

# CHAPTER 20

## Job Order Cost Accounting

### ASSIGNMENT CLASSIFICATION TABLE

<u>Study Objectives</u>	<u>Questions</u>	<u>Brief Exercises</u>	<u>Exercises</u>	<u>A Problems</u>	<u>B Problems</u>
1. Explain the characteristics and purposes of cost accounting.	1, 2, 3, 4				
2. Describe the flow of costs in a job order cost accounting system.	5, 6, 7, 8, 11, 12	1, 2, 3, 4	1, 2, 3, 4, 6, 7, 8, 9, 11	1A, 2A, 3A, 5A	1B, 2B, 3B, 5B
3. Explain the nature and importance of a job cost sheet.	9, 10, 11, 12	5	1, 2, 3, 6, 7, 8, 10, 12	1A, 2A, 3A, 5A	1B, 2B, 3B, 5B
4. Indicate how the predetermined overhead rate is determined and used.	13, 14, 15	6, 7	2, 3, 5, 6, 7, 8, 11, 12, 13	1A, 2A, 3A, 4A, 5A	1B, 2B, 3B, 4B, 5B
5. Prepare entries for jobs completed and sold.	16	8	2, 3, 4, 6, 7, 8, 9, 10, 11	1A, 2A, 3A, 5A	1B, 2B, 3B, 5B
6. Distinguish between under- and overapplied manufacturing overhead.	17, 18	9	5, 12, 13	1A, 2A, 4A, 5A	1B, 2B, 4B, 5B

## ASSIGNMENT CHARACTERISTICS TABLE

<b>Problem Number</b>	<b>Description</b>	<b>Difficulty Level</b>	<b>Time Allotted (min.)</b>
1A	Prepare entries in a job cost system and job cost sheets.	Simple	30–40
2A	Prepare entries in a job cost system and partial income statement.	Moderate	30–40
3A	Prepare entries in a job cost system and cost of goods manufactured schedule.	Simple	30–40
4A	Compute predetermined overhead rates, apply overhead, and calculate under- or overapplied overhead.	Simple	20–30
5A	Analyze manufacturing accounts and determine missing amounts.	Complex	30–40
1B	Prepare entries in a job cost system and job cost sheets.	Simple	30–40
2B	Prepare entries in a job cost system and partial income statement.	Moderate	30–40
3B	Prepare entries in a job cost system and cost of goods manufactured schedule.	Simple	30–40
4B	Compute predetermined overhead rates, apply overhead, and calculate under- or overapplied overhead.	Simple	20–30
5B	Analyze manufacturing accounts and determine missing amounts.	Complex	30–40

# BLOOM'S TAXONOMY TABLE

Correlation Chart between Bloom's Taxonomy, Study Objectives and End-of-Chapter Exercises and Problems

Study Objective	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
1. Explain the characteristics and purposes of cost accounting.		Q20-1 Q20-2				
2. Describe the flow of costs in a job order cost accounting system.	Q20-5 Q20-7 Q20-8 Q20-12	Q20-6 BE20-1	BE20-2 E20-3 BE20-3 E20-6 BE20-4 E20-7 E20-1 E20-8 E20-2 E20-9	E20-11 E20-4 P20-1A P20-2A P20-3A P20-5A P20-1B P20-2B P20-3B P20-5B		
3. Explain the nature and importance of a job cost sheet.	Q20-11 Q20-12	Q20-9 Q20-10	BE20-5 E20-7 E20-1 E20-8 E20-2 E20-10 E20-3 E20-12 E20-6 E20-1A	E20-3A P20-2A P20-1B P20-5A P20-3B P20-2B P20-5B		
4. Indicate how the predetermined overhead rate is determined and used.	Q20-15	Q20-13 Q20-14	BE20-6 E20-8 BE20-7 E20-11 E20-2 E20-12 E20-3 E20-13 E20-6 P20-1A E20-7 P20-3A	E20-4A P20-1B P20-2A P20-3B P20-5A P20-4B P20-2B P20-5B		
5. Prepare entries for jobs completed and sold.		Q20-16	BE20-8 E20-8 E20-2 E20-9 E20-3 E20-10 E20-6 E20-11 E20-7 P20-1A	E20-4 P20-5B P20-2A P20-5A P20-2B		
6. Distinguish between under- and overapplied manufacturing overhead.		Q20-17 Q20-18 BE20-9	E20-12 E20-13 P20-1A	E20-5 P20-2B P20-4A P20-5B P20-4B P20-5A		
Broadening Your Perspective		Communication Real-World Focus Exploring the Web		Managerial Analysis		All About You Decision Making Across the Organization Ethics Case

# 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.
2. (a) The two principal types of cost accounting systems are: (1) job order costing and (2) process costing. 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 may use both types of systems. For example, General Motors uses process costing for standard model cars and job order costing for custom-made vehicles.
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, nontransferable 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.
4. A process cost system is most likely to be used by manufacturing firms 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.
5. The major steps in the flow of costs in a job order cost accounting system are: (1) accumulating the manufacturing costs incurred and (2) assigning the accumulated costs to work done.
6. The three inventory control accounts and their subsidiary ledgers are:  
 Raw materials inventory—materials inventory records (stores ledger cards).  
 Work in process inventory—job cost sheets.  
 Finished goods inventory—finished goods records.
7. The source documents used in accumulating direct labor costs are time tickets and time cards.
8. Disagree. 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.
9. The source document for materials is the materials requisition slip and the source document for labor is the time ticket. The entries are:

