bookboon.com

Managerial and Cost Accounting Exercises IV

Larry M. Walther; Christopher J. Skousen

Download free books at
bookboon.com

Larry M. Walther & Christopher J. Skousen

Managerial and Cost Accounting Exercises IV

Download free eBooks at bookboon.com

Managerial and Cost Accounting Exercises IV
© 2011 Larry M. Walther, Christopher J. Skousen & Ventus Publishing ApS.
All material in this publication is copyrighted, and the exclusive property of
Larry M. Walther or his licensors (all rights reserved).
ISBN 978-87-7681-877-7

Download free eBooks at bookboon.com

Contents

Download free eBooks at bookboon.com

Click on the ad to read more

Download free eBooks at bookboon.com

Click on the ad to read more

Problem 1

Amsterdam Corporation produces medical grade isotopes. The isotopes are produced in a single continuous process and Amsterdam uses the weighted-average process costing method of accounting for production.

The production process requires constant utilization of facilities and equipment, as well as direct labor by skilled technicians. As a result, direct labor and factory overhead are both deemed to be introduced uniformly throughout production.

Amsterdam Corporation prepared the following "unit reconciliation" for the month of April:

UNIT RECONCILIATION

	QUANTITY SCHEDULE	EQUIVALENT UNITS CALCULATIONS:		
			CONVERSION	
		DIRECT MATERIALS	DIRECT LABOR	FACTORY OVERHEAD
Beginning Work in Process	7,500			
Started into Production	9,000			
Total Units into Production	16,500			
To Finished Goods	12,000	12,000	12,000	12,000
Ending Work in Process	4,500	3,150	2,250	2,250
Total Units Reconciled	16,500	15,150	14,250	14,250

Ending WIP Completion Status:
Materials = 70%
Conversion = 50%

The above beginning work in process inventory had an assigned cost of $4,500,000, divided between direct materials (50%), direct labor (30%), and factory overhead (20%).

Additional costs incurred during April were $15,000,000, divided between direct materials (15%), direct labor (20%), and factory overhead (65%).

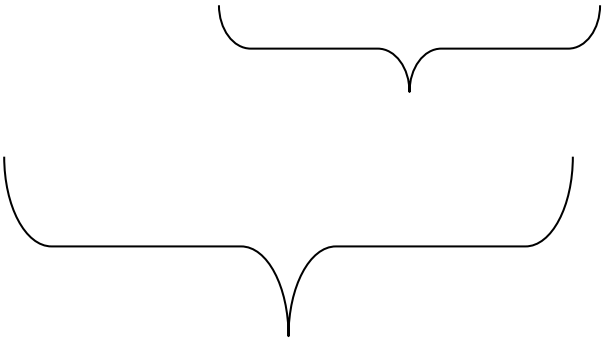
Prepare a schedule showing the calculation of cost per equivalent unit.

Download free eBooks at bookboon.com

Worksheet 1

COST PER EQUIVALENT UNIT:

			CONVERSION	
	TOTAL COST	DIRECT MATERIALS	DIRECT LABOR	FACTORY OVERHEAD
Beginning Work in Process				
Cost incurred during period				
Total cost				
Equivalent units				
Costs per equivalent unit				



