INSTRUCTOR'S SOLUTIONS MANUAL

to accompany

PRINCIPLES OF COST ACCOUNTING

Sixteenth Edition

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Professor Emeritus; Xavier University



Australia • Brazil • Japan • Korea • Mexico • Singapore • Spain • United Kingdom • United States



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CHAPTER 1

QUESTIONS

- The function of cost accounting is to provide the cost accounting information that is the basis for planning and controlling current and future operations. It provides the cost figures and analyses that management needs in order to find the most efficient methods of operating, achieving control of costs, and determining selling prices.
- 2. Originally issued for companies marketing products in Europe, a set of international standards for quality management, known as the ISO 9000 family, was designed by the International Organization for Standardization. Obtaining ISO 9000 is important because many companies will only contract with ISO 9000 suppliers.
- 3. A company meeting the requirements of ISO 14000 has an environmental management system that (1) identifies and controls the environmental impact of its activities, products, or services, (2) improves its environmental performance continually, and (3) implements a systematic approach to setting environmental objectives and targets.
- 4. Reasons given by U.S. companies for "reshoring" their manufacturing operations include (1) Chinese wages and shipping costs have risen sharply in the past few years, (2) frustration with the sometimes poor quality of goods made by foreign contractors, (3) the desire to bring production managers and assembly-line workers closer to engineers, suppliers, and customers, (4) an effort to protect a company's intellectual property, and (5) weariness from midnight phone calls and multiple annual trips to Asian producers.
- 5. Manufacturers convert purchased materials into finished goods by using labor, technology, and facilities. Merchandisers purchase completed products for resale. Service businesses or agencies sell or provide services rather than products.
- **6.** A manufacturer differs from a merchandiser in these ways:
 - a. The merchandiser buys items to sell while the manufacturing business must make the items it markets.
 - **b.** Usually the manufacturer has a greater investment in physical facilities.

c. The manufacturer will incur some costs peculiar to this type of industry, such as machine maintenance, materials handling, and inspection of manufactured goods.

The two types of operations are similar in that they are both concerned with purchasing, storing, and selling goods; they must have efficient management and adequate sources of capital; and they may employ many workers.

- **7.** Cost accounting information is used by management in the following ways:
 - a. Determining product costs which are necessary for: determining cost of goods sold and valuing inventories; determining product selling price; meeting competition; bidding on contracts; and analyzing profitability.
 - **b.** Planning by providing historical costs that serve as a basis for projecting data.
 - c. Controlling operations by providing cost data that enable management to periodically measure results, to take corrective action where necessary, and to search for ways to reduce costs.
- 8. Unit cost information is important to management because the unit costs of one period can be compared with those of other periods, and significant trends can be identified and analyzed. Unit costs are also used in making important marketing decisions related to selling prices, competition, bidding.
- 9. For a manufacturer, the planning process involves the selection of clearly defined objectives of the manufacturing operation and the development of a detailed program to guide the organization in reaching the objectives. Cost accounting provides historical cost information that is used as the basis for planning future operations.
- **10.** In a manufacturing concern, effective control is achieved in the following ways:
 - a. Responsibility must be assigned for each detail of the master production plan.
 - **b.** There must be a periodic measurement of the actual results as compared with predetermined objectives.
 - c. Management must take corrective action as necessary to improve or eliminate inefficient and unprofitable operations.

- 11. Responsibility accounting is the assigning of accountability for costs or production results to those individuals who have the authority to influence costs or production. It involves an information system that traces these data to the managers who are responsible for them.
- **12.** The criteria for a *cost center* are:
 - **a.** A reasonable basis on which manufacturing costs can be allocated.
 - **b.** A person who has control over and is accountable for many of the costs
- **13.** The requirements for becoming a CMA include a four-year college degree, two years of relevant work experience, and passing a rigorous two-day examination.
- **14.** The four major categories of ethical conduct that must be adhered to by management accountants include competence, confidentiality, integrity, and objectivity.
- **15.** The steps that should be taken by the management accountant include:
 - a. Discuss the problem with the immediate supervisor except when it appears that the supervisor is involved, in which case it should be taken to the next higher management level.
 - Clarify relevant ethical issues by confidential discussion with an objective advisor.
 - **c.** Consult your own attorney as to legal obligations and rights.
 - d. If the ethical issue still exists after exhausting all levels of internal review, there may be no other recourse on significant matters than to resign from the organization.
- **16.** Corporate governance is the means by which a company is directed and controlled. Good corporate governance is important to all stakeholders because, due to recent accounting scandals, the need for ethical conduct in managing corporate affairs has never.
- 17. The recent accounting scandals where management, including controllers and chief financial officers, has "cooked the books" to make reported financial results seem better than actual created the need for the Sarbanes-Oxley Act. To help curb future abuses the act holds CEO's and CFO's accountable for the accuracy of their firms' financial statements.
- 18. Key elements of the Sarbanes-Oxley Act include: certification by the CEO and CFO that the financial statements fairly reflect the results of operations; the establishment of the Public Company Accounting Oversight