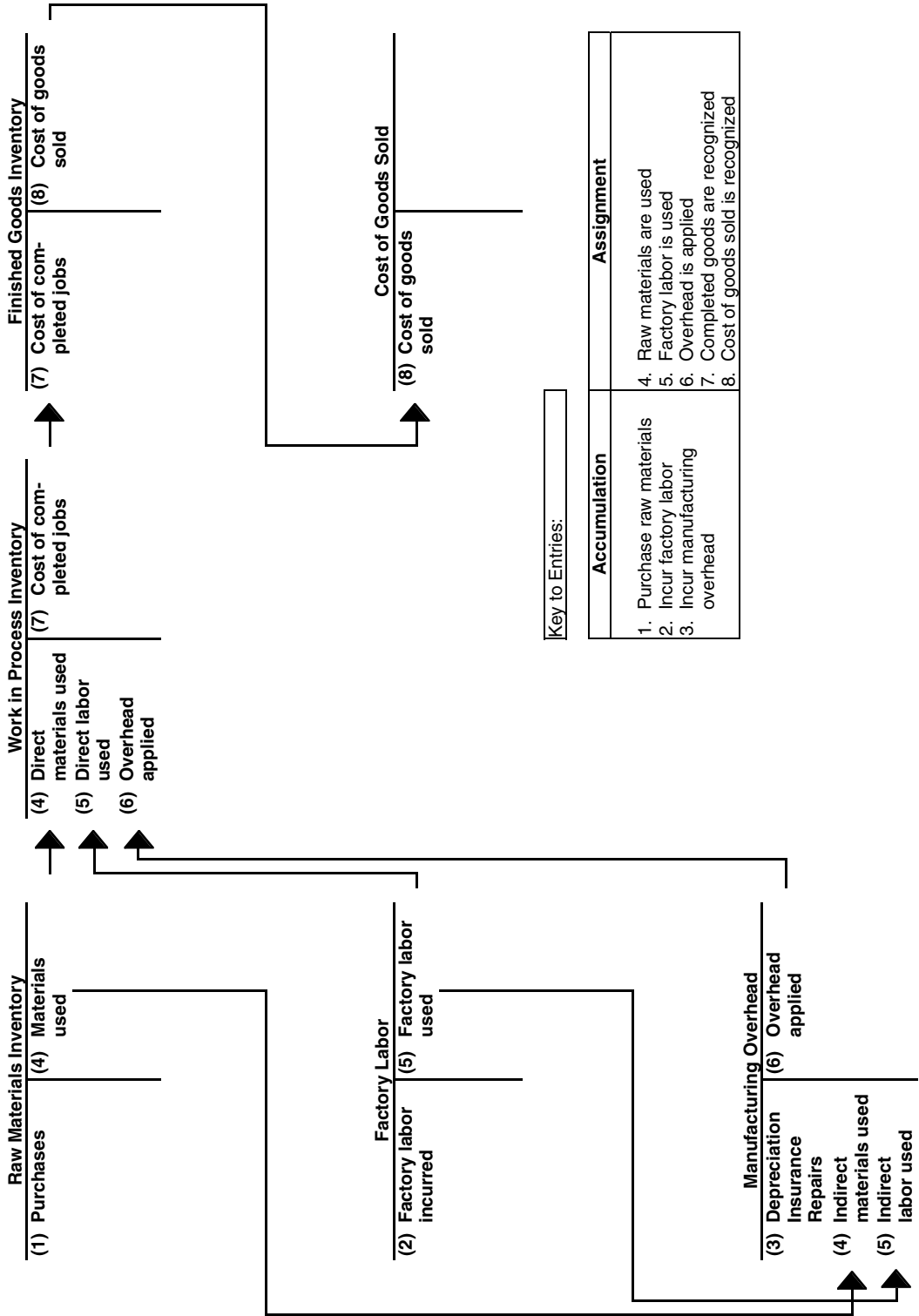
Materials			Labor		
Work in Process Inventory	XX		Work in Process Inventory	XX	
Manufacturing Overhead	XX		Manufacturing Overhead	XX	
Raw Materials Inventory		XX	Factory Labor		XX

## Questions Chapter 20 (Continued)

10. 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.
11. 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.
12. A materials inventory record, also called the stores ledger card, is used in a perpetual inventory system as a record of individual parts, units, assemblies, or other materials (direct as well as indirect). The materials inventory record is the basic inventory record in the subsidiary ledger. 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.
13. Disagree. 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.
14. The relationships 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.
15. 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.
16. Tina is incorrect. There is a difference in computing total manufacturing costs. In job order costing, manufacturing overhead applied is used, whereas in Chapter 19, actual manufacturing overhead is used.
17. 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.
18. 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.

# SOLUTIONS TO BRIEF EXERCISES

## BRIEF EXERCISE 20-1



Key to Entries:

Accumulation	Assignment
1. Purchase raw materials 2. Incur factory labor 3. Incur manufacturing overhead	4. Raw materials are used 5. Factory labor is used 6. Overhead is applied 7. Completed goods are recognized 8. Cost of goods sold is recognized

**BRIEF EXERCISE 20-2**

Jan. 31	Raw Materials Inventory.....	4,000	
	Accounts Payable.....		4,000
31	Factory Labor .....	5,000	
	Factory Wages Payable.....		4,200
	Employer Payroll Taxes Payable.....		800
31	Manufacturing Overhead .....	2,000	
	Utilities Payable .....		2,000

**BRIEF EXERCISE 20-3**

Jan. 31	Work in Process Inventory.....	2,800	
	Manufacturing Overhead .....	600	
	Raw Materials Inventory.....		3,400

**BRIEF EXERCISE 20-4**

Jan. 31	Work in Process Inventory.....	4,200	
	Manufacturing Overhead .....	800	
	Factory Labor.....		5,000

**BRIEF EXERCISE 20-5**

Job 1		
Date	Direct Materials	Direct Labor
1/31	900	
1/31		1,200

Job 2		
Date	Direct Materials	Direct Labor
1/31	1,200	
1/31		1,600

Job 3		
Date	Direct Materials	Direct Labor
1/31	700	
1/31		1,400

### BRIEF EXERCISE 20-6

Overhead rate per direct labor cost is 160%, or  $(\$800,000 \div \$500,000)$ .

Overhead rate per direct labor hour is \$16, or  $(\$800,000 \div 50,000)$ .

Overhead rate per machine hour is \$8, or  $(\$800,000 \div 100,000)$ .

### BRIEF EXERCISE 20-7

Jan. 31	Work in Process Inventory .....	36,000	
	Manufacturing Overhead.....		36,000
	(\$40,000 X 90%)		
Feb. 28	Work in Process Inventory .....	27,000	
	Manufacturing Overhead.....		27,000
	(\$30,000 X 90%)		
Mar. 31	Work in Process Inventory .....	45,000	
	Manufacturing Overhead.....		45,000
	(\$50,000 X 90%)		

### BRIEF EXERCISE 20-8

Mar. 31	Finished Goods Inventory .....	55,000	
	Work in Process Inventory .....		55,000
31	Cash .....	35,000	
	Sales.....		35,000
31	Cost of Goods Sold.....	25,000	
	Finished Goods Inventory.....		25,000

### BRIEF EXERCISE 20-9

<b>Lott Company</b>			
Dec. 31	Cost of Goods Sold.....	1,500	
	Manufacturing Overhead.....		1,500
<b>Perez Company</b>			
Dec. 31	Manufacturing Overhead.....	900	
	Cost of Goods Sold.....		900



# SOLUTIONS TO EXERCISES

## EXERCISE 20-1

(a)	Factory Labor.....	72,000	
	Factory Wages Payable .....		60,000
	Employer Payroll Taxes Payable.....		8,000
	Employer Fringe Benefits Payable.....		4,000
(b)	Work in Process Inventory (\$72,000 X 85%).....	61,200	
	Manufacturing Overhead.....	10,800	
	Factory Labor.....		72,000

