

Exercises: Set B—Solutions**E1B. Cost Recognition**

		Cost Recognition Classifications			
		Product	Variable	Value-Adding or	Direct
		or Period	or Fixed	Non-Value-Adding	or Indirect
Example: Bicycle Tire		Product	Variable	Value-adding	Direct
a.	Depreciation on office computer				
		Period	Fixed	Non-value-adding	—
b.	Labor to assemble bicycle	Product	Variable	Value-adding	Direct
c.	Labor to inspect bicycle	Product	Variable	Non-value-adding	Indirect
d.	Internal auditor's salary	Period	Fixed	Non-value-adding	—
e.	Lubricant for wheels	Product	Variable	Value-adding	Indirect

Note: Depreciation on office computer and auditor's salary are not product costs. Therefore, they would not be traceable to the bicycles in a traditional business operation. The two costs would be shown on the income statement as selling and administrative expenses.

E2B. Comparison of Income Statement Formats

a.	RET
b.	SER
c.	MANF

E3B. Characteristics of Organizations

a.	RET	f.	SER
b.	SER	g.	SER
c.	MANF	h.	MANF
d.	RET	i.	RET
e.	MANF		

E4B. Statement of Cost of Goods Manufactured									
Radio Company									
Statement of Cost of Goods Manufactured									
For the Month of August									
Direct materials used:									
	Materials inventory, beginning					\$	48,600		
	Direct materials purchased						<u>139,000</u>		
	Cost of direct materials available for use						\$187,600		
	Less materials inventory, ending						<u>50,100</u>		
	Cost of direct materials used								\$137,500
	Direct labor (3,400	hours ×	\$8.75)				29,750
Overhead:									
	Utilities					\$	5,870		
	Supervision						16,600		
	Indirect materials						6,750		
	Depreciation						6,200		
	Insurance						1,830		
	Miscellaneous						<u>1,100</u>		
	Total overhead								<u>38,350</u>
Total manufacturing costs									\$205,600
Add work in process inventory, beginning									<u>54,250</u>
Total cost of work in process during the month									\$259,850
Less work in process inventory, ending									<u>48,400</u>
Cost of goods manufactured									<u>\$211,450</u>

E5B. Statement of Cost of Goods Manufactured and Cost of Goods Sold

	Oak		Loblolly		Maple		Spruce	
	Division		Division		Division		Division	
Direct materials used	\$ 3		\$ 7		\$ 5	(g)	\$ 8	
Direct labor	2	(a)	6		4		4	
Overhead	<u>1</u>		<u>3</u>		<u>2</u>		<u>2</u>	(j)
Total manufacturing costs	\$ 6		\$16	(d)	\$11	(h)	\$14	
Beginning work in process inventory	2		7	(e)	3		2	(k)
Ending work in process inventory	<u>(1)</u>	(b)	<u>(3)</u>		<u>(2)</u>		<u>(5)</u>	
Cost of goods manufactured	\$ 7		\$20		\$12		\$11	(l)
Beginning finished goods inventory	3		4	(f)	5		7	
Ending finished goods inventory	<u>(2)</u>		<u>(6)</u>		<u>(4)</u>	(i)	<u>(9)</u>	
Cost of goods sold	<u>\$ 8</u>	(c)	<u>\$18</u>		<u>\$13</u>		<u>\$ 9</u>	

E6B. Missing Amounts—Manufacturing

a.	\$1,000	+	\$12,000	−	\$10,000	=	<u>\$ 3,000</u>
b.	\$140,000	+	\$60,000	−	\$45,000	=	<u>\$155,000</u>
c.	\$23,000	+	\$89,000	−	\$20,000	=	<u>\$ 92,000</u>