- Board to provide oversight of the accounting profession; prohibiting a public accounting firm from providing many nonauditing services to a company that it audits; requiring that a company's annual report contain management's opinion on the effectiveness of its internal controls; placing the responsibility for hiring, compensating, and terminating the audit firm in the hands of the board of director's audit committee; criminal penalties for the destruction or alteration of business documents and for retaliating against "whistleblowers."
- 19. Financial accounting focuses upon financial statements which meet the decision-making needs of external parties, such as investors. creditors, and governmental agencies, and to some extent the needs of management. Management accounting focuses on both historical and estimated data that management needs to conduct ongoing business operations and do long-range planning. Cost accounting includes those parts of both financial and management accounting that collects and analyzes cost information. It provides the product cost data required for special reports to management (management accounting) and for inventory costing in the financial statements (financial accounting).
- 20. With regard to methods for computing the cost of goods sold, the difference between a manufacturer and a merchandiser is in the determination of the cost of goods available for sale. Since the manufacturing business makes the products it has available for sale, the cost of goods manufactured must be determined and added to beginning finished goods inventory to determine the cost of finished goods available for sale. Since the merchandiser purchases rather than makes goods to sell, the cost of purchases is added to beginning merchandise inventory to compute the cost of goods available for sale.
- 21. Finished Goods—this is an inventory account reflecting the total cost incurred in manufacturing goods on hand that are ready for sale to customers.

Work in Process—this inventory account includes all of the costs incurred to date in manufacturing goods that are not yet completed.

Materials—this account represents the cost of materials on hand that will be used in the manufacturing process.

- 22. Manufacturers, such as aircraft producers and home builders, make tangible products by applying labor and technology to raw materials. They may have as many as three inventory accounts: Finished Goods, Work in Process, and Raw Materials. Merchandisers, such as wholesalers and department stores, purchase tangible products in finished form from suppliers. They have only one inventory account, Merchandise Inventory. Service businesses, such as airlines and sports franchises, provide intangible benefits such as transportation and entertainment. They have no inventory account.
- 23. A perpetual inventory system involves maintaining a continuous record of purchases, issues, and new balances of all goods in stock. Under a periodic inventory system no attempt is made to record the cost of merchandise sold at the time of sale. At the end of the accounting period a physical inventory is taken for the purpose of determining the cost of goods sold and the ending inventory.
- **24.** The basic elements of production cost are:
 - a. Direct materials.
 - b. Direct labor.
 - **c.** Factory overhead.
- 25. Direct materials—the cost of those materials which become part of the item being manufactured and can be readily identified with it.

Indirect materials—the cost of those items which are necessary for the manufacturing process but cannot be identified specifically with any particular item manufactured, and the cost of those materials which do become a part of the manufactured product but whose cost is too insignificant to track to individual jobs.

Direct labor—the labor cost for employees who work directly on the product manufactured.

Indirect labor—the cost of labor for those employees who are required for the manufacturing process but who do not work directly on the item being manufactured.

Factory overhead—includes all costs related to the manufacturing process except direct materials and direct labor, such as indirect materials, indirect labor, and all other factory expenses.

26. As manufacturing processes have become increasingly automated, direct labor cost as a percentage of total product cost has decreased for many companies. In the case of Harley-Davidson, it was only 10% of product

- cost but required an inordinate amount of time to trace directly to the products being manufactured.
- 27. Prime cost is the cost of direct materials and direct labor: it represents cost specifically identified with the product.
 - Conversion cost is the cost of direct labor and factory overhead; it is the expense incurred to convert raw materials into finished goods.
 - No, one of the component costs, direct labor, would be added twice. The cost of manufacturing includes direct materials, direct labor, and factory overhead. Both prime cost and conversion cost include the cost of direct labor.
- 28. Costs for direct materials and direct labor are charged directly to the work in process account, while the factory overhead costs are first accumulated in the factory overhead account and are then transferred to the work.
- 29. Cost of goods sold represents the total manufacturing cost of the goods sold during a given accounting period, while the cost of goods manufactured represents the total manufacturing cost of all goods that were finished during the accounting period.
- 30. Non-factory costs are charged to selling or general administrative expense accounts and do not affect the determination of manufacturing costs. Costs which benefit both factory and non-factory operations must be allocated in some equitable manner.
- **31.** A mark-on percentage is a percentage of the total manufacturing cost that is added to the manufacturing cost to establish a selling price that covers the product's share of selling and administrative expenses and earns a satisfactory profit.
- 32. Job order costing is appropriate when the output of an enterprise consists of custommade or specially ordered goods. Manufacturers such as machine shops and shipbuilders, merchandisers such as computer retailers, and service firms, such as CPAs and architects, all use job order costing.
- 33. Process costing is appropriate when an enterprise's operations involve the continuous or mass production of large quantities of homogeneous items. Manufacturers such as chemical producers and candy makers, merchandisers such as newspapers and agricultural wholesalers, and services such as hospital X-ray departments and airlines all use process costing.

- 34. An advantage of accumulating costs by departments (process costing) or by jobs (job order costing) is that the information provided aids management in achieving control of costs. With a process cost system, management can make departmental comparisons of current period costs with prior period costs and can take corrective action as needed. If costs were accumulated for the factory as a whole, management would have difficulty identifying specific sources of excessive costs and inefficiencies. The information provided by a job order cost system aids management in the determination of selling prices, the profit on each job, and costs applicable to similar jobs produced in future periods.
- **35.** A *job cost sheet* is a form on which all of the individual costs applicable to a job are recorded. Since the job cost sheets show detailed costs and gross profit for each job, they are useful to management in bidding on similar jobs in the future.