## EXERCISE 20-2

(a)	May 31	Work in Process Inventory .....	10,400
		Manufacturing Overhead.....	800
		Raw Materials Inventory .....	11,200
	31	Work in Process Inventory .....	12,500
		Manufacturing Overhead.....	1,200
		Factory Labor .....	13,700
	31	Work in Process Inventory.....	10,000
		(\$12,500 X 80%)	
		Manufacturing Overhead .....	10,000
	31	Finished Goods Inventory.....	7,920
		Work in Process Inventory.....	7,920
		(\$2,000 + \$2,500 + \$1,900 + \$1,520)*	

\*\$1,900 X 80%

(b)		Work in Process Inventory	
	May 1		
	Balance	3,200	May 31
	31	10,400	
	31	12,500	
	31	10,000	
	May 31	Balance	28,180

## EXERCISE 20-2 (Continued)

### Job Cost Sheets

Job No.	Beginning Work in Process	Direct Material	Direct Labor	Manufacturing Overhead*	Total
430	\$1,200	\$3,500	\$ 3,000	\$2,400	\$10,100
431	0	4,400	7,600	6,080	18,080
	<u>\$1,200</u>	<u>\$7,900</u>	<u>\$10,600</u>	<u>\$8,480</u>	<u>\$28,180</u>

\*Direct labor X .80

## EXERCISE 20-3

- (a) 1. \$15,500, or (\$5,000 + \$6,000 + \$4,500).  
 2. Last year 75%, or (\$4,500 ÷ \$6,000); this year 80% (either \$6,400 ÷ \$8,000 or \$3,200 ÷ \$4,000).

(b) Jan. 31	Work in Process Inventory .....	8,000	
	Raw Materials Inventory .....		8,000
31	Work in Process Inventory .....	12,000	
	Factory Labor .....		12,000
31	Work in Process Inventory .....	9,600	
	Manufacturing Overhead .....		9,600
31	Finished Goods Inventory .....	45,100	
	Work in Process Inventory .....		45,100

## EXERCISE 20-4

$$(a) + \$50,000 + \$42,500 = \$155,650$$

$$(a) = \$63,150$$

$$\$155,650 + (b) = \$201,500$$

$$(b) = \$45,850$$

$$\$201,500 - (c) = \$192,300$$

$$(c) = \$9,200$$

## EXERCISE 20-4 (Continued)

[Note: The instructions indicate that manufacturing overhead is applied on the basis of direct labor cost, and the rate is the same in all cases. From Case A, a student should note the overhead rate to be 85%, or  $(\$42,500 \div \$50,000)$ .]

$$(d) = .85 \times \$120,000$$

$$(d) = \$102,000$$

$$\$83,000 + \$120,000 + \$102,000 = (e)$$

$$(e) = \$305,000$$

$$\$305,000 + \$15,500 = (f)$$

$$(f) = \$320,500$$

$$\$320,500 - \$11,800 = (g)$$

$$(g) = \$308,700$$

[Note: (h) and (i) are solved together.]

$$(i) = .85(h)$$

$$\$63,150 + (h) + .85(h) = \$213,000$$

$$1.85(h) = \$149,850$$

$$(h) = \$81,000$$

$$(i) = \$68,850$$

$$(j) = \$213,000 + \$18,000$$

$$(j) = \$231,000$$

$$\$231,000 - (k) = \$222,000$$

$$(k) = \$9,000$$

## EXERCISE 20-5

(a)  $\$2.44$  per machine hour  $(\$305,000 \div 125,000)$ .

(b)  $(\$322,000) - (\$2.44 \times 130,000 \text{ Machine Hours})$   
 $\$322,000 - \$317,200 = \$4,800$  underapplied

(c) Cost of Goods Sold.....	4,800	
Manufacturing Overhead.....		4,800

## EXERCISE 20-6

(a) (1) The source documents are:

Direct materials—Materials requisition slips.

Direct labor—Time tickets.

Manufacturing overhead—Predetermined overhead rate.

(2) The predetermined overhead rate is 125% of direct labor cost. For example, on July 15, the computation is  $\$550 \div \$440 = 125\%$ . The same result is obtained on July 22 and 31.

(3) The total cost is:

Direct materials.....	\$4,825
Direct labor.....	1,360
Manufacturing overhead.....	<u>1,700</u>
	<u>\$7,885</u>

The unit cost is \$3.94 ( $\$7,885 \div 2,000$ ).

(b) July 31	Finished Goods Inventory.....	7,885	
	Work in Process Inventory.....		7,885

## EXERCISE 20-7

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 .....	53,900	
	Factory Wages Payable.....		49,000
	Employer Payroll Taxes Payable .....		4,900
4.	Work in Process Inventory.....	48,000	
	Manufacturing Overhead .....	5,900	
	Factory Labor .....		53,900

**EXERCISE 20-7 (Continued)**

5.	Manufacturing Overhead.....	80,500	
	Accounts Payable.....		80,500
6.	Work in Process Inventory (\$48,000 X 150%).....	72,000	
	Manufacturing Overhead.....		72,000
7.	Finished Goods Inventory .....	88,000	
	Work in Process Inventory .....		88,000
8.	Accounts Receivable.....	103,000	
	Sales.....		103,000
	Cost of Goods Sold.....	75,000	
	Finished Goods Inventory .....		75,000

**EXERCISE 20-8**

1.	Raw Materials Inventory .....	192,000	
	Accounts Payable.....		192,000
	Factory Labor.....	87,300	
	Factory Wages Payable .....		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.....	39,500	
	Accounts Payable.....		39,500
4.	Manufacturing Overhead.....	14,550	
	Accumulated Depreciation—Machinery and Equipment.....		14,550

**EXERCISE 20-8 (Continued)**

5.	Work in Process Inventory.....	64,000	
	Manufacturing Overhead .....		64,000
	(80% X \$80,000)		
6.	Finished Goods Inventory.....	234,430	
	Work in Process Inventory.....		234,430

**Computation of cost of jobs finished:**

<u>Job</u>	<u>Direct Materials</u>	<u>Direct Labor</u>	<u>Manufacturing Overhead</u>	<u>Total</u>
A20	\$35,240	\$18,000	\$14,400	\$ 67,640
A21	42,920	22,000	17,600	82,520
A23	39,270	25,000	20,000	84,270
				<u>\$234,430</u>

**EXERCISE 20-9**

(a) **HANNIFAN MANUFACTURING COMPANY**  
**Cost of Goods Manufactured Schedule**  
**For the Month Ended May 31, 2008**

Work in process, May 1 .....		\$ 14,700
Direct materials used.....	\$62,400	
Direct labor.....	32,000	
Manufacturing overhead applied.....	<u>40,000</u>	
Total manufacturing costs .....		<u>134,400</u>
Total cost of work in process.....		149,100
Less: Work in process, May 31 .....		<u>17,900</u>
Cost of goods manufactured .....		<u>\$131,200</u>

**EXERCISE 20-9 (Continued)**

**(b) HANNIFAN MANUFACTURING COMPANY  
(Partial) Income Statement  
For the Month Ended May 31, 2008**

Sales.....		<b>\$200,000</b>
Cost of goods sold		
Finished goods, May 1 .....	\$ 12,600	
Cost of goods manufactured .....	<u>131,200</u>	
Cost of goods available for sale .....	143,800	
Finished goods, May 31 .....	<u>9,500</u>	
Cost of goods sold .....		<u>134,300</u>
Gross profit.....		<u>\$ 65,700</u>

(c) In the May 31 balance sheet, the manufacturing inventories will be reported in current assets as follows: Finished goods \$9,500, Work in Process \$17,900, and Raw Materials \$7,100.