E7B. Inventories, Cost of Goods Sold, and Net Income

1.	Note: Items are listed in the suggested order of working solution.						
First Quarter:							
(a)	Gross Margin	=	Sales	-	Cost of Goods Sold		
		=	\$9	-	\$5	=	<u>\$4</u>
(c)	Operating Expenses	=	Gross Margin	-	Operating Income		
		=	\$4	-	\$3	=	<u>\$1</u>
(d)	Cost of Goods Available for Sale	=	Cost of Goods Sold	+	Ending Merchandise Inventory		
		=	\$5	+	\$5	=	<u>\$10</u>
(b)	Net Cost of Purchases	=	Cost of Goods Available for Sale	-	Beginning Merchandise Inventory		
		=	\$10	-	\$4	=	<u>\$6</u>
Second Quarter:							
(e)	Sales	=	Gross Margin	+	Cost of Goods Sold		
		=	\$4	+	\$6	=	<u>\$10</u>
(f)	Ending Merchandise Inventory	=	Cost of Goods Available for Sale	-	Cost of Goods Sold		
		=	\$12	-	\$6	=	<u>\$6</u>
(g)	Beginning Merchandise Inventory	=	Cost of Goods Available for Sale	-	Net Cost of Purchases		
		=	\$12	-	\$7	=	<u>\$5</u>

E7B. Inventories, Cost of Goods Sold, and Net Income (Continued)

Third Quarter:							
(h)	Beginning Merchandise Inventory	=	Cost of Goods Available for Sale	–	Net Cost of Purchases		
		=	\$15	–	\$9	=	<u>\$6</u>
(i)	Operating Income	=	Gross Margin	–	Operating Expenses		
		=	\$5	–	\$2	=	<u>\$3</u>
(j)	Cost of Goods Sold	=	Sales	–	Gross Margin		
		=	\$15	–	\$5	=	<u>\$10</u>
Fourth Quarter:							
(l)	Gross Margin	=	Operating Expenses	+	Operating Income		
		=	\$4	+	\$2	=	<u>\$6</u>
(k)	Sales	=	Gross Margin	+	Cost of Goods Sold		
		=	\$6	+	\$11	=	<u>\$17</u>
(m)	Ending Merchandise Inventory	=	Cost of Goods Available for Sale	–	Cost of Goods Sold		
		=	\$15	–	\$11	=	<u>\$4</u>
(n)	Net Cost of Purchases	=	Cost of Goods Available for Sale	–	Beginning Merchandise Inventory		
		=	\$15	–	\$5	=	<u>\$10</u>

E7B. Inventories, Cost of Goods Sold, and Net Income (Continued)

2.	First Quarter:						
	(c)	Sales	=	Gross Margin	+	Cost of Goods Sold	
			=	\$4	+	\$6	= <u>\$10</u>
	(a)	Ending Finished Goods Inventory	=	Cost of Goods Available for Sale	-	Cost of Goods Sold	
			=	\$8	-	\$6	= <u>\$2</u>
	(b)	Beginning Finished Goods Inventory	=	Cost of Goods Available for Sale	-	Cost of Goods Manufactured	
			=	\$8	-	\$5	= <u>\$3</u>
	Second Quarter:						
	(f)	Gross Margin	=	Sales	-	Cost of Goods Sold	
			=	\$10	-	\$3	= <u>\$7</u>
	(g)	Operating Expenses	=	Gross Margin	-	Operating Income	
			=	\$7	-	\$3	= <u>\$4</u>
	(d)	Cost of Goods Available for Sale	=	Cost of Goods Sold	+	Ending Finished Goods Inventory	
			=	\$3	+	\$3	= <u>\$6</u>
	(e)	Cost of Goods Manufactured	=	Cost of Goods Available for Sale	-	Beginning Finished Goods Inventory	
			=	\$6	-	\$2	= <u>\$4</u>

E7B. Inventories, Cost of Goods Sold, and Net Income (Concluded)

Third Quarter:							
(j)	Gross Margin	=	Operating Expenses	+	Operating Income		
		=	\$5	+	\$1	=	<u>\$6</u>
(k)	Sales	=	Gross Margin	+	Cost of Goods Sold		
		=	\$6	+	\$5	=	<u>\$11</u>
(h)	Ending Finished Goods Inventory	=	Cost of Goods Available for Sale	-	Cost of Goods Sold		
		=	\$10	-	\$5	=	<u>\$5</u>
(i)	Cost of Goods Manufactured	=	Cost of Goods Available for Sale	-	Beginning Finished Goods Inventory		
		=	\$10	-	\$3	=	<u>\$7</u>
Fourth Quarter:							
(n)	Beginning Finished Goods Inventory	=	Cost of Goods Available for Sale	-	Cost of Goods Manufactured		
		=	\$13	-	\$8	=	<u>\$5</u>
(m)	Operating Income	=	Gross Margin	-	Operating Expenses		
		=	\$7	-	\$6	=	<u>\$1</u>
(l)	Cost of Goods Sold	=	Sales	-	Gross Margin		
		=	\$14	-	\$7	=	<u>\$7</u>