- 36. Standard costs are reasonably attainable costs which are estimated by management in advance of production. Standard costs are then compared with actual costs, and differences called variances are calculated and analyzed. A standard cost system is not a separate cost accounting system but is applied in conjunction with either process costing or job order costing to increase cost control effectiveness.
- 37. Square footage occupied by each of the areas would be a good cost allocation base to use in allocating the depreciation expense between the factory operations and the selling and administrative function. This distinction is important because the depreciation allocated to factory operations is a manufacturing expense that becomes part of inventory cost and eventually cost of goods sold, whereas the portion allocated to selling and administrative expense is a period cost that is always expensed in the period incurred.

EXERCISES

E1-1

The variances for kitchen wages and utilities were favorable for September, whereas the variances for food and supplies were unfavorable. On a year-todate basis, the only expense that did not have the same pattern as September was utilities which had a \$120 F variance for the month, but an \$850 U year-todate variance.

E1-2

No, the performance report should not be prepared just once a year. It should be furnished to managers at regular intervals, in this case monthly, on a timely basis. If it is not provided in a timely fashion, it will not be effective in controlling future operations.

E1-3

Merchandise inventory, January 1 Plus purchases	\$ 22,000 183,000
Merchandise available for sale Less merchandise inventory, January 31	\$ 205,000 <u>17,000</u>
Cost of goods sold	<u>\$ 188,000</u>
E1-4	
Finished goods, July 1 Plus cost of goods manufactured	\$ 85,000 <u>343,000</u>
Finished goods available for saleLess finished goods, July 31	\$ 428,000 <u>93,000</u>
Cost of goods sold	<u>\$ 335,000</u>

E1-5

	Items	Direct Materials	Direct Labor	Factory Overhead	Selling & Admin. Expense
a.	Steel used in an overhead door plant	V			
b.	Cloth used in a shirt factory	Ì			
C.	Fiberglass used by a sailboat				
	builder	\checkmark			
d.	Cleaning solvent for the factory floor			,	
				√	
e.	Wages of a binder employed in a		.1		
£	printing plant		٧	ما	
f.	Insurance on factory machines Rent paid for factory buildings			۷ ما	
g. h.	Wages of the Machining			V	
•••	Department supervisor			\checkmark	
i.	Leather used in a shoe factory	\checkmark		•	
j.	Wages of a factory janitor			\checkmark	
k.	Electric power consumed in				
	operating factory machines			\checkmark	,
I.	Depreciation on corporate offices			1	\checkmark
m.	Fuel used in heating a factory			٧	
n.	Paint used in the manufacture of	ا			
0.	jet skis Wages of an ironworker in the	٧			
0.	construction business		V		
p.	Electricity used in lighting		•		
•	sales offices				\checkmark

When direct materials and supplies are purchased, the materials account is debited. When direct materials and supplies are issued to the factory, the materials account is credited, Work in Process is debited for the cost of the direct materials, and the factory overhead account is debited for the cost of indirect materials.

When labor costs are distributed, the payroll account is credited, Work in Process is debited for the cost of direct labor, and Factory Overhead is debited for the cost of indirect labor.

As other costs related to manufacturing are recorded, the factory overhead account is charged. The debit to Work in Process for factory overhead is made by allocating overhead expenses to this account. At the same time, the factory overhead account is credited. The total cost of goods completed is recorded by debiting Finished Goods and crediting Work in Process. When units are sold, Cost of Goods Sold is debited and Finished Goods is credited.

E1-7

Valley View Manufacturing Co. Statement of Cost of Goods Manufactured For the Month Ended January 31, 20—

a.	Materials:		
	Inventory, January 1Purchases	\$25,000 _21,000	
	Total cost of available materialsLess inventory, January 31	\$46,000 22,000	
	Cost of materials used Less indirect materials used	\$24,000 <u>1,000</u>	
	Cost of direct materials used in production Direct labor		\$23,000 18,000
	Factory overhead: Indirect materials Indirect labor Other	\$ 1,000 3,000 8,000	
	Total factory overhead		12,000
	Total manufacturing costAdd work in process inventory, January 1		\$53,000 <u>24,000</u>
	Less work in process inventory, January 31		\$77,000 20,000
	Cost of goods manufactured		<u>\$57,000</u>
b.	Finished goods inventory, January 1Add cost of goods manufactured	\$32,000 <u>57,000</u>	
	Goods available for saleLess finished goods inventory, January 31	\$89,000 <u>30,000</u>	
	Cost of goods sold	<u>\$59,000</u>	

Viejas Manufacturing Co. Statement of Cost of Goods Manufactured For the Month Ended January 31, 20—

a.	Materials:		
	Inventory, January 1 Purchases	\$22,000 	
	Total cost of available materialsLess inventory, January 31	\$40,000 <u>25,000</u>	
	Cost of materials usedLess indirect materials used	\$15,000 <u>1,000</u>	
	Cost of direct materials used in production Direct labor		\$14,000 21,000
	Factory overhead:		
	Indirect materialsIndirect laborOther	\$ 1,000 4,000 <u>11,000</u>	
	Total factory overhead		16,000
	Total manufacturing cost Add work in process inventory, January 1		\$51,000 <u>20,000</u>
	Less work in process inventory, January 31		\$71,000 <u>24,000</u>
	Cost of goods manufactured		<u>\$47,000</u>
b.	Finished goods inventory, January 1	\$30,000 <u>47,000</u>	
	Goods available for saleLess finished goods inventory, January 31	\$77,000 <u>32,000</u>	
	Cost of goods sold	<u>\$45,000</u>	