**EXERCISE 20-10**

**(a) Work in Process Inventory**

April 30	\$9,300	(#10, \$5,200 + #11, \$4,100)
May 31	\$17,600	(#11, \$8,000 + #13, \$4,700 + #14, \$4,900)
June 30	\$8,500	(#14, \$4,900 + \$3,600)

**(b) Finished Goods Inventory**

April 30	\$1,200	(#12)
May 31	\$9,600	(#10)
June 30	\$20,200	(#11, \$11,000 + #13, \$9,200)

**(c) Gross Profit**

<u>Month</u>	<u>Job Number</u>	<u>Sales</u>	<u>Cost of Goods Sold</u>	<u>Gross Profit</u>
May	12	\$ 1,500	\$ 1,200	\$ 300
June	10	12,000	9,600	2,400
July	11/13	25,250	20,200	5,050

**EXERCISE 20-11**

(a)

<u>Transaction Number</u>	<u>Accounts Titles</u>	<u>Debit</u>	<u>Credit</u>
1	Supplies..... Accounts Payable.....	1,500	1,500
2	Work in Process..... Operating Overhead..... Supplies.....	720 480	1,200
3	Work in Process..... Operating Overhead..... Salaries Payable.....	40,000 10,000	50,000
4	Operating Overhead..... Cash.....	40,000	40,000
5	Work in Process (\$40,000 X 90%)..... Operating Overhead.....	36,000	36,000
6	Cost of Completed Work..... Work in Process.....	70,000	70,000

(b)

<b>Work in Process</b>			
2.	720	70,000	(6)
3.	40,000		
5.	36,000		
	6,720		



**EXERCISE 20-12**

(a)	<u>Gonzalez</u>	<u>Navarro</u>	<u>Rojas</u>
Direct materials	\$ 600	\$ 400	\$ 200
Auditor labor costs	5,400	6,600	3,375
Applied overhead	<u>3,960</u>	<u>4,840</u>	<u>2,475</u>
Total cost	<u>\$9,960</u>	<u>\$11,840</u>	<u>\$6,050</u>

(b) The Gonzalez job is the only incomplete job, therefore, \$9,960.

(c) Actual overhead	\$12,000 (DR)
Applied overhead	<u>11,275 (CR)</u>
Balance	<u>\$ 725 (DR)</u>

**EXERCISE 20-13**

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

(b) <u>Applied overhead</u>		
Work in Process (40,500 hrs X \$24).....	972,000	
Operating Overhead.....		972,000

(c) Actual overhead	\$982,800
Applied overhead	<u>972,000</u>
Balance	<u>\$ 10,800</u> underapplied

# SOLUTIONS TO PROBLEMS

<b>PROBLEM 20-1A</b>
----------------------

(a)  $\$1,050,000 \div \$700,000$  direct labor costs = 150% of direct labor costs

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

(c) Raw Materials Inventory .....	90,000	
Accounts Payable .....		90,000
 Factory Labor .....	 65,000	
Employer Payroll Taxes Payable .....		16,000
Factory Wages Payable.....		49,000
 Manufacturing Overhead .....	 71,000	
Raw Materials Inventory .....		17,000
Factory Labor .....		15,000
Accumulated Depreciation.....		19,000
Accounts Payable .....		20,000
 (d) Work in Process Inventory.....	 79,000	
Raw Materials Inventory.....		79,000
(\$10,000 + \$39,000 + \$30,000)		
 Work in Process Inventory.....	 50,000	
Factory Labor .....		50,000
(\$5,000 + \$25,000 + \$20,000)		
 Work in Process Inventory.....	 75,000	
Manufacturing Overhead .....		75,000
(\$50,000 X 150% of direct labor costs)		

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

**PROBLEM 20-1A (Continued)**

(e)

**Job Cost Sheets**

<b>Job No. 50</b>			
<u>Date</u>	<u>Direct Materials</u>	<u>Direct Labor</u>	<u>Manufacturing Overhead</u>
Beg.	\$20,000	\$12,000	\$16,000
Jan.	<u>10,000</u>	<u>5,000</u>	<u>7,500*</u>
	<u>\$30,000</u>	<u>\$17,000</u>	<u>\$23,500</u>
<b>Cost of completed job</b>			
	Direct materials .....		\$30,000
	Direct labor .....		17,000
	Manufacturing overhead .....		<u>23,500</u>
	<b>Total cost .....</b>		<b><u>\$70,500</u></b>

\*\$5,000 X 150%

<b>Job No. 51</b>			
<u>Date</u>	<u>Direct Materials</u>	<u>Direct Labor</u>	<u>Manufacturing Overhead</u>
Jan.	\$39,000	\$25,000	\$37,500**
	<u>\$39,000</u>	<u>\$25,000</u>	<u>\$37,500</u>
<b>Cost of completed job</b>			
	Direct materials .....		\$ 39,000
	Direct labor .....		25,000
	Manufacturing overhead .....		<u>37,500</u>
	<b>Total cost .....</b>		<b><u>\$101,500</u></b>

\*\*\$25,000 X 150%

<b>Job No. 52</b>			
<u>Date</u>	<u>Direct Materials</u>	<u>Direct Labor</u>	<u>Manufacturing Overhead</u>
Jan.	\$30,000	\$20,000	\$30,000***

\*\*\*\$20,000 X 150%

**PROBLEM 20-1A (Continued)**

<b>Finished Goods Inventory</b> .....	<b>172,000</b>	
<b>Work in Process Inventory</b> .....		<b>172,000</b>
(\$70,500 + \$101,500)		
 (f) <b>Cost of Goods Sold</b> .....	 <b>160,500</b>	
<b>Finished Goods Inventory</b> .....		<b>160,500</b>
(\$90,000 + \$70,500)		
 <b>Accounts Receivable</b> .....	 <b>280,000</b>	
<b>Sales</b> .....		<b>280,000</b>
(\$122,000 + \$158,000)		

(g)	<b>Finished Goods Inventory</b>	
Beginning balance	90,000	160,500    Cost of jobs 49 and 50 sold
Cost of completed jobs 50 and 51	172,000	
Ending balance	101,500	

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

(h)	<b>Manufacturing Overhead</b>	
	<u>Actual</u>	<u>Applied</u>
	71,000	75,000
		4,000

The balance in the Manufacturing Overhead account is overapplied.

