CHAPTER 2

Job Order Costing

Learning Objectives

1. Describe cost systems and the flow of costs in a job order system.
2. Use a job cost sheet to assign costs to work in process.
3. Demonstrate how to determine and use the predetermined overhead rate.
4. Prepare entries for manufacturing and service jobs completed and sold.
5. Distinguish between under- and overapplied manufacturing overhead.

ANSWERS TO QUESTIONS

1. (a) Cost accounting involves the measuring, recording, and reporting of product costs. A cost accounting system consists of manufacturing cost accounts that are fully integrated into the general ledger of a company.

(b) An important feature of a cost accounting system is the use of a perpetual inventory system that provides immediate, up-to-date information on the cost of a product.

LO1 BT: C Difficulty: Easy TOT: 4 min. AACSB: None AICPA FC: Measurement Analysis and Interpretation IMA: Cost Management

2. (a) The two principal types of cost accounting systems are: (1) job order cost system and (2) process cost system. Under a job order cost system, costs are assigned to each job or batch of goods; at all times each job or batch of goods can be separately identified. A job order cost system measures costs for each completed job, rather than for set time periods. Under a process cost system, product-related costs are accumulated by or assigned to departments or processes for a set period of time. Job order costing lends itself to specific, special-order manufacturing or servicing while process costing is better suited to similar, large-volume products and continuous process manufacturing.

(b) A company can use both types of systems. For example, General Motors uses process costing for standard model cars and job order costing for custom-made vehicles.

LO1 BT: C Difficulty: Easy TOT: 5 min. AACSB: None AICPA FC: Measurement Analysis and Interpretation IMA: Cost Management

3. A job order cost system is most likely to be used by a company that receives special orders, or custom builds, or produces heterogeneous items or products; that is, the product manufactured or the service rendered is tailored to the customer or client's requests, needs, or situation. Examples of industries that use job order systems are custom home builders, commercial printing companies, motion picture companies, construction contractors, repair shops, accounting and law firms, hospitals, shipbuilders, and architects.

LO1 BT: C Difficulty: Easy TOT: 4 min. AACSB: None AICPA FC: Measurement Analysis and Interpretation IMA: Cost Management

4. A process cost system is most likely to be used by manufacturing companies with continuous production flows usually found in mass production, assembly line, large-volume, uniform, or relatively similar product industries. Companies producing appliances, chemicals, pharmaceuticals, rubber and tires, plastics, cement, petroleum, and automobiles utilize process cost systems.

LO1 BT: C Difficulty: Easy TOT: 3 min. AACSB: None AICPA FC: Measurement Analysis and Interpretation IMA: Cost Management

5. The major steps in the flow of costs in a job order cost system are: (1) accumulating the manufacturing costs incurred and (2) assigning the accumulated costs to work done.

LO1 BT: K Difficulty: Easy TOT: 2 min. AACSB: None AICPA FC: Measurement Analysis and Interpretation IMA: Cost Management

6. Not true. Entries to Manufacturing Overhead are also made at the end of an accounting period. For example, there will be adjusting entries for factory depreciation, property taxes, and insurance.

LO1 BT: K Difficulty: Easy TOT: 2 min. AACSB: None AICPA FC: Measurement Analysis and Interpretation IMA: Cost Management

7. The source document for assigning materials is the materials requisition slip and the source document for assigning labor is the time ticket. The entries are:

Materials			Labor		
Work in Process Inventory	XX		Work in Process Inventory	XX	
Manufacturing Overhead	XX		Manufacturing Overhead	XX	
Raw Materials Inventory		XX	Factory Labor		XX

LO2 BT: C Difficulty: Easy TOT: 4 min. AACSB: None AICPA FC: Measurement Analysis and Interpretation IMA: Cost Management

8. The purpose of a job cost sheet is to record the costs chargeable to a specific job and to determine the total and unit costs of the completed job.

