

MANAGERIAL ACCOUNTING

LO 1: Understand the difference in managerial and financial accounting:

Financial	Managerial
External Users Quarterly/Annual Financial Statement General Purpose Reports GAAP - Audited	Internal Users Internal Reports Special Purpose Reports Used for Decision Making Purposes

Understand Management Responsibilities and Structure

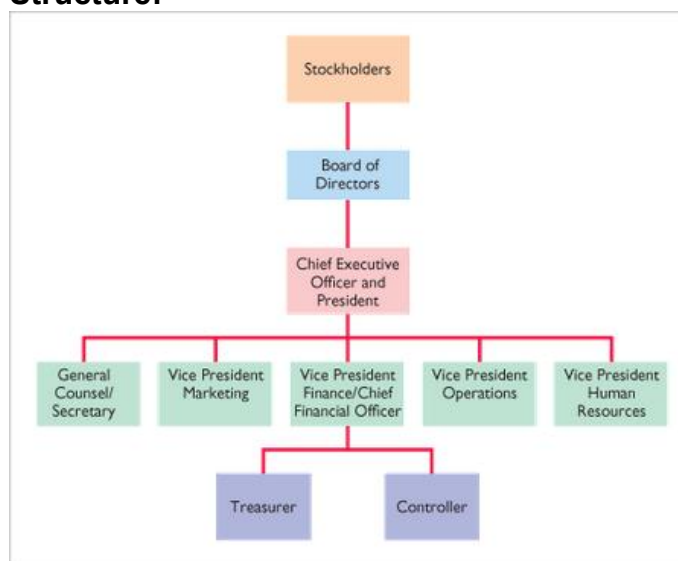
Responsibilities:

Planning: looking ahead to establish objectives that add value to the business

Directing: coordinating company's activities and human resources to operate effectively

Controlling: keeping all the activities on track to accomplish objectives

Structure:



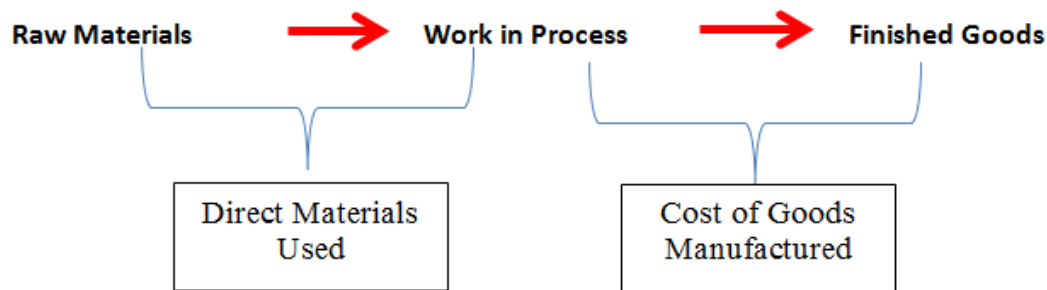
LO 2: MANUFACTURING COSTS

Terms

Direct Materials
 Indirect Materials
 Direct Labor
 Indirect Labor

Manufacturing Overhead
 Product Cost
 Period Cost

Manufacturing consists of activities and processes that convert raw materials into finished goods.



Raw Materials: Basic material and parts used in the manufacturing process

Work in Process: Product costs associated with partially completed units

Finished Goods: Completed units that are unsold

PRODUCT COSTS: Manufacturing Costs	PERIOD COSTS: Nonmanufacturing Costs
Direct Materials Direct Labor Manufacturing Overhead (all indirect costs)	Selling Expenses Administrative Expenses

Practice #1

Indicate how a manager would assign the following costs to the various categories for a motorcycle company.

	Product Costs			
	Direct Materials	Direct Labor	Manufacturing Overhead	Period Cost
Engines				
Labor costs				
Factory Equipment Depreciation				
Electricity to run factory equipment				
Advertising				
Salary of Plant Manager				
Shipping of finished product				
Salary of CFO				
Lubricant for tightening screws				
Motorcycle seat				

LO 3: FINANCIAL STATEMENTS

Terms

Cost of Goods Sold

Cost of Goods Manufactured

Total Manufacturing Costs

Raw Materials

Work in Process Inventory

Finished Goods Inventory

Cost of Goods Manufactured

- 1) Start with the Beginning Work in Process
- 2) Find Direct Materials Used
- 3) Find Total Manufacturing Costs
- 4) Find Cost of Goods Manufactured