**PROBLEM 20-2A**

(a)

Work in Process Inventory			
1/1	Balance (1)	128,400	Completed work (5) (c)
	Direct materials (2)	121,000	386,200
	Direct labor (3)	139,000	
	Manufacturing overhead (4)	166,800	
12/31	Balance	169,000	

(1)	Job 7640	\$ 77,800		(3)	Job 7640	\$ 36,000
	Job 7641	50,600			Job 7641	48,000
		<u>\$128,400</u>			Job 7642	<u>55,000</u>
						<u>\$139,000</u>

(2)	Job 7640	\$ 30,000		(4)	Job 7640	\$ 43,200
	Job 7641	43,000			Job 7641	57,600
	Job 7642	48,000			Job 7642	66,000
		<u>\$121,000</u>				<u>\$166,800</u>

(5)	(a)	Job 7640		
		Beginning balance.....	\$ 77,800	
		Direct materials .....	30,000	
		Direct labor.....	36,000	
		Manufacturing overhead .....	43,200	
			<u>\$187,000</u>	

(b)	Job 7641			
		Beginning balance.....	\$ 50,600	
		Direct materials .....	43,000	
		Direct labor.....	48,000	
		Manufacturing overhead .....	57,600	
			<u>\$199,200</u>	

(c)	Total cost of completed work			
		Job 7640.....	\$187,000	
		Job 7641 .....	199,200	
			<u>\$386,200</u>	

**PROBLEM 20-2A (Continued)**

Work in process balance .....		<u>\$169,000</u>
Unfinished job No. 7642 .....		<u>\$169,000</u> (a)
<b>(a) Current year's cost</b>		
Direct materials .....	\$ 48,000	
Direct labor .....	55,000	
Manufacturing overhead .....	<u>66,000</u>	
		<u>\$169,000</u>
<b>(b) Actual overhead costs</b>		
Incurred on account .....		\$120,000
Indirect materials .....		14,000
Indirect labor .....		20,000
Depreciation .....		<u>8,000</u>
		<u>\$162,000</u>
<b>Applied overhead costs</b>		
Job 7640 .....	\$ 43,200	
Job 7641 .....	57,600	
Job 7642 .....	<u>66,000</u>	
		<u>\$166,800</u>
<b>Actual overhead</b> .....		\$162,000
<b>Applied overhead</b> .....		<u>166,800</u>
<b>Overapplied overhead</b> .....		<u>\$ 4,800</u>
<b>Manufacturing Overhead</b> .....	<b>4,800</b>	
<b>Cost of Goods Sold</b> .....		<b>4,800</b>
<b>(c) Sales (given) .....</b>		
		<b>\$530,000</b>
<b>Cost of goods sold</b>		
<b>Add: Job 7638</b> .....	<b>\$ 87,000</b>	
<b>Job 7639</b> .....	<b>92,000</b>	
<b>Job 7641</b> .....	<b><u>199,200</u></b>	
	<b>378,200</b>	
<b>Less: Overapplied overhead</b> .....	<b><u>4,800</u></b>	<b><u>373,400</u></b>
<b>Gross profit</b> .....		<b><u>\$156,600</u></b>

**PROBLEM 20-3A**

(a)			
(i)	Raw Materials Inventory .....	3,900	
	Accounts Payable .....		3,900
	Factory Labor .....	4,800	
	Cash .....		4,800
	Manufacturing Overhead.....	1,100	
	Accumulated Depreciation—Equipment.....		700
	Accounts Payable.....		400
(ii)	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
(iii)	Finished Goods Inventory .....	14,740	
	Work in Process Inventory .....		14,740

Job	Direct Materials	Direct Labor	Manufacturing Overhead*	Total Costs
Fowler	\$1,700	\$1,160	\$1,450	\$ 4,310
Haines	1,300	900	1,125	3,325
Krantz	2,200	2,180	2,725	7,105
				\$14,740

\*125% X direct labor amount

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

**PROBLEM 20-3A (Continued)**

(b)

<b>Work in Process Inventory</b>					
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 .....	<u>\$3,800</u>
Job: Elgin (Direct materials \$2,000 + Direct labor \$800 + Manufacturing overhead \$1,000) .....	<u>\$3,800</u>

(d)

**ENOS INC.**  
**Cost of Goods Manufactured Schedule**  
**For the Month Ended June 30, 2008**

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



<b>PROBLEM 20-4A</b>
----------------------

- (a) Department D:  $\$1,050,000 \div \$1,500,000 = 70\%$  of direct labor cost.  
 Department E:  $\$1,500,000 \div 125,000 = \$12.00$  per direct labor hour.  
 Department K:  $\$840,000 \div 120,000 = \$7.00$  per machine hour.

(b)

<u>Manufacturing Costs</u>	Department		
	D	E	K
Direct materials	\$140,000	\$126,000	\$ 78,000
Direct labor	120,000	110,000	37,500
Overhead applied	<u>84,000*</u>	<u>132,000**</u>	<u>72,800***</u>
<b>Total</b>	<b><u>\$344,000</u></b>	<b><u>\$368,000</u></b>	<b><u>\$188,300</u></b>

\*\$120,000 X 70%

\*\*11,000 X \$12.00

\*\*\*10,400 X \$7.00

(c)

<u>Manufacturing Overhead</u>	Department		
	D	E	K
Incurred	\$89,000	\$124,000	\$74,000
Applied	<u>84,000</u>	<u>132,000</u>	<u>72,800</u>
<b>Under (over) applied</b>	<b><u>\$ 5,000</u></b>	<b><u>\$ (8,000)</u></b>	<b><u>\$ 1,200</u></b>

**PROBLEM 20-5A**

- (a) \$7,600     ( $\$18,850 + \$7,975 - \$19,225$ ).
- (b) \$36,750     [ $\$9,750 + \$15,000 + (80\% \times \$15,000)$ ]. (Given in other data).
- (c) \$16,950     ( $\$18,850 - \$1,900$ ).
- (d) \$7,040     ( $\$8,800 \times 80\%$ ).
- (e) \$12,440     [Given in other data— $\$3,800 + \$4,800 + (80\% \times \$4,800)$ ].
- (f) \$57,100     ( $\$36,750 + \$16,950 + \$8,800 + \$7,040 - \$12,440$ ).
- (g) \$5,000     (Given in other data).
- (h) \$57,100     (See (f) above).
- (i) \$58,100     ( $\$5,000 + \$57,100 - \$4,000$ ).
- (j) \$4,000     (Given in other data).
- (k) \$12,465     (Equal to factory labor incurred).
- (l) \$3,665     ( $\$12,465 - \$8,800$ ).
- (m) \$7,040     ( $\$6,810^* + \$230$ ) or (Same as (d)).