Download free eBooks at bookboon.com

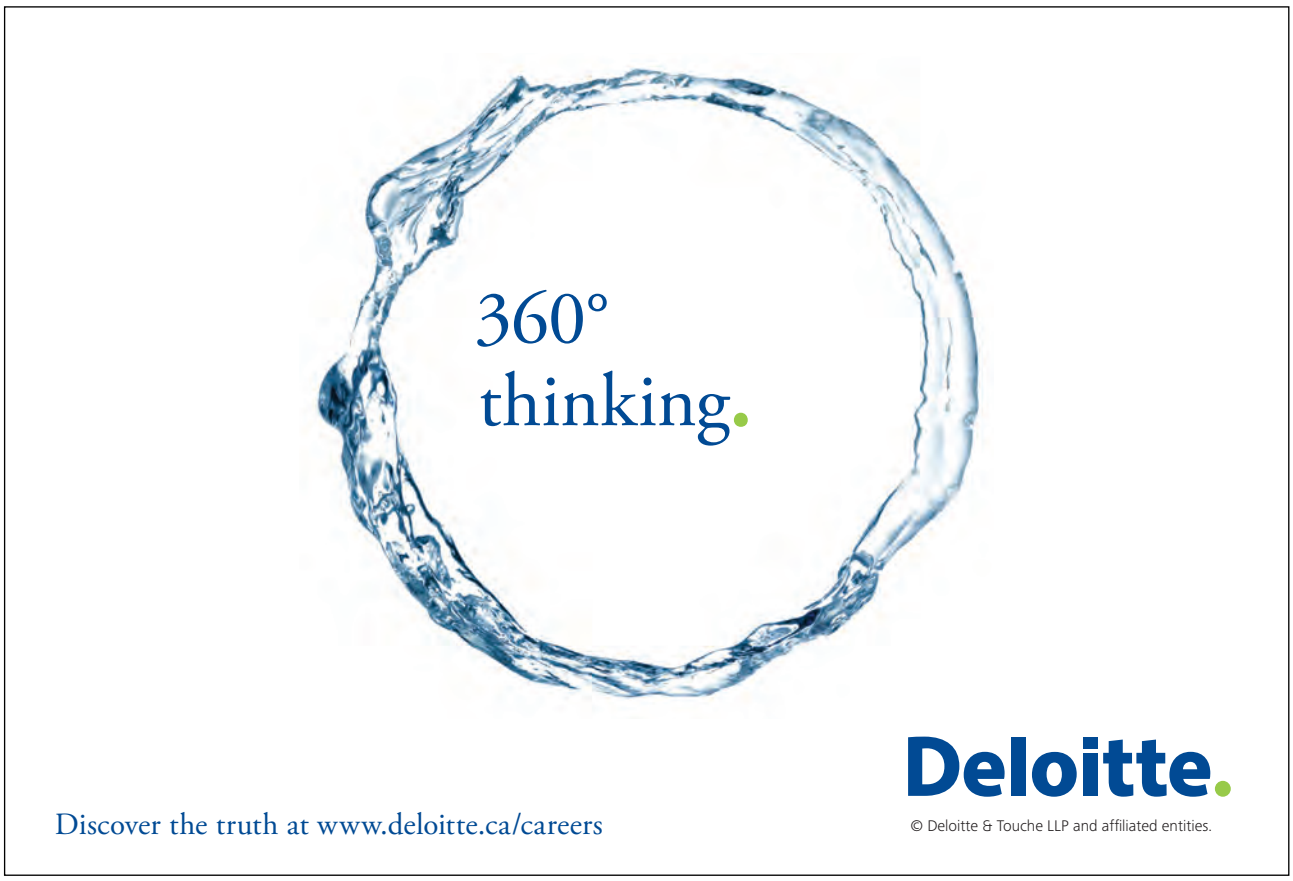
Solution 1

COST PER EQUIVALENT UNIT:

			CONVERSION	
	TOTAL COST	DIRECT MATERIALS	DIRECT LABOR	FACTORY OVERHEAD
Beginning Work in Process	$ 4,500,000	$ 2,250,000	$ 1,350,000	$ 900,000
Cost incurred during period	15,000,000	2,250,000	3,000,000	9,750,000
Total cost	$ 19,500,000	$ 4,500,000	$ 4,350,000	$ 10,650,000
Equivalent units		÷ 15,150	÷ 14,250	÷ 14,250
Costs per equivalent unit		**$ 297.03**	**$ 305.26**	**$ 747.37**

$1,052.63

$1,349.66



Download free eBooks at bookboon.com

Click on the ad to read more

Problem 2

Amsterdam Corporation produces medical grade isotopes. The isotopes are produced in a single continuous process and Amsterdam uses the FIFO process costing method of accounting for production.

The production process requires constant utilization of facilities and equipment, as well as direct labor by skilled technicians. As a result, direct labor and factory overhead are both deemed to be introduced uniformly throughout production.