LO2 BT: C Difficulty: Easy TOT: 2 min. AACSB: None AICPA FC: Measurement Analysis and Interpretation IMA: Cost Management

9. The source documents for charging costs to specific jobs are materials requisition slips for direct materials, time tickets for direct labor, and the predetermined overhead rate for manufacturing overhead.

LO2 BT: K Difficulty: Easy TOT: 2 min. AACSB: None AICPA FC: Measurement Analysis and Interpretation IMA: Cost Management

10. The materials requisition slip is a business document used as an authorization to issue materials from inventory to production. It is approved and signed by authorized personnel so that materials may be removed from inventory and charged to production, to specific jobs, departments, or processes. The materials requisition slip is the basis for posting to the materials inventory records and to the job cost sheet.

LO2 BT: K Difficulty: Easy TOT: 4 min. AACSB: None AICPA FC: Measurement Analysis and Interpretation IMA: Cost Management

11. Not true. Actual manufacturing overhead cannot be determined until the end of a period of time. Consequently, there could be a significant delay in assigning overhead and in determining the total cost of the completed job.

LO3 BT: C Difficulty: Easy TOT: 2 min. AACSB: None AICPA FC: Measurement Analysis and Interpretation IMA: Cost Management

12. The elements for computing the predetermined overhead rate are the estimated annual overhead costs and an expected activity base such as direct labor hours. The rate is computed by dividing the estimated annual overhead costs by the expected annual operating activity.

LO3 BT: C Difficulty: Easy TOT: 2 min. AACSB: None AICPA FC: Measurement Analysis and Interpretation IMA: Cost Management

13. At any point in time, the balance in Work in Process Inventory should equal the sum of the costs shown on the job cost sheets of unfinished jobs. Alternatively, posting to Work in Process Inventory may be compared with the sum of the postings to the job cost sheets for each of the manufacturing cost elements.

LO3 BT: K Difficulty: Easy TOT: 3 min. AACSB: None AICPA FC: Measurement Analysis and Interpretation IMA: Cost Management

14. Jane is incorrect. There is a difference in computing total manufacturing costs. In job order costing, manufacturing overhead applied is used, whereas in Chapter 1, actual manufacturing overhead is used.

LO4 BT: C Difficulty: Easy TOT: 2 min. AACSB: None AICPA FC: Measurement Analysis and Interpretation IMA: Cost Management

15. Underapplied overhead means that the overhead assigned to work in process is less than the overhead incurred. Overapplied overhead means that the overhead assigned to work in process is greater than the overhead incurred. Manufacturing Overhead will have a debit balance when overhead is underapplied and a credit balance when overhead is overapplied.

LO5 BT: C Difficulty: Easy TOT: 4 min. AACSB: None AICPA FC: Measurement Analysis and Interpretation IMA: Cost Management

16. Under- or overapplied overhead is not closed to Income Summary. The balance in Manufacturing Overhead is eliminated through an adjusting entry. Under- or overapplied overhead generally is considered to be an adjustment of Cost of Goods Sold.

LO5 BT:

SOLUTIONS TO EXERCISES

EXERCISE 2.7

1.	Raw Materials Inventory	46,300	
	Accounts Payable		46,300
2.	Work in Process Inventory	29,200	
	Manufacturing Overhead	6,800	
	Raw Materials Inventory		36,000
3.	Factory Labor	59,900	
	Payroll Liabilities		59,900
4.	Work in Process Inventory	54,000	
	Manufacturing Overhead	5,900	
	Factory Labor		59,900

EXERCISE 2.7 (Continued)

5.	**Manufacturing Overhead**	**80,500**	
	Accounts Payable		**80,500**
6.	**Depreciation Expense**	**8,100**	
	Accumulated Depreciation—Building		**8,100**
7.	**Work in Process Inventory ($54,000 X 150%)**	**81,000**	
	Manufacturing Overhead		**81,000**
8.	**Finished Goods Inventory**	**88,000**	
	Work in Process Inventory		**88,000**
9.	**Accounts Receivable**	**103,000**	
	Sales Revenue		**103,000**
	Cost of Goods Sold	**75,000**	
	Finished Goods Inventory		**75,000**