a. Direct materials used during the period		\$ 205,000
b. Total manufacturing costs incurred during the period Less: Direct materials used Factory overhead incurred Direct labor costs incurred during the period	\$ 205,000 	\$ 675,000
c. Cost of goods available for sale Less finished goods inventory at the end of the period Cost of goods sold during the period		\$ 775,000
d. Sales		\$ 900,000
E1-10		
Work in Process (Direct Materials)Factory Overhead (Indirect Materials)	21,000 5,000	26,000
Work in Process (Direct Labor) Factory Overhead (Indirect Labor) Payroll	15,000 3,000	18,000
Factory Overhead	7,200	4,000 1,200 500 1,500
Work in Process	15,200	15,200

a.	Work in Process—(Jobs1040, 1065, 1120) Materials	7,780	7,780
	Work in Process—(Jobs 1040, 1065, 1120) Payroll	8,200	8,200
	Work in Process—(Jobs 1040, 1065, 1120)	3,280	3,280
b.			

1		
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ı	u	

Jobs Completed	Direct Materials Cost	Direct Labor Cost	Factory Overhead	Total Production Cost
1040	\$ 3,600	\$ 4,000	\$ 1,600	\$ 9,200
1065	2,380	2,500	1,000	5,880
1120	1,800	1,700	680	4,180
Total	<u>\$ 7,780</u>	\$ 8,200	\$ 3,280	<u>\$19,260</u>
Finished Good	40			10.260

C.	Finished Goods	19,260	
	Work in Process—(Jobs1040, 1065, 1120)		19,260

d.

Unit Cost	
Job 1040 (\$9,200 ÷ 400)	\$23.00
Job 1065 (\$5,880 ÷ 240)	\$24.50
Job 1120 (\$4,180 ÷ 200)	\$20.90

e.

Seiling Price Per Unit	
Job 1040 (\$23.00 × 140%)	\$32.20
Job 1065 (\$24.50 × 140%)	\$34.30
Job 1120 (\$20.90 × 140%)	\$29.26

a.	Work in Process—(Jobs 1100, 1200, 1300) Materials	10,800	10,800
	Work in Process—(Jobs 1100, 1200, 1300)	13,600	13,600
	Work in Process—(Jobs 1100, 1200, 1300) Factory Overhead	23,100	23,100

п		
н	-	
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	Jobs Completed	Direct Materials Cost	Direct Labor Cost	Factory Overhead	Total Produc Cost	tion
	1100 1200 1300	\$4,200 3,700 2,900	\$5,000 4,500 4,100	\$9,000 7,800 6,300	\$18,20 16,00 13,30	0
	Total	<u>\$10,800</u>	<u>\$13,600</u>	<u>\$23,100</u>	\$47,50	<u>0</u>
C.	Finished Good Work in Pro	ls ocess—(Jobs110			47,500	47,500
d.						
			Unit Cost			
	Job 1100 (\$18,200 ÷ 500)				\$36.40	
	Job 1200 (\$16,000 ÷ 400)			\$40.00		
	Job 1300 (\$13,300 ÷ 300)				\$44.33	
^						

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JOD 1100 (\$36.40 × 150%)	\$54.60
Job 1200 (\$40.00 × 150%)	\$60.00
Job 1300 (\$44.33 × 150%)	\$66.50

a.	Work in ProcessFactory Overhead (Indirect Materials)	14,500 1,200	15,700
b.	Work in Process Factory Overhead (Indirect Labor) Payroll	11,500 900	12,400
C.	Work in ProcessFactory Overhead	9,500	9,500
d.	Finished Goods Work in Process*	27,500	27,500
	*Jobs completed: Racers		
e.	Cost of Goods SoldFinished Goods	27,500	27,500
	Accounts Receivable	49,000	49,000

PROBLEMS

P1-1

Saito's Sushi Bar

Performance Report—Dining Room

February 28, 2013

	Budgeted		Actual		Variance	
Expense	February	Year-to- Date	February	Year-to- Date	February	Year-to- Date
Dining room wages	\$4,150	\$8,450	\$4,400	\$9,100	\$250U	\$650U
Laundry and housekeeping	1,500	3,150	1,400	3,000	100F	150F
Utilities	2,050	4,250	2,100	4,450	50U	200U
Depreciation	<u>1,500</u>	3,000	<u>1,500</u>	3,000		
Total	<u>\$9,200</u>	<u>\$18,850</u>	<u>\$9,400</u>	<u>\$19,550</u>	<u>\$200U</u>	<u>\$700U</u>

P1-2

1.	Merchandise inventory, April 1	\$ 38,000 <u>121,000</u>
	Merchandise available for sale Less merchandise inventory, April 30	\$159,000 <u>33,000</u>
	Cost of goods sold	<u>\$126,000</u>
2.	Finished goods, April 1 Plus cost of goods manufactured	\$ 67,000 287,000
	Finished goods available for sale Less finished goods, April 30	\$354,000 <u>61,000</u>
	Cost of goods sold	<u>\$293,000</u>

1.	Merchandise inventory, Sept. 1Plus purchases	\$ 33,000 <u>111,000</u>
	Merchandise available for saleLess merchandise inventory, Sept. 30	\$144,000 <u>38,000</u>
	Cost of goods sold	<u>\$106,000</u>
2.	Finished goods, Sept. 1Plus cost of goods manufactured	\$ 61,000 <u>267,000</u>
	Finished goods available for sale Less finished goods, Sept. 30	\$328,000 <u>67,000</u>
	Cost of goods sold	<u>\$261,000</u>

P1-4

1.