$^*\$1,900 + \$3,665 + \$1,245$

<b>PROBLEM 20-1B</b>
----------------------

(a)  $\$440,000 \div 20,000$  direct labor hours = \$22 per direct labor hour

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

(c)	Raw Materials Inventory .....	45,000	
	Accounts Payable.....		45,000
	Factory Labor.....	31,500	
	Employer Payroll Taxes Payable.....		7,500
	Factory Wages Payable .....		24,000
	Manufacturing Overhead.....	37,500	
	Raw Materials Inventory .....		10,000
	Factory Labor.....		7,500
	Accumulated Depreciation .....		12,000
	Accounts Payable.....		8,000
(d)	Work in Process Inventory .....	40,000	
	Raw Materials Inventory .....		40,000
	(\$5,000 + \$20,000 + \$15,000)		
	Work in Process Inventory .....	24,000	
	Factory Labor.....		24,000
	(\$3,000 + \$12,000 + \$9,000)		
	Work in Process Inventory .....	35,200	
	Manufacturing Overhead.....		35,200
	(200 + 800 + 600) X \$22 per hour		

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

**PROBLEM 20-1B (Continued)**

**(e) Job Cost Sheets**

<b>Job No. 25</b>			
<u>Date</u>	<u>Direct Materials</u>	<u>Direct Labor</u>	<u>Manufacturing Overhead</u>
Beg.	\$10,000	\$6,000	\$ 9,000
Jan.	<u>5,000</u>	<u>3,000</u>	<u>4,400*</u>
	<u>\$15,000</u>	<u>\$9,000</u>	<u>\$13,400</u>
<b>Cost of completed job</b>			
	Direct materials.....		\$15,000
	Direct labor.....		9,000
	Manufacturing overhead.....		<u>13,400</u>
	<b>Total cost .....</b>		<b><u>\$37,400</u></b>

\*\$22 X 200 direct labor hours

<b>Job No. 26</b>			
<u>Date</u>	<u>Direct Materials</u>	<u>Direct Labor</u>	<u>Manufacturing Overhead</u>
Jan.	\$20,000	\$12,000	\$17,600**
	<u>\$20,000</u>	<u>\$12,000</u>	<u>\$17,600</u>
<b>Cost of completed job</b>			
	Direct materials.....		\$20,000
	Direct labor.....		12,000
	Manufacturing overhead.....		<u>17,600</u>
	<b>Total cost .....</b>		<b><u>\$49,600</u></b>

\*\*\$22 X 800 direct labor hours

<b>Job No. 27</b>			
<u>Date</u>	<u>Direct Materials</u>	<u>Direct Labor</u>	<u>Manufacturing Overhead</u>
Jan.	\$15,000	\$9,000	\$13,200***
	<u>\$15,000</u>	<u>\$9,000</u>	<u>\$13,200***</u>

\*\*\*\$22 X 600 direct labor hours

**PROBLEM 20-1B (Continued)**

	87,000	
Finished Goods Inventory .....		
Work in Process Inventory .....		87,000
(\$37,400 + \$49,600)		
(f) Cost of Goods Sold.....	82,400	
Finished Goods Inventory .....		82,400
(\$45,000 + \$37,400)		
Accounts Receivable.....	141,000	
Sales.....		141,000
(\$67,000 + \$74,000)		

	<b>Work in Process</b>		
(g) Beginning balance	25,000	87,000	Cost of completed jobs 25 and 26
Direct materials	40,000		
Direct labor	24,000		
Manufacturing overhead	35,200		
Ending balance	37,200		

The balance in this account consists of the current costs assigned to Job No. 27:

Direct Materials.....	\$15,000
Direct Labor .....	9,000
Manufacturing Overhead.....	<u>13,200</u>
Total costs assigned.....	<u>\$37,200</u>

(h)	<b>Manufacturing Overhead</b>	
	<u>Actual</u>	<u>Applied</u>
	37,500	35,200
	2,300	

The balance in the Manufacturing Overhead account is underapplied.

**PROBLEM 20-2B**

**(a)** Work in Process Inventory

1/1	Balance (1)	115,500	Completed work (5) (c)	333,000
	Direct materials (2)	100,000		
	Direct labor (3)	138,000		
	Manufacturing overhead (4)	172,500		
12/31	Balance	193,000		

<b>(1)</b>	<b>Job 7650</b>	<b>\$ 63,000</b>	<b>(3)</b>	<b>Job 7650</b>	<b>\$ 30,000</b>
	<b>Job 7651</b>	<u><b>52,500</b></u>		<b>Job 7651</b>	<b>40,000</b>
		<u><b>\$115,500</b></u>		<b>Job 7652</b>	<u><b>68,000</b></u>
					<u><b>\$138,000</b></u>

<b>(2)</b>	<b>Job 7650</b>	<b>\$ 32,000</b>	<b>(4)</b>	<b>Job 7650</b>	<b>\$ 37,500</b>
	<b>Job 7651</b>	<b>28,000</b>		<b>Job 7651</b>	<b>50,000</b>
	<b>Job 7652</b>	<u><b>40,000</b></u>		<b>Job 7652</b>	<u><b>85,000</b></u>
		<u><b>\$100,000</b></u>			<u><b>\$172,500</b></u>

<b>(5)</b>	<b>(a)</b>	<b>Job 7650</b>	
		Beginning balance .....	\$ 63,000
		Direct materials .....	32,000
		Direct labor .....	30,000
		Manufacturing overhead .....	<u>37,500</u>
			<u><b>\$162,500</b></u>

<b>(b)</b>	<b>Job 7651</b>		
		Beginning balance .....	\$ 52,500
		Direct materials .....	28,000
		Direct labor .....	40,000
		Manufacturing overhead .....	<u>50,000</u>
			<u><b>\$170,500</b></u>

<b>(c)</b>	<b>Total cost of completed work</b>	
	Job 7650 .....	\$162,500
	Job 7651 .....	<u>170,500</u>
		<u><b>\$333,000</b></u>