LO1, 2, 3, 4 BT: AP Difficulty: Easy TOT: 18 min. AACSB: Analytic AICPA FC: Measurement Analysis and Interpretation IMA: Cost Management

EXERCISE 2.8

1.	**Raw Materials Inventory**	**192,000**	
	Accounts Payable		**192,000**
	Factory Labor	**87,300**	
	Payroll Liabilities		**87,300**
2.	**Work in Process Inventory**	**153,530**	
	Manufacturing Overhead	**4,470**	
	Raw Materials Inventory		**158,000**
	Work in Process Inventory	**80,000**	
	Manufacturing Overhead	**7,300**	
	Factory Labor		**87,300**
3.	**Manufacturing Overhead**	**49,500**	
	Accounts Payable		**49,500**

EXERCISE 2.8 (Continued)

4.	Manufacturing Overhead	14,550	
	Accumulated Depreciation—Equipment		14,550
5.	Depreciation Expense	14,300	
	Accumulated Depreciation—Building		14,300
6.	Work in Process Inventory	72,000	
	Manufacturing Overhead (90% X $80,000)		72,000
7.	Finished Goods Inventory	240,930	
	Work in Process Inventory		240,930

Computation of cost of jobs finished:

Job	Direct Materials	Direct Labor	Manufacturing Overhead (90% x DL$)	Total
A20	$35,240	$18,000	$16,200	$ 69,440
A21	42,920	22,000	19,800	84,720
A23	39,270	25,000	22,500	86,770
				$240,930

LO1, 2, 3, 4 BT: AP Difficulty: Easy TOT: 18 min. AACSB: Analytic AICPA FC: Measurement Analysis and Interpretation IMA: Cost Management

EXERCISE 2.9

(a)

LOPEZ COMPANY
Cost of Goods Manufactured Schedule
For the Month Ended May 31, 2022

Work in process, May 1		$ 14,700
Direct materials used	$62,400	
Direct labor	50,000	
Manufacturing overhead applied	40,000	
Total manufacturing costs		152,400
Total cost of work in process		167,100
Less: Work in process, May 31		15,900
Cost of goods manufactured		$151,200

[($14,700 + ($62,400 + $50,000 + $40,000)) - $15,900 = $151,200]
[(Beg. WIP + (DM + DL + MOH app.)) – End. WIP = COGM]

EXERCISE 2.9 (Continued)

(b)

LOPEZ COMPANY
Income Statement (Partial)
For the Month Ended May 31, 2022

Sales revenue		$215,000
Cost of goods sold		
Finished goods, May 1	$ 12,600	
Cost of goods manufactured	151,200	
Cost of goods available for sale	163,800	
Less: Finished goods, May 31	9,500	
Cost of goods sold		154,300
Gross profit		$ 60,700

(c)

LOPEZ COMPANY
Balance Sheet (Partial)
May 31, 2022

Current assets:		
Finished goods inventory	$ 9,500	
Work in process inventory	15,900	
Raw materials inventory	7,100	$32,500

LO1, 5 BT: AP Difficulty: Easy TOT: 18 min. AACSB: Analytic AICPA FC: Reporting IMA: Reporting

EXERCISE 2.10

(a) Work in Process Inventory

April 30	$ 9,300	(#10, $5,200 + #11, $4,100)
May 31	$18,600	(#11, ($4,100 + $3,900) + #13, $4,700 + #14, $5,900)
June 30	$ 9,500	(#14, $5,900 + $3,600)