Amsterdam Corporation prepared the following "unit reconciliation" for the month of April:

UNIT RECONCILIATION

	QUANTITY SCHEDULE	EQUIVALENT UNITS CALCULATIONS:		
			CONVERSION	
		DIRECT MATERIALS	DIRECT LABOR	FACTORY OVERHEAD
Beginning Work in Process	7,500			
Started into Production	9,000			
Total Units into Production	16,500			
To Finished Goods				
From beginning WIP	7,500	2,250	2,625	2,625
Started and completed	4,500	4,500	4,500	4,500
Ending Work in Process	4,500	3,150	2,250	2,250
Total Units Reconciled	16,500	9,900	9,375	9,375

The above beginning work in process inventory had an assigned cost of $4,500,000, divided between direct materials (30%), direct labor (35%), and factory overhead (35%).

Additional costs incurred during April were $15,000,000, divided between direct materials (15%), direct labor (20%), and factory overhead (65%).

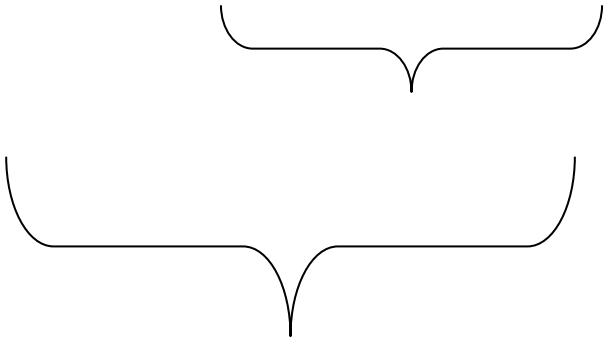
Prepare a schedule showing the calculation of cost per equivalent unit.

Download free eBooks at bookboon.com

Worksheet 2

COST PER EQUIVALENT UNIT:

			CONVERSION	
	TOTAL COST	DIRECT MATERIALS	DIRECT LABOR	FACTORY OVERHEAD
Beginning Work in Process				
Cost incurred during period				
Total cost				
Equivalent units				
Costs per equivalent unit				



Download free eBooks at bookboon.com

Solution 2

COST PER EQUIVALENT UNIT:

			CONVERSION	
	TOTAL COST	DIRECT MATERIALS	DIRECT LABOR	FACTORY OVERHEAD
Beginning Work in Process	$ 4,500,000			
Cost incurred during period	15,000,000	$ 2,250,000	$ 3,000,000	$ 9,750,000
Total cost	$ 19,500,000			
Equivalent units		÷ 9,900	÷ 9,375	÷ 9,375
Costs per equivalent unit		**$ 227.27**	**$ 320.00**	**$ 1.040.00**

$1,360.00

$1,587.27

SIMPLY CLEVER

ŠKODA

Do you like cars? Would you like to be a part of a successful brand?
We will appreciate and reward both your enthusiasm and talent.
Send us your CV. You will be surprised where it can take you.

Send us your CV on
www.employerforlife.com

Download free eBooks at bookboon.com

Click on the ad to read more

Problem 3

Amsterdam Corporation produces medical grade isotopes. The isotopes are produced in a single continuous process and Amsterdam uses the FIFO process costing method of accounting for production.

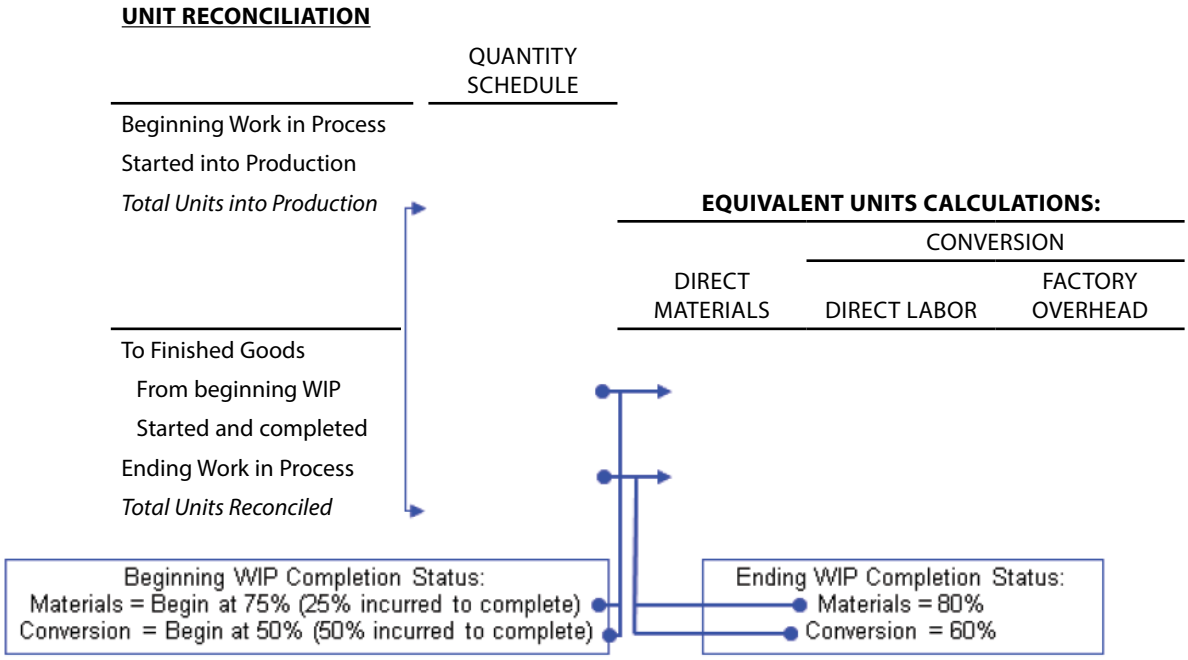
The production process requires constant utilization of facilities and equipment, as well as direct labor by skilled technicians. As a result, direct labor and factory overhead are both deemed to be introduced uniformly throughout production.