**PROBLEM 20-2B (Continued)**

Work in process balance.....		<u>\$193,000</u>
Unfinished job No. 7652 .....		<u>\$193,000</u> (a)
<b>(a) Current year's cost</b>		
Direct materials .....	\$ 40,000	
Direct labor .....	68,000	
Manufacturing overhead .....	<u>85,000</u>	
		<u>\$193,000</u>
<b>(b) Actual overhead costs</b>		
Incurred on account.....		\$126,000
Indirect materials .....		12,000
Indirect labor .....		18,000
Depreciation .....		<u>19,500</u>
		<u>\$175,500</u>
<b>Applied overhead costs</b>		
Job 7650.....		\$ 37,500
Job 7651.....		50,000
Job 7652.....		<u>85,000</u>
		<u>\$172,500</u>
Actual overhead .....		\$175,500
Applied overhead.....		<u>172,500</u>
Underapplied overhead .....		<u>\$ 3,000</u>
Cost of Goods Sold.....	3,000	
Manufacturing Overhead.....		3,000
<b>(c) Sales (given).....</b>		
		<b>\$490,000</b>
Cost of goods sold		
Add: Job 7648 .....	\$ 98,000	
Job 7649 .....	62,000	
Job 7650 .....	<u>162,500</u>	
	322,500	
Add: Underapplied overhead.....	<u>3,000</u>	<u>325,500</u>
Gross profit.....		<u>\$164,500</u>

**PROBLEM 20-3B**

(a)			
(i)	Raw Materials Inventory .....	5,000	
	Accounts Payable .....		5,000
	Factory Labor .....	7,600	
	Cash.....		7,600
	Manufacturing Overhead .....	1,400	
	Cash.....		1,400
(ii)	Work in Process Inventory.....	5,800	
	Manufacturing Overhead.....	1,500	
	Raw Materials Inventory .....		7,300
	Work in Process Inventory.....	5,600	
	Manufacturing Overhead .....	2,000	
	Factory Labor .....		7,600
	Work in Process Inventory.....	4,200	
	(\$5,600 X .75)		
	Manufacturing Overhead .....		4,200
(iii)	Finished Goods Inventory.....	20,525	
	Work in Process Inventory.....		20,525

Job	Direct Materials	Direct Labor	Manufacturing Overhead*	Total Costs
Looper	\$3,000	\$2,400	\$1,800	\$ 7,200
Carpenter	2,600	2,200	1,650	6,450
Ingle	3,200	2,100	1,575	6,875
				<b>\$20,525</b>

\*75% of direct labor amount

Cash.....	37,500	
Sales (3 X \$12,500).....		37,500
Cost of Goods Sold .....	20,525	
Finished Goods Inventory.....		20,525



**PROBLEM 20-3B (Continued)**

(b) **Work in Process Inventory**

5/1	Balance	12,400	5/31	Completed work	20,525
	Direct materials	5,800			
	Direct labor	5,600			
	Overhead applied	4,200			
5/31	Balance	7,475			

(c)

Work in Process Inventory .....	<u>\$7,475</u>
Job: Bennett (Direct materials \$2,400 + Direct labor \$2,900 + Manufacturing overhead \$2,175).....	<u>\$7,475</u>

(d) **CHRIS DUNCAN COMPANY**  
**Cost of Goods Manufactured Schedule**  
**For the Month Ended May 31, 2008**

Work in process, May 1 .....		\$12,400
Direct materials used.....	\$5,800	
Direct labor .....	5,600	
Manufacturing overhead applied.....	<u>4,200</u>	
Total manufacturing costs.....		<u>15,600</u>
Total cost of work in process .....		28,000
Less: Work in process, May 31 .....		<u>7,475</u>
Cost of goods manufactured .....		<u>\$20,525</u>

<b>PROBLEM 20-4B</b>
----------------------

- (a) Department A:  $\$900,000 \div \$600,000 = 150\%$  of direct labor cost.  
 Department B:  $\$800,000 \div 40,000 = \$20.00$  per direct labor hour.  
 Department C:  $\$750,000 \div 125,000 = \$6.00$  per machine hour.

(b)

	Department		
Manufacturing Costs	A	B	C
Direct materials	\$ 92,000	\$ 86,000	\$ 64,000
Direct labor	48,000	35,000	50,400
Overhead applied	<u>72,000*</u>	<u>70,000**</u>	<u>75,600***</u>
<b>Total</b>	<b><u>\$212,000</u></b>	<b><u>\$191,000</u></b>	<b><u>\$190,000</u></b>

\*\$48,000 X 150%

\*\*3,500 X \$20

\*\*\*12,600 X \$6.00

(c)

	Department		
Manufacturing Overhead	A	B	C
Incurred	\$76,000	\$75,000	\$72,100
Applied	<u>72,000</u>	<u>70,000</u>	<u>75,600</u>
<b>Under (over) applied</b>	<b><u>\$ 4,000</u></b>	<b><u>\$ 5,000</u></b>	<b><u>\$ (3,500)</u></b>

**PROBLEM 20-5B**

- (a) \$78,900 (\$70,000 + \$8,900).
- (b) \$30,500 [(\$19,000 + \$90,400) – \$78,900 (See (a))].
- (c) \$27,200 (Given in other data—\$19,000 + \$8,200).
- (d) \$80,000 (\$104,000 manufacturing overhead applied ÷ 130%).
- (e) \$104,000 (Manufacturing overhead applied).
- (f) \$275,750 [\$27,200 + \$70,000 + \$80,000 + \$104,000 – \$5,450 (See (g))].
- (g) \$5,450 [\$2,000 + \$1,500 + (\$1,500 X 130%)].
- (h) \$135,000 (Given in other data).
- (i) \$275,750 (Same as (f)).
- (j) \$267,750 [\$135,000 + \$275,750 – \$143,000 (Given in other data)].
- (k) \$143,000 (Given in other data).
- (l) \$96,000 [\$80,000 (See (d)) + \$16,000].
- (m) \$96,000 (Same as (l)).
- (n) \$82,100 [\$104,000 + \$3,000 (Given in other data) – \$8,900 – \$16,000].

- (a) The manufacturing cost element that is responsible for the fluctuating unit costs is manufacturing overhead. Manufacturing overhead is being included as incurred rather than being applied on a predetermined basis. Direct materials and direct labor are not the cause as they have the same unit cost per batch in each quarter.
- (b) The solution is to apply overhead using a predetermined overhead rate based on a relevant basis of production activity. Based on actual overhead incurred and using batches of product TC-1 as the activity base, the overhead rate is \$15,000 per batch  $[(\$105,000 + \$123,000 + \$97,000 + \$125,000) \div 30]$ . Another approach would be to use direct labor cost as the relevant basis to apply overhead on a predetermined basis. For example, a rate of 125% of direct labor cost  $(\$450,000 \div \$360,000)$  could be used. Either approach will provide the same result.
- (c) The quarterly results using a predetermined overhead rate based on batches produced are as follows:

Costs	Quarter			
	1	2	3	4
Direct materials	\$100,000	\$220,000	\$ 80,000	\$200,000
Direct labor	60,000	132,000	48,000	120,000
Manufacturing overhead Applied (\$15,000 X batches)	<u>75,000</u>	<u>165,000</u>	<u>60,000</u>	<u>150,000</u>
Total	<u>\$235,000</u>	<u>\$517,000</u>	<u>\$188,000</u>	<u>\$470,000</u>
Production in batches	<u>5</u>	<u>11</u>	<u>4</u>	<u>10</u>
Unit cost (per batch)	<u>\$ 47,000</u>	<u>\$ 47,000</u>	<u>\$ 47,000</u>	<u>\$ 47,000</u>

(Note: The unit cost of a batch remains the same in each quarter. Both sales and production should be pleased with this solution to fluctuating unit costs.)

