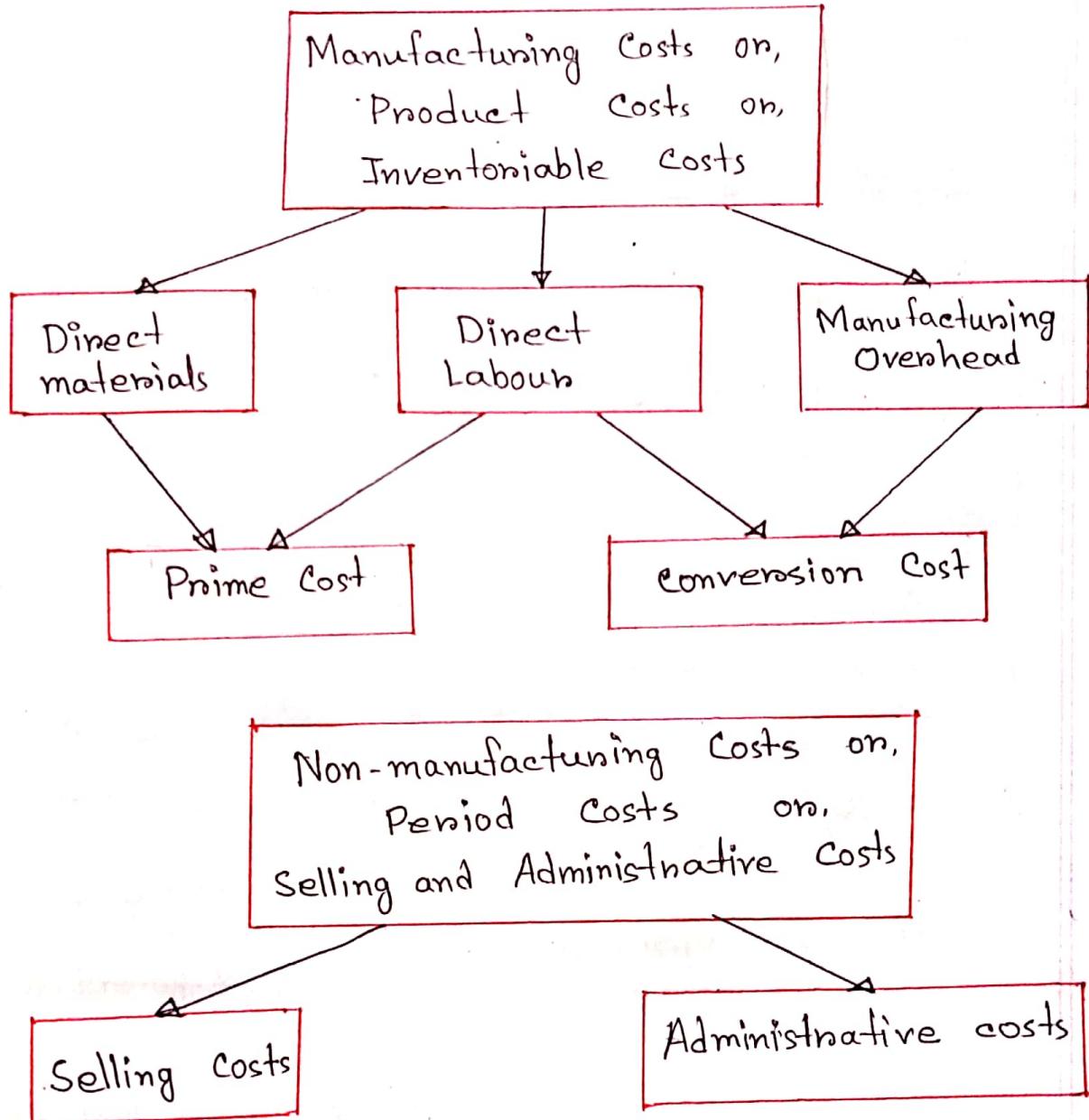
Prime cost

⇒ Prime cost is the sum of direct material cost and labour cost.

Conversion cost

⇒ Conversion cost is the sum of direct labour cost and manufacturing overhead cost.