Kokomo Furniture Company Statement of Cost of Goods Manufactured For the Month Ended November 30, 2013

Direct materials:

Inventory, November 1 Purchases	\$ 0 33,000		
Total cost of available materialsLess inventory, November 30	\$33,000 <u>7,400</u>		
Cost of materials used	\$25,600		
Less indirect materials used	<u>1,400</u>		
Cost of direct materials used in production		\$24,200	
Direct laborFactory overhead:		18,500	
Indirect materials	\$ 1,400		
Indirect flaterials	4,300		
Depreciation of building	3,000		
Depreciation of machinery and equipment	2,200		
· · · ·	•		
Utilities	<u>2,750</u>		
Total factory overhead		13,650	
Cost of goods manufactured during the month		\$ 56,350	

P1-4 Continued

2.

Kokomo Furniture Company Income Statement For the Month Ended November 30, 2013

Sales Cost of goods sold:		\$ 68,300
Finished goods inventory, November 1	\$ 0	
Add cost of goods manufactured	<u>56,350</u>	
Goods available for sale	\$56,350	
Less finished goods inventory, November 30	13,900	42,450
Gross profit on sales		\$ 25,850
Selling and administrative expenses		<u> 15,200</u>
Net income		\$ 10,650

P1-4 Concluded

3.

Kokomo Furniture Company Balance Sheet November 30, 2013

Assets Current assets:				
Cash Accounts receivable		ft 42 000		21,800 16,200
Finished goodsWork in processMaterials		\$ 13,900 0 <u>7,400</u>		<u>21,300</u>
Total current assets Plant and equipment: Building			\$	59,300
Less accumulated depreciation		\$ 297,000		
Machinery and equipmentLess accumulated depreciation		85,800		
Total plant and equipment			_3	<u>82,800</u>
Total assets			<u>\$ 4</u> 4	<u>42,100</u>
Liabilities and Sto Current liabilities:	ckholders' E	quity		
Accounts payable		\$422,550 	\$	8,900
Total stockholders' equity			4	33,200
Total liabilities and stockholders' equity			<u>\$4</u>	<u>42,100</u>

Terre Haute Plastics, Inc. 1. Statement of Cost of Goods Manufactured For the Month Ended November 30, 2013

Direct materials:		
Inventory, November 1Purchases	\$ 0 23,000	
Total cost of available materialsLess inventory, November 30	\$23,000 <u>4,700</u>	
Cost of materials used Less indirect materials used	\$18,300 <u>1,400</u>	
Cost of direct materials used in production Direct labor Factory overhead:	6.4.400	\$16,900 15,800
Indirect materialsIndirect labor	\$ 1,400 6,010 4,000 1,650 	
Total factory overhead		<u> 15,810</u>
Cost of goods manufactured during the month		<u>\$48,510</u>
2. Terre Haute Plastics, Inc. Income Statement For the Month Ended June 30, 20	013	
Sales		\$63,800
Cost of goods sold: Finished goods inventory, November 1 Add cost of goods manufactured	. \$ 0 . <u>48,510</u>	
Goods available for saleLess finished goods inventory, November 30		29,210
Gross profit on sales Selling and administrative expenses		\$34,590
Net income		\$22,090

P1-5 Concluded

Terre Haute Plastics, Inc. Balance Sheet November 30, 2013

Acceto		
Current assets: Cash Accounts receivable Inventories: Finished goods	\$ 19,300	\$ 18,200 12,600
Work in process Materials	4,700	24,000
Total current assets Plant and equipment: Building	\$ 396,000	\$ 54,800
Machinery and equipment	64,350	
Total plant and equipment		460,350
Total assets		<u>\$ 515,150</u>
Liabilities and Stockholders' E Current liabilities: Accounts payable Stockholders' equity:	Equity	\$ 9,800
Capital stockRetained earnings	\$483,260 22,090	
Total stockholders' equity		<u>505,350</u>
Total liabilities and stockholders' equity		\$ 515,150

1.	a.	MaterialsAccounts Payable	58,000	58,000
	b.	Work in ProcessFactory Overhead (Indirect Materials)	47,000 15,000	62,000
	C.	Payroll Wages Payable	48,000	48,000
		Wages Payable Cash	48,000	48,000
		Work in Process	29,000 12,000 7,000	
	d.	Payroll Factory Overhead (Depreciation of Building) Factory Overhead (Depreciation of Factory	1,600	48,000
		Equipment)Selling and Administrative Expenses	1,833*	
		(Depreciation of Building)Selling and Administrative Expenses	400	
		(Depreciation of Office Equipment)	1,000	2,000 1,833* 1,000
		*Rounded		

P1-6 Continued

e.	Factory Overhead (Miscellaneous) Selling and Administrative Expenses	8,250	
	(Miscellaneous)Accounts Payable	2,750	11,000
f.	Work in ProcessFactory Overhead	38,683	38,683
g.	Finished Goods	91,000	91,000
h.	Accounts Receivable	362,000	362,000
	Cost of Goods SoldFinished Goods	188,000	188,000
i.	Cash Accounts Receivable	345,000	345,000
j.	Accounts Payable	158,000	158,000

P1-6 Continued

2.