[(Apr. 30: $5,200 + $4,100 = $9,300); (May 31: $8,000 + $4,700 + $5,900 = $18,600); (June 30: $5,900 + $3,600 = $9,500)]
[(Apr. 30: Job #10 + Job #11 = End. WIP); (May 31: (Job #11 + Job #13 + Job #14 = End. WIP); (June 30: Job #14 = End. WIP)]

(b) Finished Goods Inventory

April 30	$ 1,200	(#12)
May 31	$ 9,600	(#10)
June 30	$19,200	(#11, $10,000 + #13, $9,200)

EXERCISE 2.10 (Continued)

(c) Gross Profit

Month	Job Number(s)	Sales	Cost of Goods Sold	Gross Profit
May	12	$ 1,500	$ 1,200	$ 300
June	10	12,000	9,600	2,400
July	11/13	24,000	19,200	4,800

[(May: ($1,200 x 125%) - $1,200 = $300); (June: ($9,600 x 125%) - $9,600 = $2,400); (July: ($19,200 x 125%) - $19,200 = $4,800)]
[(May: (CGS x 1 + Markup %) – CGS = GP); (June: (CGS x 1 + Markup %) – CGS = GP); (July: (CGS x 1 + Markup %) – CGS = GP)]
LO2, 4 BT: AP Difficulty: Moderate TOT: 12 min. AACSB: Analytic AICPA FC: Measurement Analysis and Interpretation, Reporting IMA: Cost management, Reporting

EXERCISE 2.11

(a)

1.	Supplies	1,800	
	Accounts Payable.....		1,800
2.	Service Contracts in Process	720	
	Operating Overhead	480	
	Supplies		1,200
3.	Service Contracts in Process	56,000	
	Operating Overhead	14,000	
	Salaries and Wages.....		70,000
4.	Operating Overhead	40,000	
	Cash		40,000
5.	Service Contracts in Process ($56,000 X 90%).....	50,400	
	Operating Overhead		50,400
6.	Cost of Completed Service Contracts.....	75,000	
	Service Contracts in Process ...		75,000

EXERCISE 2.11 (Continued)

(b)

Service Contracts in Process			
2.	720	75,000	6.
3.	56,000		
5.	50,400		
	32,120		

LO1, 3, 4 BT: AP Difficulty: Easy TOT: 15 min. AACSB: Analytic AICPA FC: Measurement Analysis and Interpretation IMA: Cost Management

EXERCISE 2.12

(a)

	Waters	Renolds	Bayfield
Direct materials	$ 600	$ 400	$ 200
Auditor labor costs	5,400	6,600	3,375
Applied overhead*	3,600	4,400	2,250
Total cost	$9,600	$11,400	$5,825

*Waters: 72 x $50 = $3,600 Renolds: 88 x $50 = $4,400 Bayfield: 45 x $50 = $2,250
[(Waters app. OH: 72 x $50 = $3,600); (Renolds app. OH: 88 x $50 = $4,400); (Bayfield app. OH: 45 x $50 = $2,250)]
[(Waters app. OH: (Auditor hrs. x Predet. OH rate = App. OH); (Renolds app. OH: (Auditor hrs. x Predet. OH rate = App. OH); (Bayfield app. OH: (Auditor hrs. x Predet. OH rate = App. OH)]

(b) The Waters job is the only incomplete job, therefore, $9,600.

(c)

Actual overhead	$11,000 (DR)
Applied overhead	10,250 (CR)
Balance (underapplied)	$ 750 (DR)

[$11,000 – ($3,600 + $4,400 + $2,250) = $750]
[Act. OH – (Waters app. OH + Renolds app. OH + Bayfield app. OH) = Underapp. OH]
LO2, 3, 4 BT: AP Difficulty: Easy TOT: 8 min. AACSB: Analytic AICPA FC: Measurement Analysis and Interpretation IMA: Cost Management

EXERCISE 2.13

(a) Predetermined overhead rate = Estimated overhead ÷ Estimated decorator hours
= $960,000 ÷ 40,000 decorator hours
= $24 per decorator hour