E8B. Unit Cost Determination									
1.						Total	Unit Cost		
	Cost Items					Cost	(Total /	10,550)
	Total direct materials costs					\$36,925	\$3.50		
	Total direct labor costs					24,265	2.30		
	Total overhead costs					<u>34,815</u>	<u>3.30</u>		
	Total production costs					<u>\$96,005</u>	<u>\$9.10</u>		
2.	The price for a bottle of wine should be increased to at least \$12.13* per bottle. The current price barely covers the production costs. Very little is left over for profit and other operating costs, such as selling and administrative expenses.								
	*[\$9.10 / (1 – 0.25)] = \$12.13 rounded								
3.						Prime	Conversion		
						Cost	Cost		
	Direct materials					\$3.50	NA		
	Direct labor					2.30	\$2.30		
	Overhead					<u>NA</u>	<u>3.30</u>		
	Totals					<u>\$5.80</u>	<u>\$5.60</u>		
E9B. Unit Costs in a Service Business									
Gas							\$150		
Tractor maintenance							115		
Tractor depreciation (\$1,500	/	12	months)			125	
Labor							<u>600</u>		
Total costs							<u>\$990</u>		
Cost per bale		=	\$2,710	/	6,000	bales	=	<u>\$0.45</u> *	
Revenue per bale		=	\$3,600	/	6,000	bales	=	<u>\$0.60</u>	
*Rounded									
Green is currently covering his costs and making an adequate profit. He does not need to increase the amount he charges to his customers if he is satisfied with his profit for the year or if he obtains profits from other farming services. However, to increase his profits, he may either increase the service charge to his customers or reduce some of his operating expenses. This also assumes that his business activities are steady throughout the year and not seasonal or cyclical. If, for instance, the tractor generates revenue only four months of the year, the depreciation expense allocation would increase to \$375 (\$1,500 × 1/4).									

E10B. The Management Process			
a.	PE	f.	C
b.	E	g.	PE
c.	PL	h.	PL
d.	C	i.	C
e.	PL	j.	PE
E11B. The Planning Framework			
1.	budget	5.	business plan
2.	goal	6.	strategic objectives
3.	operating objectives	7.	tactical objectives
4.	mission		
E12B. Ethical Conduct			
<p>Katrina Storm is in a delicate situation. The ethical issue is one of professional competence. Her boss is violating the ethical standard that requires management accountants to maintain an appropriate level of professional competence through ongoing development of their knowledge and skills.</p>			
<p>Storm has three choices. She can choose to do nothing. However, since Howe's actions can affect the security of company activities, Storm is ethically obligated to do something about the situation. Thus, she can either (1) approach Vicky Howe and urge her to reconsider her thoughts and actions regarding professional development or (2) report her actions to someone higher in the organization. Howe's actions constitute employee theft of services because she is receiving a salary and travel, lodging, and meal expenses for personal pleasure instead of work-related activity. As is the case with so many ethical dilemmas, there is no easy solution for Storm. If Howe does not remain competent, management should be informed.</p>			
E13B. Corporate Ethics			
<p>Depending on the company selected, each student's description will vary. For example, some companies, such as Lockheed Martin, state their ethical principles on their website (www.lockheedmartin.com). The Lockheed Martin principles articulate the company's commitment to honesty, integrity, responsibility, trust, respect, and citizenship. Other companies, such as Nokia, not only have a code of conduct but also provide information about the environmental attributes of its products and how it is being a good corporate neighbor wherever it does business. Students' conclusions about corporate ethical conduct should be supported by their findings.</p>			