Summary of cost Terms:



7) Schedule of Cost of Goods Manufactured

Direct materials:		
Beginning raw materials inventory	60,000	
Add: Purchases of raw materials	400,000	
Raw materials available for use	460,000	
Deduct: Ending raw materials inventory	50,000	
Raw materials used in production	410,000	
 Add: Direct Labours	60,000	
Prime Cost	470,000	
Add: Manufacturing Overhead	350,000	
Total manufacturing cost	820,000	
Add: Beginning work in process inventory	90,000	
Deduct: Ending work in process inventory	60,000	
 Cost of goods manufactured	850,000	

* Direct materials + Direct labours = Prime cost

* Prime cost + manufacturing overhead = Total manufacturing cost

* Total manufacturing cost + Beg WIP - End WIP = Cost of goods manufactured

* Direct mat = Beg raw mat + Purchase - End raw mat

Income Statement

Sales		500,000
Deduct: Cost of goods sold		
Finished goods inventory beginning	30,000	
Add: Cost of goods manufactured	390,000	
Goods available for sale	310,000	
Deduct: Finished goods inventory ending	40,000	
		270,000
Gross margin		230,000
Deduct: Selling and administrative expenses		
Selling expenses	80,000	
Add: Administrative expenses	110,000	
Net operating income		40,000

* Sales - cost of goods sold = Gross margin

* Gross margin - S&A expenses = Net income

* Cost of goods sold = Finished goods inventory beginning + goods manufactured - finished goods inventory ending

Chapters - 05

Cost Behavior: Analysis and Use

Cost Behavior

→ how costs change as volume changes.

→ There are three common cost behaviors:

1. Variable costs
 2. Fixed costs
 3. Mixed costs

The Variable costs

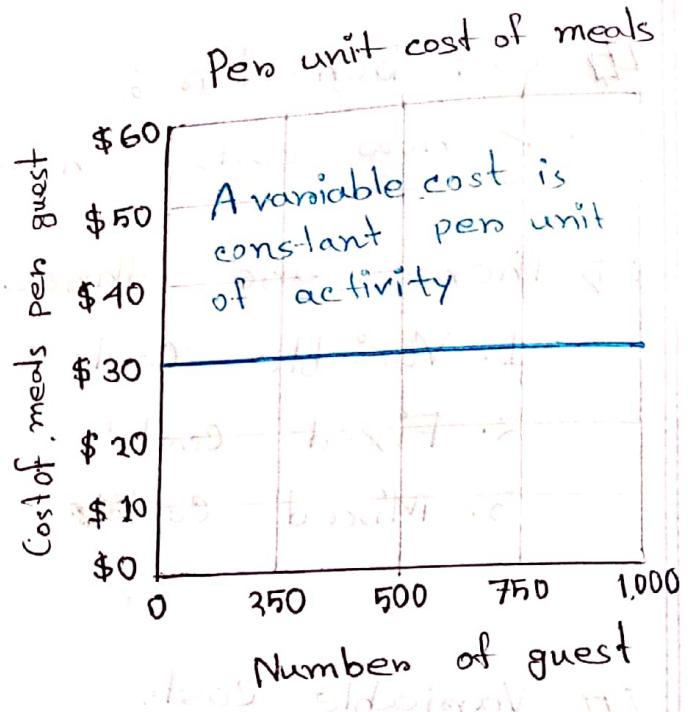
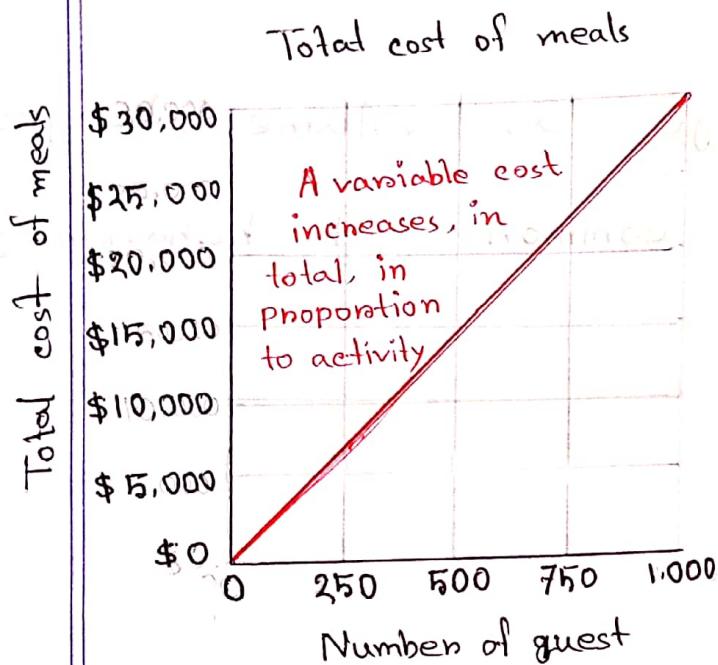
Variable costs are any expenses that change based on how much a company produces and sells.