(b) Service Contracts in Process (40,500 hrs X $24)..... 972,000
Operating Overhead..... 972,000

EXERCISE 2.13 (Continued)

(c)	**Actual overhead**	**$982,800**	**(DR)**
	Applied overhead	**972,000**	**(CR)**
	Balance (underapplied)	**$ 10,800**	**(DR)**

[$982,800 – (40,500 x $24) = $10,800]
[Act. OH – (Act. dec. hrs. x Predet. OH rate) = Underapp. OH]
LO3, 5 BT: AP Difficulty: Easy TOT: 8 min. AACSB: Analytic AICPA FC: Measurement Analysis and Interpretation IMA: Cost Management

SOLUTIONS TO PROBLEMS

PROBLEM 2.1

(a) $840,000 ÷ $700,000 direct labor costs = 120% of direct labor costs
($840,000 ÷ $700,000 = 120% of DL cost)
(Est. OH costs ÷ Est. DL cost = Predet. OH rate)

(b) See solution to part (e) for job cost sheets

(c)	**Raw Materials Inventory**	**90,000**	
	Accounts Payable		**90,000**
	Factory Labor	**70,000**	
	Payroll Liabilities		**54,000**
	Manufacturing Overhead	**28,000**	
	Accounts Payable		**16,000**
	Accumulated Depreciation—Equipment		**12,000**
(d)	**Work in Process Inventory**	**79,000**	
	Manufacturing Overhead	**17,000**	
	Raw Materials Inventory ($10,000 + $39,000 + $30,000 + $17,000)		**96,000**
	Work in Process Inventory	**50,000**	
	Manufacturing Overhead	**20,000**	
	Factory Labor ($5,000 + $25,000 + $20,000 + $20,000)		**70,000**
	Work in Process Inventory	**60,000**	
	Manufacturing Overhead ($50,000 x 120% of direct labor costs)		**60,000**

See solution to part (e) for postings to job cost sheets.

PROBLEM 2.1 (Continued)

(b)&(e) Job Cost Sheets

Job No. 50

Date	Direct Materials	Direct Labor	Manufacturing Overhead
Beg.	$20,000	$12,000	$16,000
Jan.	10,000	5,000	6,000*
	$30,000	$17,000	$22,000

Cost of completed job	
Direct materials	$30,000
Direct labor	17,000
Manufacturing overhead	22,000
Total cost	$69,000

***$5,000 x 120%**

[Job #50: $5,000 x 120% = $6,000]
[Job #50: DL cost x Predet. OH rate = App. OH]

Job No. 51

Date	Direct Materials	Direct Labor	Manufacturing Overhead
Jan.	$39,000	$25,000	$30,000**
	$39,000	$25,000	$30,000

Cost of completed job	
Direct materials	$39,000
Direct labor	25,000
Manufacturing overhead	30,000
Total cost	$94,000

****$25,000 x 120%**

[Job #51: $25,000 x 120% = $30,000]
[Job #51: DL cost x Predet. OH rate = App. OH]

Job No. 52

Date	Direct Materials	Direct Labor	Manufacturing Overhead
Jan.	$30,000	$20,000	$24,000***

*****$20,000 x 120%**

[Job #52: $20,000 x 120% = $24,000]
[Job #52: DL cost x Predet. OH rate = App. OH]

PROBLEM 2.1 (Continued)

	Finished Goods Inventory	**163,000**	
	Work in Process Inventory ($69,000 + $94,000)		**163,000**
(f)	**Accounts Receivable**	**280,000**	
	Sales Revenue ($122,000 + $158,000)		**280,000**
	Cost of Goods Sold	**159,000**	
	Finished Goods Inventory ($90,000 + $69,000)		**159,000**

(g)

Finished Goods Inventory

Beginning balance	**90,000**	**159,000**	**Cost of jobs 49 and 50 sold**
Cost of completed jobs 50 and 51	**163,000**		
Ending balance	**94,000**		

The balance in this account consists of the cost of completed Job No. 51 which has not yet been sold.