> At the beginning of April, 20X7, 7,500 isotopes were in process. During April, an additional 9,000 isotopes were started. 12,000 isotopes were completed and transferred to finished goods.
>
> As of the beginning of the month, work in process was 75% complete with respect to materials and 50% complete with respect to conversion costs.
>
> As of the end of the month, work in process was 80% complete with respect to materials and 60% complete with respect to conversion costs.

Prepare a "unit reconciliation" schedule that includes calculations showing the equivalent units of materials, direct labor, and factory overhead for April.

Download free eBooks at bookboon.com

Worksheet 3



Download free eBooks at bookboon.com

Solution 3

UNIT RECONCILIATION

	QUANTITY SCHEDULE
Beginning Work in Process	7,500
Started into Production	9,000
Total Units into Production	16,500

EQUIVALENT UNITS CALCULATIONS:

			CONVERSION	
		DIRECT MATERIALS	DIRECT LABOR	FACTORY OVERHEAD
To Finished Goods				
From beginning WIP	7,500	1,875	3,750	3,750
Started and completed	4,500	4,500	4,500	4,500
Ending Work in Process	4,500	3,600	2,700	2,700
Total Units Reconciled	16,500	9,975	10,950	10,950

Beginning WIP Completion Status:
Materials = Begin at 75% (25% incurred to complete)
Conversion = Begin at 50% (50% incurred to complete)

Ending WIP Completion Status:
Materials = 80%
Conversion = 60%

I joined MITAS because
I wanted **real responsibility**

The Graduate Programme
for Engineers and Geoscientists
www.discovermitas.com

Download free eBooks at bookboon.com

Click on the ad to read more

Problem 4

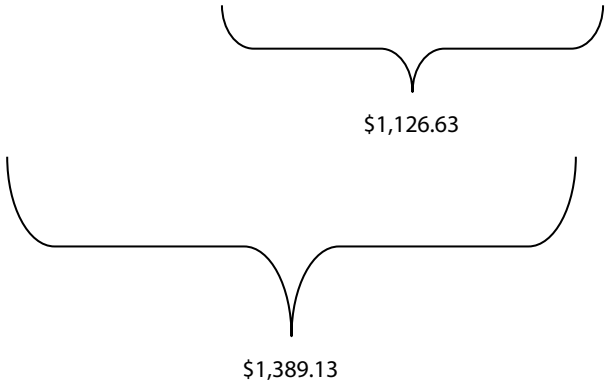
Amsterdam Corporation produces medical grade isotopes. The isotopes are produced in a single continuous process and Amsterdam uses the weighted-average process costing method of accounting for production.

Below is the company's calculation of cost per equivalent unit for September. During September, the company completed and transferred 12,000 isotopes to finished goods. An additional 6,000 units were still in process at the end of the month. The ending work in process was 70% complete with respect to direct materials and 30% complete with respect to both elements of conversion cost.

Prepare a schedule showing the allocation of total cost between finished goods and ending work in process.