(v) This means that variable costs increase as production rises and decrease as production falls.

Typical variable costs

- Raw materials
 - Direct Labour
 - Factory utilities
 - Sales commissions
 - Shipping costs

⇒ Variable cost behavior



- o Total variable costs change in direct proportion to changes in volume
- o The variable cost per unit of activity (v) remains constant and it is the slope of the variable cost line
- o Total variable cost graphs always begin at the origin (if volume is zero, total variable costs are zero)
- o Total variable costs can be expressed as follows :

$$y = vx$$

where y = total variable cost
 v = variable cost per unit of activity
 x = volume of activity

Fixed Costs

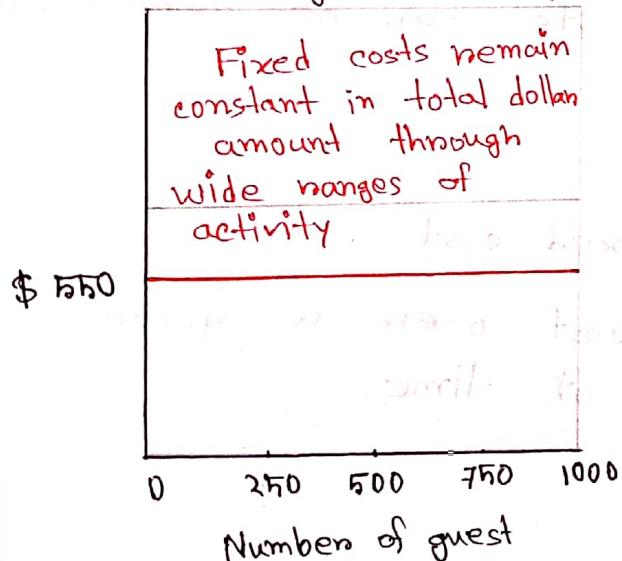
⇒ Fixed costs are any expenses that remain the same no matter how much a company produces.

Typical fixed costs

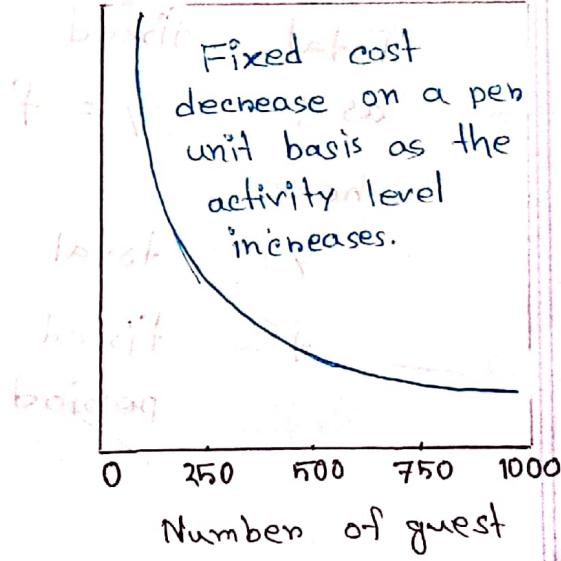
- Real estate taxes
- Insurance for buildings
- Supervisory salaries
- Depreciation
- Advertising

⇒ Fixed cost behavior

Total fixed cost of
Renting the building



Per unit fixed cost of
Renting the building



- ① Total fixed cost stay constant over a wide range of volume

Fixed costs per unit of activity vary inversely with changes in volume:

- Fixed cost per unit of activity increases when volume decreases.
- Fixed cost per unit of activity decreases when volume increases.

Total fixed costs graphs are always flat lines with no slope that intersect the y-axis at a level equal to total fixed costs.

Total fixed costs can be expressed as : $y = f$ where,

y = total fixed cost.