[$90,000 + ($69,000 + $94,000) – ($90,000 + $69,000) = $94,000]
[Beg. bal. + (Cost of compltd. jobs 50 & 51) – (Cost of jobs 49 & 50 sold) = End. bal.]

(h)

Manufacturing Overhead

Actual	**Applied**
65,000	**60,000**
5,000	

The balance in the Manufacturing Overhead account is underapplied.

[$65,000 – ($6,000 + $30,000 + $24,000) = $5,000]
[Act. MOH – (MOH app. To jobs #50, #51, & #52) = MOH underapp.]
LO1, 2, 3, 4, 5 BT: AP Difficulty: Easy TOT: 40 min. AACSB: Analytic AICPA FC: Measurement Analysis and Interpretation IMA: Cost Management

PROBLEM 2.2

(a)

Work in Process Inventory

1/1	Balance (1)	128,400	Completed work (5) (c)	386,200
	Direct materials (2)	131,000		
	Direct labor (3)	139,000		
	Manufacturing overhead (4)	166,800		
12/31	Balance	179,000		

(1)

Job 7640	$ 77,800
Job 7641	50,600
	$128,400

(2)

Job 7640	$ 30,000
Job 7641	43,000
Job 7642	58,000
	$131,000

(3)

Job 7640	$ 36,000
Job 7641	48,000
Job 7642	55,000
	$139,000

(4)

Job 7640	$ 43,200
Job 7641	57,600
Job 7642	66,000
	$166,800

(5) (a) Job 7640

Beginning balance	$ 77,800
Direct materials	30,000
Direct labor	36,000
Manufacturing overhead	43,200
	$187,000

(b) Job 7641

Beginning balance	$ 50,600
Direct materials	43,000
Direct labor	48,000
Manufacturing overhead	57,600
	$199,200

(c) Total cost of completed work

Job 7640	$187,000
Job 7641	199,200
	$386,200

PROBLEM 2.2 (Continued)

Work in process balance	**$179,000**
Unfinished job No. 7642	**$179,000***

* **Current year's cost**

Direct materials	**$ 58,000**
Direct labor	**55,000**
Manufacturing overhead	**66,000**
	$179,000

[($77,800 + $50,600) + ($30,000 + $43,000 + $58,000) + ($36,000 + $48,000 + $55,000) + ($43,200 + $57,600 + $66,000) – ($187,000 + $199,200) = $179,000]
[Beg. WIP bal. + DM + DL + App. OH – Cost of compltd. jobs 7640 & 7641 = End. WIP bal.]

(b) Actual overhead costs

Incurred on account	**$120,000**
Indirect materials	**14,000**
Indirect labor	**18,000**
Depreciation	**8,000**
	$160,000

Applied overhead costs

Job 7640	**$ 43,200**
Job 7641	**57,600**
Job 7642	**66,000**
	$166,800

Actual overhead	**$160,000**
Applied overhead	**166,800**
Overapplied overhead	**$ 6,800**

Manufacturing Overhead	**6,800**	
Cost of Goods Sold		**6,800**

[($120,000 + $14,000 + $18,000 + $8,000) – ($43,200 + $57,600 + $66,000) = $6,800]
[(OH incurred on acct. + Ind. Mat. + Ind. Labor + Depr.) – (App. OH to jobs #7640 + #7641 + #7642) = Overapp. OH]

PROBLEM 2.2 (Continued)

CINTA COMPANY
Income Statement (Partial)
For the Year Ended December 31, 2022

(c)	**Sales revenue (given)**		**$530,000**
	Cost of goods sold		
	Add: Job 7638	**$ 87,000**	
	Job 7639	**92,000**	
	Job 7641	**199,200**	
		378,200	
	Less: Overapplied overhead	**6,800**	**371,400**
	Gross profit		**$158,600**