Cá	ash	Accounts Receivable
4/30 25,000	(c) 48,000	4/30 65,000 (i) 345,000
(i) 345,000	(j) 158,000	(h) 362,000
370,000	206,000	427,000
164,000		82,000
Finishe	d Goods	Work in Process
4/30 120,000	(h) 188,000	4/30 35,000 (g) 91,000
(g) 91,000		(b) 47,000
211,000		(c) 29,000
23,000		(f) 38,683
		149,683
		58,683
Mate	erials	Building
4/30 18,000	(b) 62,000	4/30 480,000
(a) 58,000	(1)	22,222
76,000		
14,000		
	·	
	nulated	_ , _ ,
Depreciation	n—Building	Factory Equipment
	4/30 72,000	4/30 220,000
	(d) 2,000	
	74,000	
Accun	nulated	
	on—Factory	
	oment	Office Equipment
	4/30 66,000	4/30 60,000
	(d) 1,833	
	67,833	

Accumulated Depreciation—Office Equipment Account					s Pavab	le		
		4/30 (d)	36,000 1,000 37,000		(j)	158,000	4/30 (a) (e)	95,000 58,000 11,000 <i>164,000</i> 6,000
	Payroll			И	/ages	Payable		
(c) 48,000	(c) 48,	000		(c) 48,000		(c) 48,000	_	
	Capita	l Stock				Retained	l Earning	gs
	·	4/30	250,000				4/30	504,000
	Sa	les			-	Cost of G	oods Sc	old
		(h)	362,000		(h)	188,000		
	Footony	Overhoo	nd.			Selling and A		rative
(b)	<i>Factory</i> 0	(f)	38,683		(c)		enses	
(c) (d) (d) (e)	15,000 12,000 1,600 1,833 8,250 38,683	(1)	30,003		(c) (d) (d) (e)	7,000 400 1,000 2,750 11,150		

Continued P1-6

Hokie Manufacturing Co. 3. Statement of Cost of Goods Manufactured For the Month Ended May 31, 2013

Materials:		
Inventory, May 1	\$ 18,000	
Purchases	58,000	
Total cost of available materials	\$ 76,000	
Less inventory, May 31	14,000	
Cost of materials used	\$ 62,000	
Less indirect materials used	15,000	
		¢ 47.000
Cost of direct materials used in production Direct labor		\$ 47,000 29,000
Factory overhead:		23,000
Indirect materials	\$ 15,000	
Indirect labor	12,000	
Depreciation of building	1,600	
Depreciation of factory equipment	1,833	
Miscellaneous expenses	<u>8,250</u>	
Total factory overhead		<u>38,683</u>
Total manufacturing cost		\$114,683
Add work in process inventory, May 1		<u>35,000</u>
		\$149,683
Less work in process inventory, May 31		<u>58,683</u>
Cost of goods manufactured		<u>\$ 91,000</u>
Hokie Manufacturing Co. Income Statement		
For the Month Ended May 31, 20	13	

Sales		\$362,000
Cost of goods sold: Finished goods inventory, May 1	\$120,000	
Add cost of goods manufactured	91,000	
Goods available for sale	\$211,000	
Less finished goods inventory, May 31	23,000	<u> 188,000</u>
Gross profit on sales		\$174,000
Selling and administrative expenses		<u>11,150</u>
Net income		<u>\$162,850</u>

P1-6 Concluded

Hokie Manufacturing Co. Balance Sheet May 31, 2013

Assets			
Current assets:			
Cash			\$164,000
Accounts receivable			82,000
Inventories:			
Finished goods		\$ 23,000	
Work in process Materials		58,683 14,000	05 693
		14,000	95,683
Total current assets Plant and equipment:			\$341,683
Building	\$ 480,000		
Less accumulated depreciation	<u>74,000</u>	\$ 406,000	
Factory equipment	\$ 220,000		
Less accumulated depreciation	<u>67,833</u>	152,167	
Office equipment	\$ 60,000		
Less accumulated depreciation	37,000	23,000	
Total plant and equipment			<u>581,167</u>
Total assets			<u>\$922,850</u>
Liabilities and Stockholders	' Equity		
Current liabilities:			
Accounts payable			\$ 6,000
Stockholders' equity: Capital stock		\$250,000	
Retained earnings*		666,850	
			016 950
Total stockholders' equity			916,850
Total liabilities and stockholders' equity			<u>\$922,850</u>
*\$504,000 (bal. on 4/30) + \$162,850 (Net income	for May) = \$6	666,850	

1.	MaterialsAccounts Payable	55,000	55,000
2.	Work in Process (Materials)	45,500	
	(Beginning balance + Purchases - Ending balance = \$6,000 + \$45,000 - \$5,500)		
	Factory Overhead (Indirect Materials)	9,900	
	(Beginning balance + Purchases – Ending balance = \$800 + \$10,000 – \$900)		
	Materials		55,400
3.	Payroll Wages Payable	65,000	65,000
4.	Work in Process (Labor) Factory Overhead (Indirect Labor)	50,000 15,000	65,000
5.	Wages Payable	65,000	65,000
6.	Factory Overhead	42,000	,
	Accounts Payable		42,000
7.	Factory Overhead Various Credits (Prepaid Insurance, Accumulated Depreciation, etc.)	10,000	10,000
8.	Work in Process (Factory Overhead)	76,900	
	(Indirect materials + Indirect labor + Factory overhead paid + Factory overhead recorded = \$9,900 + \$15,000 + \$42,000 + \$10,000)		
	Factory Overhead		76,900
9.	Finished Goods	169,400	
	(Work in process, beginning balance + Materials + Labor + Factory overhead – Work in process, ending balance = \$3,500 + \$45,500 + \$50,000 + \$76,900 - \$6,500)		
	Work in Process		169,400

P1-7 Concluded

10. Cost of Goods Sold	168,200	
(Finished goods, beginning balance + Goods		
finished during the month – Finished goods,		
ending balance = \$12,000 + \$166,400 - \$13,200)		
Finished Goods		168,200

P1-8

1.