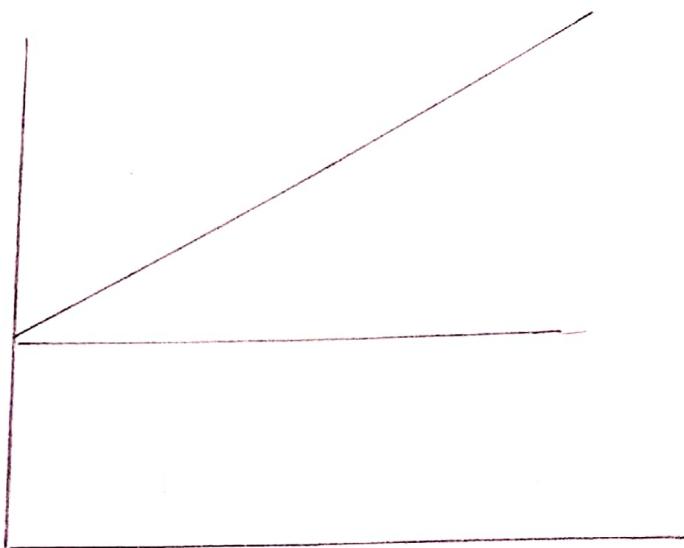
f = fixed cost over a given period of time.

fixed cost remain constant

fixed cost remain constant

Mixed Costs

A Mixed cost is a cost that contains both a fixed cost component and a variable cost component.



- o Total mixed costs increase as volume increases because of the variable cost component.
- o Mixed costs per unit decrease as volume increases because of the fixed cost component.
- o Total mixed costs graphs slope upward but do not begin at the origin - they intersect the y-axis at the level of fixed costs.

- Total mixed costs can be expressed as a combination of the variable and fixed cost equations:

Total mixed costs = variable cost component + fixed cost component

$$y = vx + f$$

where,

y = total mixed costs
 v = variable cost per unit of activity (slope)

x = volume of activity
 f = fixed cost over a given period of time (vertical intercept).



(last answer) and last question

gross sales is not enough to absorb fixed cost
 profit will not be able to be
 there to cover profit from unit cost
 gross margin is not enough to cover

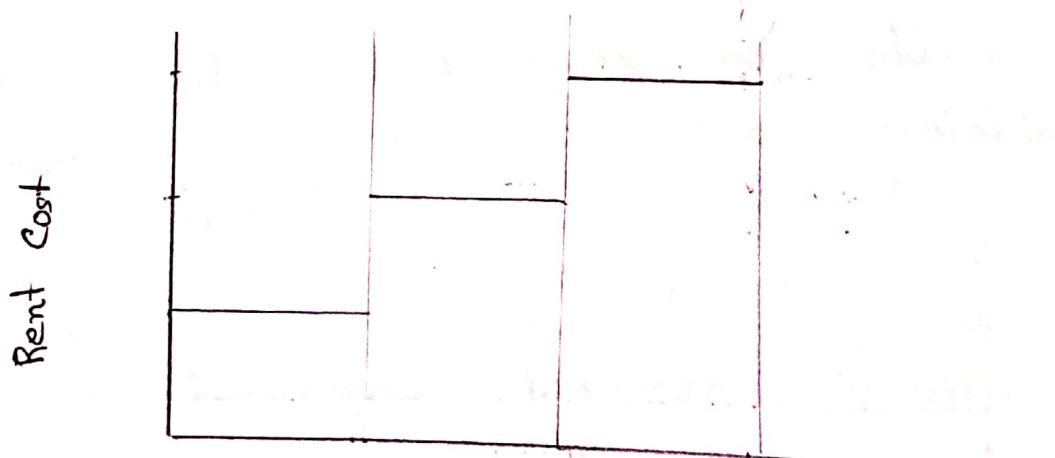
4) The Relevant Range

➡ This concept suggests that within a certain range of cost driven activity that total fixed cost and per unit variable costs will remain the same or linear.

➡ Fixed costs and the relevant range

Example:

Office space is available at a rental rate of \$30,000 per year in increments of 1,000 square feet. As the business grows more space is rented, increasing the total cost.