LO1, 2, 3, 4, 5 BT: AP Difficulty: Moderate TOT: 40 min. AACSB: Analytic AICPA FC: Measurement Analysis and Interpretation, Reporting IMA: Cost Management, Reporting

PROBLEM 2.3

(a)

(1)	**Raw Materials Inventory**	**4,900**	
	Accounts Payable		**4,900**
	Factory Labor	**4,800**	
	Cash		**4,800**
	Manufacturing Overhead	**1,300**	
	Accumulated Depreciation—Equipment		**900**
	Accounts Payable		**400**
(2)	**Work in Process Inventory**	**4,900**	
	Manufacturing Overhead	**1,500**	
	Raw Materials Inventory		**6,400**
	Work in Process Inventory	**3,600**	
	Manufacturing Overhead	**1,200**	
	Factory Labor		**4,800**
	Work in Process Inventory ($3,600 X 1.25)	**4,500**	
	Manufacturing Overhead		**4,500**
(3)	**Finished Goods Inventory**	**14,740**	
	Work in Process Inventory		**14,740**

Job	Direct Materials	Direct Labor	Manufacturing Overhead*	Total Costs
Rogers	$1,700	$1,560	$1,950	$ 5,210
Stevens	1,300	900	1,125	3,325
Linton	2,200	1,780	2,225	6,205
				$14,740

***125% X direct labor amount**

	Cash	**18,900**	
	Sales revenue		**18,900**
	Cost of Goods Sold	**14,740**	
	Finished Goods Inventory		**14,740**

PROBLEM 2.3 (Continued)

(b)

Work in Process Inventory

6/1	Balance	5,540	June	Completed work	14,740
	Direct materials	4,900			
	Direct labor	3,600			
	Overhead applied	4,500			
6/30	Balance	3,800			

(c) Work in Process Inventory $3,800

Job: Koss (Direct materials $2,000 + Direct labor $800 + Manufacturing overhead $1,000) $3,800

(d)

CASE INC.
Cost of Goods Manufactured Schedule
For the Month Ended June 30, 2022

Work in process, June 1		$ 5,540
Direct materials used	$4,900	
Direct labor	3,600	
Manufacturing overhead applied	4,500	
Total manufacturing costs		13,000
Total cost of work in process		18,540
Less: Work in process, June 30		3,800
Cost of goods manufactured		$14,740

[($5,540 + ($4,900 + $3,600 + $4,500)) - $3,800 = $14,740]
[(Beg. WIP + (DM used + DL + MOH app.)) – End. WIP = COGM]
LO1, 2, 3, 4, 5 BT: AP Difficulty: Easy TOT: 40 min. AACSB: Analytic AICPA FC: Measurement Analysis and Interpretation, Reporting IMA: Cost Management, Reporting

PROBLEM 2.4

(a) **Department D: $1,200,000 ÷ $1,500,000 = 80% of direct labor cost.**
Department E: $1,500,000 ÷ 125,000 = $12.00 per direct labor hour.
Department K: $900,000 ÷ 120,000 = $7.50 per machine hour.

(b)

	Department		
Manufacturing Costs	**D**	**E**	**K**
Direct materials	**$140,000**	**$126,000**	**$ 78,000**
Direct labor	**120,000**	**110,000**	**37,500**
Overhead applied	**96,000***	**132,000****	**78,000*****
Total	**$356,000**	**$368,000**	**$193,500**

***$120,000 X 80%**
****11,000 X $12.00**
*****10,400 X $7.50**

(c)

	Department		
Manufacturing Overhead	**D**	**E**	**K**
Incurred	**$99,000**	**$124,000**	**$79,000**
Applied	**96,000**	**132,000**	**78,000**
Under (over) applied	**$ 3,000**	**$ (8,000)**	**$ 1,000**