Dennis Manufacturing Company Statement of Cost of Goods Manufactured For the Month Ended July 31, 20—

Direct materials:

\$ 20,000 <u>110,000</u>	
\$ 130,000 <u>26,000</u>	
	\$104,000 ^e 160,000 ^f <u>80,000^g</u>
	\$344,000 ^d _40,000
	\$384,000 ^c 36,000 ^b \$348,000 ^a
	110,000 \$ 130,000

^a Cost of goods manufactured = cost of goods sold + ending finished goods inventory – beginning finished goods inventory (\$345,000 + \$105,000 - \$102,000 = \$348,000)

^b Ending work in process (90% × \$40,000 = \$36,000)

^c Total manufacturing cost to be accounted for (\$348,000 + \$36,000 = \$384,000)

^d Total manufacturing cost = total manufacturing cost to be accounted for – beginning work in process inventory (\$384,000 – \$40,000 = \$344,000)

e Direct materials used = beginning inventory + purchases - ending inventory = (\$20,000 + \$110,000 - \$26,000 = \$104,000)

f Direct labor = total manufacturing cost - direct materials - factory overhead

X = \$344,000 - \$104,000 - .5X

X = \$160,000

^g Factory overhead = $50\% \times $160,000 = $80,000$

\$ 240,000

2.

Dennis Manufacturing Company Schedule to Compute Prime Cost

Schedule to Compute Prime Cost For the Month Ended July 31, 20—			
Direct materials used	\$ 104,000 ^e 160,000 ^f		
Prime cost incurred during July	<u>\$ 264,000</u>		
3. Dennis Manufacturing Company Schedule to Compute Conversion Cost For the Month Ended July 31, 20—			
Direct labor incurredFactory overhead	\$ 160,000 ^f 80,000 ^g		

Conversion cost incurred during July

Manlius Manufacturing Co. Statement of Cost of Goods Manufactured For the Year Ended December 31, 2013

Direct materials used Direct labor	\$ 370,000 ^c 360,000 ^b 270,000 ^a
Factory overhead	<u>270,000</u> a
Total manufacturing cost	\$1,000,000 20,000 d
Less work in process inventory, December 31	\$1,020,000 50,000 d
Cost of goods manufactured	<u>\$ 970,000</u>

Supporting Computations:

Let X = ending work in process inventory

\$1,000,000 + 0.4X - X = \$970,000

X = \$50,000

 $0.4 \quad X = $20,000$

^a Factory overhead: 27% × total manufacturing cost (27% × \$1,000,000) = \$270,000

^b Direct labor: 75% of direct labor equals \$270,000, so direct labor was \$360,000 (\$270,000 ÷ 75%)

^c Direct materials used equals total manufacturing cost less direct labor and factory overhead [\$1,000,000 – (\$360,000 + \$270,000)]

^d Work in process inventories:

1.

	Job 101	Job 102	Job 103	Job 104	Total
Direct materials Direct labor Factory overhead	\$2,200 2,700 <u>1,200</u>	\$ 5,700 6,800 2,000	\$ 7,100 9,200 3,800	\$ 1,700 2,100 <u>1,000</u>	\$16,700 20,800 <u>8,000</u>
Total	<u>\$6,100</u>	<u>\$14,500</u>	<u>\$20,100</u>	<u>\$ 4,800</u>	<u>\$45,500</u>
2. a. MaterialsAccounts Pay				37,000	37,000
b. Work in Process. Factory Overhead Materials	d			16,700 1,350	18,050
c. Payroll Wages Payab				23,050	23,050
Work in Process. Factory Overhea Payroll	d			20,800 2,250	23,050

P1-10 Concluded

	d.	Factory OverheadAccounts Payable		2,400	2,400
	e.	Factory Overhead		2,000	2,000
	f.	Work in ProcessFactory Overhead		8,000	8,000
	g.	Finished Goods*Work in Process		40,700	40,700
	h.	Accounts Receivable		39,000	39,000
		Cost of Goods Sold**Finished Goods		20,600	20,600
			*Completed	**Bill	ed
		Job 101 Job 102 Job 103	\$ 6,100 14,500 20,100 \$40,700	\$ 6,1 14,5 —— <u>\$20,6</u>	500
3.	Tra	ded to work in process: Direct materials Direct labor Factory overhead Total ansferred to finished goods		 	\$16,700 20,800 8,000 \$45,500 40,700
	Ва	lance (represented by the cost of Job 104)		<u>\</u>	\$ 4,800
4.	Le	ded to finished goodsss costs of goods soldlance (represented by the cost of Job 103)		··· .	\$40,700 20,600 \$20,100