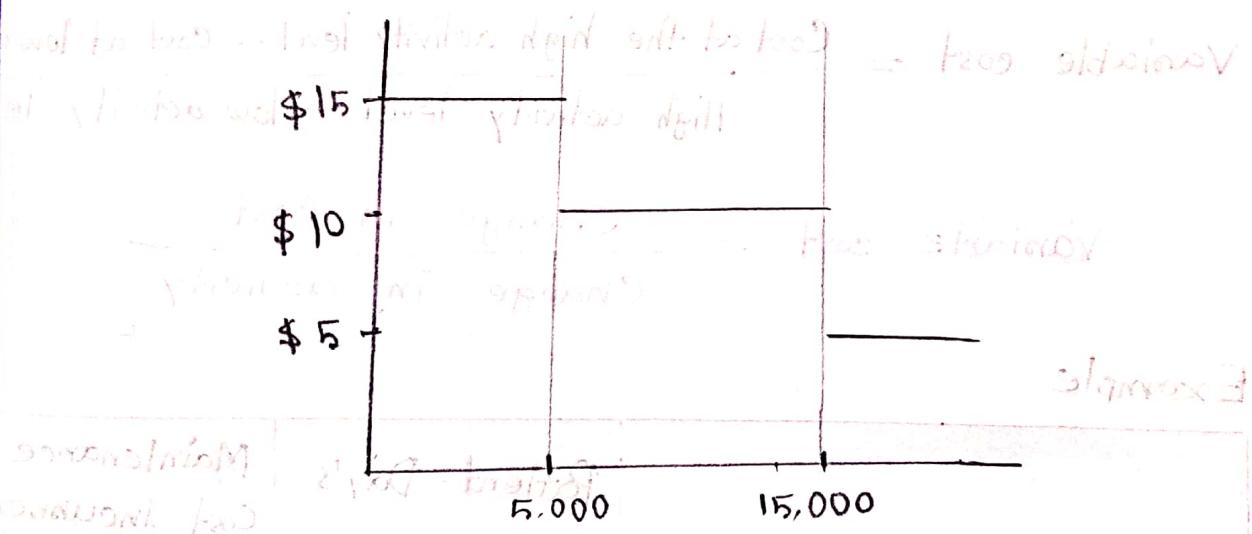


Rent Area (Square feet)

Total cost doesn't change for a wide range of activity, but then jumps to a new higher cost for the next higher range of activity.

⇒ Per unit variable cost and the Relevant Range:

Example: ABC company assumes that the cost of a green widget is \$10 within a relevant range of no less than 5,000 units per year and no more than 15,000 units per year. If the actual volume is less than 5,000 units, the purchased cost of materials increases sufficiently to make the assumed cost of \$10 per unit too low. Conversely, if the actual unit volume is higher than 15,000 units, the purchased cost of materials decreases sufficiently to make the assumed cost of \$10 per unit too high.



COSE \$ 10,000.8

GOP \$ 10,000.7

GOPS \$ 10,000.8

(unit) level variable cost

(volume) level variable cost

The High-Low Method

The high-low method is a way of attempting to separate fixed and variable costs given a limited amount of data.

The high-low method involves taking the highest level of activity and the lowest level of activity and comparing the total costs at each level.

Variable cost = Slope of the line

$$\text{Variable cost} = \frac{\text{Rise}}{\text{Run}} = \frac{Y_2 - Y_1}{X_2 - X_1}$$

$$\text{Variable cost} = \frac{\text{Cost at the high activity level} - \text{Cost at low activity level}}{\text{High activity level} - \text{low activity level}}$$

$$\text{Variable cost} = \frac{\text{Change in Cost}}{\text{Change in activity}}$$

Example

	Patient-Day's	Maintenance Cost Incurred
High activity level (June)	8,000	\$ 9,800
Low activity level (March)	5,000	\$ 7,900
Change	3,000	\$ 2,900

$$\begin{aligned}\text{Variable cost} &= \frac{\text{change in cost}}{\text{change in activity}} \\ &= \frac{\$2,900}{3,000} \\ &= \$0.80 \text{ per patient-day}\end{aligned}$$

$$\begin{aligned}\text{Fixed cost} &= \text{Total cost} - \text{variable cost element} \\ &= \$9,800 - (\$0.80 \times 8,000) \\ &= \$3,400\end{aligned}$$

The cost of maintenance can be expressed as:

$$Y = \$3,400 + \$0.80 X$$

④ Problem 2-24

Visie Corporation, a manufacturing company, produces a single product.

Production in units

Sales in units

Ending finished goods inventory in units

Sales in dollars

Costs:

Direct labour

Raw materials purchased

Manufacturing overhead

Selling and administrative expenses

Inventories:

Raw materials

Work in process

Finished goods

The finished goods inventory is being carried at the average unit production cost for the year. The selling price of the product is \$50 per unit.