[(D: $99,000 – ($120,000 x 80%) = $3,000); (E: $124,000 – (11,000 x $12) = ($8,000)); (K: $79,000 – (10,400 x $7.50) = $1,000)]
[(D: Act. MOH – (DL cost x Predet. MOH rate) = Underapp. MOH); (E: Act. MOH – (Act. DL hrs. x Predet. MOH rate) = Overapp. MOH); (K: Act. MOH – (Act. MH x Predet. MOH rate) = Underapp. MOH)]
LO3, 5 BT: AP Difficulty: Easy TOT: 25 min. AACSB: Analytic AICPA FC: Measurement Analysis and Interpretation IMA: Cost Management

CT2.5 ETHICS CASE

(a) The stakeholders in this situation are:

- **Alice Reiley, controller for LRF Printing.**
- **The president of LRF Printing.**
- **The customers of LRF Printing.**
- **The competitors of LRF Printing.**

(b) Padding cost-plus contracts is both unethical and illegal. Alice is faced with an ethical dilemma. She will be in trouble with the president if she doesn't follow his directive, and she will be committing an unethical act if she does follow his instructions.

(c) Alice should continue to accurately account for cost-plus contracts and, if challenged by the president, she should say that she is doing her very best to charge each and every legitimate cost to the cost-plus contracts.

LO N/A BT: E Difficulty: Easy TOT: 15 min. AACSB: Ethics AICPA FC: Reporting AICPA PC: Ethical Conduct, Communication IMA: Business Applications

CT2.6 ALL ABOUT YOU

The 10 steps for starting a business are:

1. **Conduct market research**
2. **Write your business plan**
3. **Fund your business**
4. **Pick your business location**
5. **Choose a business structure**
6. **Choose your business name**
7. **Register your business**
8. **Get federal and state tax IDs**
9. **Apply for licenses and permits**
10. **Open a business bank account**

LO N/A BT: E Difficulty: Easy TOT: 15 min. AACSB: Technology AICPA FC: Reporting AICPA PC: Communication IMA: Reporting

CT2.7 CONSIDERING YOUR COSTS AND BENEFITS

Discussion guide: The situation presented is a difficult one because you are presently receiving some help for free. It would seem that the best strategy is to price your services based on what it would cost you to do the landscape business without any free help. In the long run, it is going to be impossible to continue unless you can cover these costs. In addition, if you underprice your services today, your customers may expect your prices will remain as low in the future. That probably cannot happen, given that your costs will increase substantially after the first two years. However, we should note that it is not unusual to start a small business with some assets available to you. Then, as your business grows, you acquire additional assets to meet your needs. After all, you may need a low price to get started, and as you gain experience you will be able to charge more or become more efficient.

So what to do? Let's address your old truck first. You should treat the truck as an asset owned by your business. Record it on your books at its fair value, and depreciate it over a reasonable life. This will result in an overhead charge. You need to cover the cost of that truck, as you will have to buy another one someday. The land, barn, and your mother's services are a little more difficult. If you rented the land and barn and if you paid an assistant, all of these costs would be charged to overhead. (The assistant would be indirect labor.) You are currently getting all these services for free. This is a good situation now, and you may need this situation early in your business to help you get started. But you should recognize that even if you run your business profitably for the first two years, you may have problems beginning in the third year. Thus, it would seem prudent to establish a budget based on both scenarios for the first two years. If you can charge based on your expected costs in the future, do so. If that is not realistic, because you need to establish yourself and get more experience, then charge less. But be sure from the start to cover a reasonable amount of your costs, or the business does not make sense for you financially.

LO2, 3, 4 BT: E Difficulty: Moderate TOT: 25 min. AACSB: Reflective Thinking, Communication AICPA FC: Measurement Analysis and Interpretation, Reporting, AICPA PC: Communication IMA: Cost Management, Reporting