1.	Work in Process (Jobs				69,000
	Work in Process (Jobs	312,411,510)		185,000	00,000
	Payroll Work in Process (Jobs				185,000
					153,000
	Finished Goods			407,000	407.000
	Accounts Receivable (c	•	1,510)		407,000
	Sales	······			447,250
	Cost of Goods Sold			•	407,000
	i illistica goods				40 7,000
2.	a. Sales				\$447,250
	Manufacturing costs			••••	Ψ117,200
				. ,	
				•	407,000
	Gross profit on sales				\$40,250
	b.				
	312		411	510	
Sal	/-	000	\$120,000	\$175,250	
	nufacturing cost: Materials \$25,0	000	\$15,000	\$29,000	
	Oirect labor 70,0	000	60,000	55,000	
	actory overhead <u>50,0 </u>		<u>40,000</u> \$115,000	63,000 \$147,000	
	oss profit <u>\$7,0</u>		\$5,000	\$ 28,250	
	c.				
		240	444	540	
		312	411	510	
Nur	mber of units completed	10,000	5,000	14,00	00
	ling price per unit	\$15.20	\$24.00	\$12.5	
Ma	nufacturing cost per unit	<u>14.50</u>	23.00	<u>10.5</u>	<u>50</u>
Gro	oss profit	<u>\$.70</u>	<u>\$ 1.00</u>	<u>\$2.0</u>	<u>)2</u>

1.	Work in Process (Jobs 10AX,11BX,12CX)138,000 Materials	138,000
Wo	rk in Process (Jobs 10AX,11BX,12CX)370,000 Payroll	370,000
	Work in Process (Jobs 10AX,11BX,12CX)306,000 Factory Overhead	306,000
	Finished Goods	814,000
	Accounts Receivable (or Cash)900,000	
	Sales	900,000

2. a. Sales \$900,000

Manufacturing costs of goods sold:

Materials	\$ 138,000	
Direct labor	370,000	
Factory overhead	<u>306,000</u>	814,000
Gross profit on sales		<u>\$86,000</u>

P1-12 Concluded

b. 10AX	×	11BX	12CX
Sales\$300,000	000	\$250,000	\$350,000
Materials \$ 50,000 Materials \$ 50,000 Direct labor \$ 140,000 Factory overhead \$ 50,000	000 000 000	\$30,000 120,000 <u>80,000</u> \$20,000	\$58,000 110,000 <u>126,000</u> \$56,000
c. 10AX	×	11BX	12CX
Number of units completed10,000	0	5,000	14,000
Selling price per unit Manufacturing cost per unit	ୁ ପ୍ର	\$50 <u>46</u>	\$25 <u>21</u>
Gross profit per unit	\$ 1	\$4	84

1.	Work in Process	98,500	98,500
	Work in Process	155,000	155,000
	Work in ProcessFactory Overhead	120,000	120,000

2. Job	Direct Materials Cost	Direct Labor Cost	Factory Overhead	Total Production Cost
007	\$ 50,000	\$ 80,000	\$ 60,000	\$190,000
800	22,000	40,000	32,000	94,000
009	18,500	23,000	17,500	59,000
010	<u>8,000</u>	<u>12,000</u>	<u> 10,500</u>	<u>30,500</u>
Total	<u>\$98,500</u>	<u>\$155,000</u>	<u>\$120,000</u>	<u>\$373,500</u>
	Finished Goods	Inventory (Job 009)	<u>\$5</u>	<u>59,000</u>
	Work in Process (Job 010)	Inventory	<u>\$</u> 3	<u>30,500</u>
3. Finish	ed Goods			43,000
	Work in Process ((Jobs 007, 008, 009)		343,000
Ac				26,000 426,000
				84,000 284,000

P1-13 Concluded

4.

Adirondack Manufacturing Co. Statement of Cost of Goods Manufactured For the Month Ended January 31, 20—

Direct materials used Direct labor Factory overhead	\$ 98,500 155,000 120,000
Total manufacturing costLess work in process inventory, January 31	\$ 373,500
Cost of goods manufactured	<u>\$ 343,000</u>

MINI-CASE

- 1. The ethical standards which apply to this case are competency, integrity, and objectivity. Competency requires that Gates perform his professional duties in accordance with relevant laws, regulations, and technical standards. Integrity requires that Gates refrain from either actively or passively subverting the attainment of the organization's legitimate and ethical objectives. Objectivity requires that Gates communicate information fairly and objectively.
- 2. Gates should first explain to Allen that recording the revenue in 2013 would be a violation of generally accepted accounting principles (GAAP). If Allen persists, Gates should report the matter to the corporate controller. If there is no support from top management, Gates should resign.

INTERNET EXERCISE 1

Students' answers will vary depending upon articles chosen.

INTERNET EXERCISE 2

Students' answers will vary, but key points include:

- Most significant legislation affecting the accounting profession since 1934.
- Applies to over 15,000 publicly-held companies.
- Creates a Public Company Accounting Oversight Board (PCAOB).
- Establishes standards related to the preparation of audits reports and the conduct of audits relative to: the length of time that audit workpapers must be kept; the prohibition of certain nonaudit services for audit clients; the requirement that audit partners rotate off an audit every five years; the requirement that the audit committee of a company's board of directors approve all accounting services to be performed; and the requirement that a company's CEO and CFO attest to the accuracy of the financial statements.

Principles of Cost Accounting 16th Edition Vanderbeck Solutions Manual