Required:

1. Prepare a schedule of cost of goods manufactured for the year.
2. Compute the following:
 - a. The number of units in the finished goods inventory at the end of the year.
 - b. The cost of the units in the finished goods inventory at the end of the year.
3. Prepare an income statement for the year.

Answers 1

Schedule of cost of goods manufactured

Direct materials:

Raw materials inventory, beg

Add: Raw materials purchased

Raw materials available for use

Deduct: Raw materials inventory, end

Raw materials used in production

Direct Labour.

Manufacturing Overhead

Total manufacturing costs.

Add: WIP inventory, beg.

Deduct: WIP inventory, end

Cost of goods manufactured

Answers 2: (a)

To compute the numbers of units in the finished goods inventory at the end of the year, we must first compute the number of units sold during the year.

$$\frac{\text{Total sales}}{\text{Unit selling price}} = \frac{\$1,300,000}{\$50 \text{ per unit sold}} = 36,000 \text{ units sold}$$

Units in the finished goods inventory, beg - - - - -

Units produced during the year - - - - - 29,000

Units available for sale - - - - - 29,000

Units sold during the year - - - - - 26,000

Units in the finished goods inventory, end - - - - - 3,000

Answers 3 : (b)

The average production cost per unit during the years is :

$$\frac{\text{Cost of goods manufactured}}{\text{Number of units produced}} = \frac{\$870,000}{29,000 \text{ units}} = \$30 \text{ per unit}$$

Thus the cost of the units in the finished goods inventory at the end of the year is:

$$3,000 \text{ units} \times \$30 \text{ per unit} = \$90,000.$$

Answer 3:

Income Statement

Sales	- - - - -	- - - - -	- - - - -	1,300,000
Cost of goods sold:				
Finished goods inventory, beg	- - - - -	- - - - -	- - - - -	0
Add: Cost of goods manufactured	- - - - -	- - - - -	- - - - -	870,000
Goods available for sale	- - - - -	- - - - -	- - - - -	870,000
Deduct: Finished goods inventory, end	- - - - -	- - - - -	- - - - -	90,000
	- - - - -	- - - - -	- - - - -	780,000
Gross margin	- - - - -	- - - - -	- - - - -	520,000
Selling & administrative expenses	- - - - -	- - - - -	- - - - -	380,000
Net operating income	- - - - -	- - - - -	- - - - -	140,000

(5)

Review Problem 2: chapter (5)

Time spent shopping for books

Time spent shopping for food

Time spent shopping for clothing

Time spent shopping for furniture

Time spent shopping for food and clothing

Answer 1:

Month	Number of patients admitted	Admitting Department cost
High activity level (June)	1,900	15,200
Low activity level (November)	1,100	12,800
Change	800	\$2,400

$$\begin{aligned} \text{Variable cost} &= \frac{\text{Change in cost}}{\text{Change in activity}} \\ &= \frac{\$2,400}{800} \\ &= \$3 \text{ per patient admitted.} \end{aligned}$$

$$\begin{aligned} \text{Fixed cost element} &= \text{Total cost} - \text{variable cost element} \\ &= \$15,200 - (\$3 \times 1,900) \\ &= \$9,500 \end{aligned}$$

Answer 2:

The cost formula is

$$Y = \$9,500 + \$3X$$

Answers 1:

Month	Occupancy - Days	Electrical Costs
High activity level (August)	2,406	\$ 5,148
Low activity level (October)	124	\$ 1,588
Change	2,282	\$ 3,560

Variable cost = $\frac{\text{change in cost}}{\text{change in activity}}$

$$\text{variable cost} = \frac{\$3,560}{3,282}$$

$$= 1.09$$

Fixed cost element = Total cost - Variable cost element

$$\text{fixed cost element} = \$5,148 - (1.09 \times 3,906)$$

$$= \$1394.64$$

Answers 2:

Electrical costs may reflect seasonal factors other than just the variation in occupancy days. For example, common areas such as the reception area must be lighted for longer periods during the winter than in the summer. This will result in seasonal fluctuations in the fixed electrical costs.

Additionally, fixed costs will be affected by the number of days in a month. In other words, costs like the costs of lighting common areas are variable with respect to the number of days in the month but are fixed with respect to how many rooms are occupied during the month.

Other, less systematic, factors may also affect electrical costs such as the frugality of individual guests. Some guests will turn off lights when they leave a room, others will not.