- Use this basic equation:

beginning balance + additions – deductions = ending balance

1) Find Beginning Work in Process

2) Find Direct Materials Used

Raw Materials Beginning Inventory
 + Raw Materials Purchased
 = Raw Materials Available for Use
 - Raw Materials Ending Inventory
 = Direct Materials Used

3) Find Total Manufacturing Costs

Direct Materials Used (Step 2)
 + Direct Labor
 + Total Manufacturing Overhead
 = Total Manufacturing Costs

4) Find Cost of Goods Manufactured

Work in Process Beginning Inventory (Step 1)
 + Total Manufacturing Costs (Step 3)
 = Total Cost of Work in Process
 - Work in Process Ending Inventory
 = Cost of Goods Manufactured

$$\begin{array}{rclclcl}
 \text{Beginning} & & & & \text{Total} & & & & \text{Total} \\
 \text{Work in} & & & & \text{Cost of} & & & & \text{Cost of} \\
 \text{Process} & & & & \text{Work in} & & & & \text{Goods} \\
 \text{Inventory} & + & \text{Total} & = & \text{Process} & - & \text{Ending Work} & = & \text{Manufactured} \\
 & & \text{Manufacturing} & & & & \text{in Process} & & \\
 & & \text{Costs} & & & & \text{Inventory} & &
 \end{array}$$

Cost of Goods Manufactured Schedule For the Year Ended December 31, 2017			
Work in process, January 1			\$ 18,400
Direct materials			
Raw materials inventory, January 1	\$ 16,700		
Raw materials purchases	152,500		
Total raw materials available for use	169,200		
Less: Raw materials inventory, December 31	22,800		
Direct materials used		\$146,400	
Direct labor		175,600	
Manufacturing overhead			
Indirect labor	14,300		
Factory repairs	12,600		
Factory utilities	10,100		
Factory depreciation	9,440		
Factory insurance	8,360		
Total manufacturing overhead		54,800	
Total manufacturing costs			376,800
Total cost of work in process			395,200
Less: Work in process, December 31			25,200
Cost of goods manufactured			\$370,000

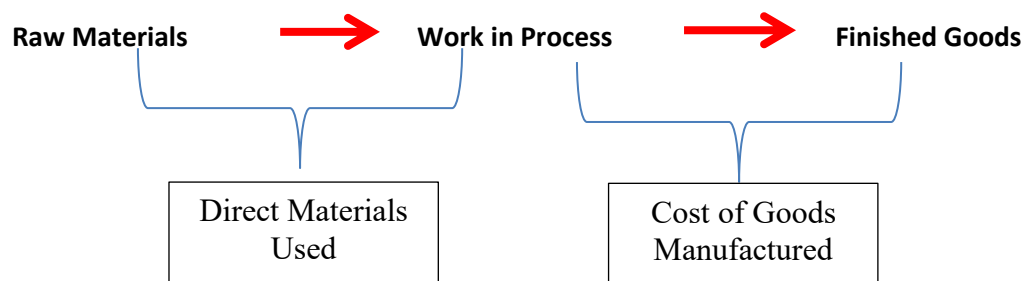
Cost of Goods Sold on the Income Statement

$$\begin{array}{rcccl} \text{Beginning Finished} & & \text{Cost of Goods} & & \text{Ending Finished} & & \text{Cost of Goods} \\ \text{Goods Inventory} & + & \text{Manufactured} & - & \text{Goods Inventory} & = & \text{Sold} \end{array}$$

MANUFACTURING COMPANY	
Income Statement (partial)	
For the Year Ended December 31, 2017	
Cost of goods sold	
Finished goods inventory, Jan. 1	\$ 90,000
Cost of goods manufactured (see Illustration 1-9)	370,000
Cost of goods available for sale	460,000
Less: Finished goods inventory,	
Dec. 31	80,000
Cost of goods sold	\$ 380,000

Inventory on the Balance Sheet

- Manufacturing companies have three inventory accounts: raw materials inventory, work-in-process inventory and finished goods inventory.
- Raw Materials inventory includes all the direct and indirect materials purchased but not yet used in the manufacturing or production process.
- Work-In-Process Inventory includes all the direct materials, direct labor and manufacturing overhead costs that have been added to the manufacturing process but for which production has not been completed.
- Finished Goods Inventory includes all manufacturing costs for products that have been completed but not sold.