1. (a) **Work in Process Inventory** ..... 25,000  
**Raw Materials Inventory** ..... 25,000
- (b) **If not corrected, the balance sheet is affected. Cash is understated and Raw Materials Inventory is overstated.**
2. (a) **Sales Bonus Expense** ..... 12,000  
**Cash** ..... 12,000
- (b) **Both the income statement and the balance sheet are affected. In the income statement, Sales Bonus Expense is understated, Income Tax Expense is overstated, and net income is overstated. The error causes the underapplied overhead to be overstated or the overapplied overhead to be understated. This affects Cost of Goods Sold, since the over- or underapplied balance is closed out to Cost of Goods Sold. The error in Cost of Goods Sold also has an effect on Retained Earnings. Also, Retained Earnings is overstated because of the overstatement of net income, and Income Taxes Payable is overstated.**
3. (a) **Factory Labor**..... 120,000  
**Factory Wages Payable** ..... 105,000  
**Employer Payroll Taxes Payable** ..... 15,000
- (b) **If not corrected, both the income statement and the balance sheet are affected. On the income statement, Cost of Goods Sold is understated and Wages Expense is overstated. On the balance sheet, Cash, Factory Wages Payable, and Employer Payroll Taxes Payable are understated.**

**BYP 20-2 (Continued)**

4. (a)	Manufacturing Overhead.....	3,000	
	Raw Materials Inventory .....		3,000

(b) Both the income statement and balance sheet are affected. If units that were in process during the month have been sold, then in the income statement Cost of Goods Sold is overstated, Income Tax Expense is understated, and net income is understated. This causes the Retained Earnings and Income Taxes Payable in the balance sheet to be understated. Also the error causes underapplied overhead to be understated or overapplied overhead to be overstated. This affects Cost of Goods Sold, since the over- or underapplied balance is closed out to Cost of Goods Sold. The error in Cost of Good Sold also has an affect on Retained Earnings.

- (a) The advantages of job order costing include the following:
1. **Accurate costing results because actual costs of direct materials and direct labor are assigned to each job.**
  2. **A comparison of actual costs with costs estimated in the company's bid provides a basis for controlling job costs and improving operating efficiency.**
  3. **Cost data on specific jobs may be useful to management in bidding on similar jobs in the future.**
  4. **Accurate costs are assigned to work in process and finished goods inventories.**
  5. **Job costing enables management to assess the relationship of the cost of goods sold for each job to the sales price of each job. The reciprocal of this relationship is the gross profit on each job. Improving these relationships is an important factor in increasing net income.**
- (b) **Products in job order costing are usually custom-made to customer specifications so that a sale is assured prior to the start of the manufacturing process. Specific products include cruise ships, presidential limousines, buildings, homes, wedding invitations, and graduation and birth announcements.**

**Products in process costing are relatively homogeneous such as boxes of cereal, bottles and cans of soda, jars of peanut butter, quarts of motor oil, and automobiles. The manufacture of the product is continuous to ensure that adequate inventories of finished products are available at all times.**

- (a) Candidates for the CMA or CFM Certificate must complete two continuous years of professional experience in management accounting or financial management. This requirement may be completed prior to or within seven years of passing the examination.**
- (b) CMAs, CFMs, and candidates who have successfully completed all parts of a certification program must maintain their professional competence through a regular program of continuing professional education. To remain in good standing with the Institute of Certified Management Accountants, 30 hours of continuing education must be completed each year subsequent to passing the exam. Reporting of continuing education is done in conjunction with renewal of IMA membership.**

**Credit will be given for subjects relevant to the CMA's or CFM's career development and related to employer needs. Such qualifying subjects include: management accounting, financial management, corporate taxation, computer science, systems analysis, statistics, management skills, insurance, marketing, and business law.**



**Newberry Manufacturing**  
**Date**

**Donna Werly**  
**123 Cedar Lane**  
**Altoona, Kansas 66651**

**Dear Ms. Werly:**

**Thank you for your prompt payment! I am very glad that you found the cost information helpful.**

**Thank you also for your questions about our overhead costs. We do try to provide our customers with as much information as possible, but we cannot give detailed information on overhead costs. The cost of providing such information is prohibitive.**

**You asked why we do not use actual overhead costs when we bill our customers. We estimate overhead costs, rather than use actual costs, for several reasons. One of the most important for you is that we could not prepare bills in a timely manner if we had to use actual overhead. We would have to wait until we were billed for such things as electricity and telephone service. A second reason is that some costs we include in overhead are only payable once or twice a year, such as insurance and taxes. When we use an estimated rate, we are able to allow for those costs. A third reason is that some costs are fixed, which means that they stay the same in dollar amount from month to month. This category includes items such as rent. If we billed you based on our actual costs, you would be billed a higher amount if your work was done during a slow time (because we would have fewer jobs to spread the costs over). An estimated overhead rate allows us to level out these costs.**

**BYP 20-5 (Continued)**

**I hope this answers some of your questions. I'm glad you are interested in our company and that you took the time to write. I am sending a copy of our annual report under separate cover. It contains some details on the information you asked about.**

**Thanks again for your letter and for having Newberry make your new cabinets!**

**Sincerely,**

**Student**

- (a) The stakeholders in this situation are:
- ▶ Betty Keiser, controller for SEK Printing.
  - ▶ The president of SEK Printing.
  - ▶ The customers of SEK Printing.
  - ▶ The competitors of SEK Printing.
- (b) Padding cost-plus contracts is both unethical and illegal. Betty 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) Betty 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. Let the president perform the unethical act if he continues to persist in padding costs.

- (a) Your chances of success in small business are increased if you have the following characteristics: You are a self-starter, you get along with many different kinds of people, you are good at making decisions, you have physical and emotional stamina, you are well organized, you have a strong desire to succeed and you will receive family support during the start up phase.
- (b) The top ten reason why businesses fail as sited in article from the books Small Business Management by Michael Ames, and The Do it Yourself Business Book by Gustav Berle are:
1. Lack of experience
  2. Insufficient capital (money)
  3. Poor location
  4. Poor inventory management
  5. Over-investment in fixed assets
  6. Poor credit arrangements
  7. Personal use of business funds
  8. Unexpected growth
  9. Competition
  10. Low sales