MANUFACTURING COMPANY			
Balance Sheet			
December 31, 2017			
Current assets			
Cash			\$180,000
Accounts receivable (net)			210,000
Inventory			
Finished goods	\$80,000		
Work in process	25,200		
Raw materials	22,800	128,000	
Prepaid expenses			18,000
Total current assets			\$536,000

Practice #2

T Company has provided the following data for the month of July:

	<u>Beginning</u>	<u>Ending</u>
Work-in-process inventory	\$23,000	\$21,000
Finished goods inventory	26,000	35,000
	<u>July Activity</u>	
Direct materials used	\$56,000	
Direct labor incurred	91,000	
Manufacturing overhead	61,000	

Required: a) Determine total manufacturing costs, cost of goods manufactured and cost of goods sold for July.

LO 4: TRENDS

Terms

Value Chain

Just in Time Inventory

Total Quality Management

Theory of Constraints

Activity Based Costing

Balanced Scorecard

Sarbanes-Oxley Act

Corporate Social Responsibility

Triple Bottom Line

Solution #1

Indicate how a manager would assign the following costs to the various categories for a motorcycle company.

	Product Costs			
	Direct Materials	Direct Labor	Manufacturing Overhead	Period Cost
Engines	X			
Labor costs		X		
Factory Equipment Depreciation			X	
Electricity to run factory equipment			X	
Advertising				X
Salary of Plant Manager			X	
Shipping of finished product				X
Salary of CFO				X
Lubricant for tightening screws			X	
Motorcycle seat	X			

Solution #2

a)

Direct materials used	\$56,000
Direct labor incurred	91,000
Manufacturing overhead	<u>61,000</u>
Total manufacturing cost	\$208,000

Beginning work-in-process	\$23,000
Total manufacturing cost	208,000
Ending work-in-process	<u>21,000</u>
Cost of goods manufactured	\$210,000

Beginning finished goods	\$26,000
Cost of goods manufactured	210,000
Ending finished goods	<u>35,000</u>
Cost of goods sold	\$201,000

Practice Problems

Practice #2

P Company has provided the following data for the month of March:

	<u>Beginning</u>	<u>Ending</u>
Raw materials inventory	\$25,000	\$30,000
Work-in-process inventory	16,000	18,000
Finished goods inventory	36,000	59,000
	<u>March Activity</u>	
Direct materials purchases	\$71,000	
Direct labor incurred	83,000	
Manufacturing overhead	74,000	
Indirect materials included in overhead	5,000	

Required: Prepare a Schedule of Cost of Goods Manufactured and a Partial Income Statement Showing the Cost of Goods Sold

Solution #2

Schedule of Cost of Goods Sold

Beginning finished goods inventory	\$36,000
Cost of goods manufactured	<u>216,000</u>
Goods available for sale	252,000
less: Ending finished goods inventory	<u>59,000</u>
Cost of goods sold	\$193,000

Schedule of Cost of Goods Manufactured

Beginning raw materials inventory	\$25,000
Direct materials purchases	<u>71,000</u>
Raw materials available for use	96,000
less: Ending raw materials inventory	<u>30,000</u>

Raw materials used	66,000
less: indirect materials used	<u>5,000</u>
Direct materials used	61,000
Direct labor incurred	83,000
Manufacturing overhead inventory	<u>74,000</u>

Practice #3

D Company reported the following information on its income statements for the first quarter:

	<u>January</u>	<u>February</u>	<u>March</u>
Beginning Finished goods inventory	\$61,600	?	?
Cost of Goods Manufactured	229,000	?	531,400
Goods Available for Sale	?	260,000	?
Cost of Goods Sold	?	?	531,400
Ending Finished goods inventory	72,800	61,600	?

Required: Determine the missing values.

Solution #3

	<u>January</u>	<u>February</u>	<u>March</u>
Beginning Finished goods inventory	\$61,600	72,800	61,600
Cost of Goods Manufactured	<u>229,000</u>	<u>187,200</u>	<u>531,400</u>
Goods Available for Sale	290,000	260,000	593,000
Cost of Goods Sold	<u>217,200</u>	<u>198,400</u>	<u>531,400</u>
Ending Finished goods inventory	72,800	61,600	61,600

True / False Questions

1. Total beginning finished goods inventory + cost of goods manufactured - ending finished goods inventory = cost of goods sold.
True False
2. Cost of Goods Manufactured represents the total direct materials, direct labor and overhead added to work-in-process inventory.
True False
3. The schedule of cost of goods manufactured is the same as the statement of cost of goods sold.
True False

Multiple Choice Questions

1. On the Schedule of Cost of Goods Manufactured, the final Cost of Goods Manufactured figure represents:
 - a) The amount of cost charged to Work in Process during the period
 - b) The amount of cost transferred from Finished Goods to Cost of Goods Sold during the period
 - c) The amount of cost placed into production during the period
 - d) The amount of cost of goods completed during the current year whether they were started before or during the current year

The next 2 questions refer to the following information.

A manufacturing company has a beginning finished goods inventory balance of \$14,600, cost of goods manufactured of \$32,500 and an ending finished goods inventory balance of \$17,800.

2. The cost of goods sold is:
 - a) \$21,200
 - b) \$29,300
 - c) \$32,500
 - d) \$27,600
3. The total costs transferred from work-in-process inventory to finished goods inventory is:
 - a) \$21,200
 - b) \$29,300
 - c) \$32,500
 - d) \$27,600
4. R Company had finished goods inventory \$3,200 on January 1 and \$4,000 on December 31. During the year, cost of goods sold was \$14,200. Cost of goods manufactured was:
 - a) \$21,400
 - b) \$11,000
 - c) \$15,000
 - d) \$17,400

5. J Company had the following inventory balances for the year:

	January 1	December 31
Raw Materials	\$57,000	\$60,000
Work-in-process	68,000	50,000
Finished goods	79,000	40,000

Raw materials used in manufacturing during the year were \$118,000. Raw materials purchases during the year were:

- a) \$107,000
 - b) \$115,000
 - c) \$118,000
 - d) \$121,000
6. Total manufacturing costs incurred do not include:
- a) Direct materials used
 - b) Factory supplies used
 - c) Direct materials purchased
 - d) Indirect labor used
7. D Company reported the following information for the year:

Ending work-in-process inventory	\$4,000
Beginning work-in-process inventory	3,000
Factory overhead	5,100
Direct labor cost	7,000
Direct materials used	5,000

Manufacturing costs added to work-in-process inventory were:

- a) \$12,000
- b) \$16,100
- c) \$13,600
- d) \$17,100

Solutions to Practice Problems

Practice Problem #1

Factory supplies	\$7,000
Factory depreciation	2,000
Indirect labor	<u>23,000</u>
Total Overhead	\$32,000

Practice Problem #2

Direct labor	\$43,000
Manufacturing overhead	<u>71,000</u>
Total Conversion Cost	\$114,000

Total manufacturing cost	218,000
Beginning work-in-process inventory	<u>16,000</u>
	234,000
less: Ending work-in-process inventory	<u>18,000</u>
Cost of goods manufactured	\$216,000

Practice Problem #5

Beginning raw materials inventory	\$28,000
Direct materials purchases	72,000
Direct materials used	<u>86,000</u>
Ending raw materials inventory	\$14,000

Total manufacturing cost	\$309,000
less: Direct materials used	86,000
Direct labor incurred	<u>112,000</u>
Manufacturing overhead	<u>\$111,000</u>

Ending work-in-process inventory	\$25,000
Cost of goods manufactured	307,000
less: Total manufacturing cost	<u>309,000</u>
Beginning work-in-process inventory	\$23,000

Beginning finished goods inventory	\$37,000
Cost of goods manufactured	307,000
less: Ending finished goods inventory	<u>55,000</u>
Cost of goods sold	\$289,000

Practice Problem #6

Schedule of Cost of Goods Manufactured

Beginning raw materials inventory	\$8,000
Direct materials purchases	<u>18,000</u>
Raw materials available for use	26,000
less: Ending raw materials inventory	<u>8,700</u>
Direct materials used	17,300
Direct labor incurred	10,000
Manufacturing overhead	<u>15,000</u>
Total manufacturing cost	42,300
Beginning work-in-process inventory	<u>2,100</u>
	44,400
less: Ending work-in-process inventory	<u>3,200</u>
Cost of goods manufactured	\$41,200

Income Statement

Sales	\$55,300
Cost of Goods Sold:	
Beginning finished goods inventory	\$5,000
Cost of goods manufactured	<u>41,200</u>
Goods available for sale	46,200
less: Ending finished goods inventory	<u>5,700</u>
Cost of goods sold	<u>40,500</u>
Gross Profit	14,800
Selling and administrative expenses	<u>6,300</u>
Net Income	\$8,500

Solutions to True / False Problems

1. True
2. False – cost of goods manufactured are the costs added to finished goods inventory. Total manufacturing costs are the direct materials, direct labor and overhead added to work-in-process.
3. False – they are different statements.
- 4.
- 5.
- 6.
- 7.

Solutions to Multiple Choice Questions

- | | |
|----|---|
| 1. | D |
| 2. | B |
| 3. | C |
| 4. | C |
| 5. | D |
| 6. | C |
| 7. | D |