COST PER EQUIVALENT UNIT:

			CONVERSION	
	TOTAL COST	DIRECT MATERIALS	DIRECT LABOR	FACTORY OVERHEAD
Beginning Work in Process	$ 5,850,000	$ 1,462,500	$ 1,170,000	$ 3,217,500
Cost incurred during period	13,950,000	2,790,000	4,185,000	6,975,000
Total cost	$ 19,800,000	$ 4,252,500	$ 5,355,000	$ 10,192,500
Equivalent units		÷ 16,200	÷ 13,800	÷ 13,800
Costs per equivalent unit		**$ 262.50**	**$ 388.04**	**$ 738.59**



Download free eBooks at bookboon.com

Worksheet 4

COST ALLOCATION:

		EQUIVALENT UNITS		
			CONVERSION	
	TOTAL COST	DIRECT MATERIALS	DIRECT LABOR	FACTORY OVERHEAD
Transferred to Finished Goods				
Ending Work in Process				
Total Ending Work in Process				
Total Cost Allocation				

Download free eBooks at bookboon.com

Solution 4

		EQUIVALENT UNITS		
			CONVERSION	
	TOTAL COST	DIRECT MATERIALS	DIRECT LABOR	FACTORY OVERHEAD
Transferred to Finished Goods (12,000 units @ **$1,389.13** each)	$ 16,669,560	12,000	12,000	12,000
Ending Work in Process				
Incurred (Material @ **$262.50**)	$ 1,102,500	4,200		
Incurred (Conversion @ **$1,126.63**)	2,027,934		1,800	1,800
Total Ending Work in Process	$ 3,130,434			
Total Cost Allocation	$ 19,799,994			

Click on the ad to read more

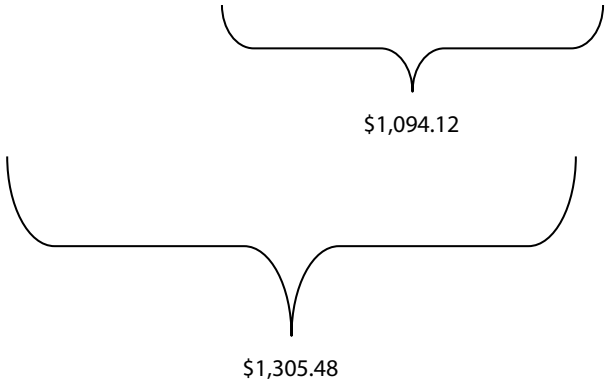
Problem 5

Amsterdam Corporation produces medical grade isotopes. The isotopes are produced in a single continuous process and Amsterdam uses the FIFO process costing method of accounting for production.

Below is the company's calculation of cost per equivalent unit for September. During September, the company completed and transferred 12,000 isotopes to finished goods. An additional 6,000 units were still in process at the end of the month. The beginning work in process consisted of 6,000 units that were 50% complete with respect to direct materials and 40% complete with respect to both elements of conversion cost. The ending work in process was 70% complete with respect to direct materials and 30% complete with respect to both elements of conversion cost.

Prepare a schedule showing the allocation of total cost between finished goods and ending work in process.

			CONVERSION	
	TOTAL COST	DIRECT MATERIALS	DIRECT LABOR	FACTORY OVERHEAD
Beginning Work in Process	$ 5,850,000			
Cost incurred during period	13,950,000	$ 2,790,000	$ 3,487,500	$ 7,672,500
Total cost	$ 19,800,000			
Equivalent units		÷ 13,200	÷ 10,200	÷ 10,200
Costs per equivalent unit		**$ 211.36**	**$ 341.91**	**$ 752.21**



Download free eBooks at bookboon.com

Worksheet 5

COST ALLOCATION:

		EQUIVALENT UNITS		
			CONVERSION	
	TOTAL COST	DIRECT MATERIALS	DIRECT LABOR	FACTORY OVERHEAD
Transferred to Finished Goods				
From Beginning Inventory				
Cost in Beginning Inventory				
To complete (Material @ **$217.40**)				
To complete (Conver. @ **$1,003.42**)				
Started and Comp. (@ **$1,220.82**)				
Total Cost to Finished Goods				
Ending Work in Process				
Incurred (Material @ $**217.40**)				
Incurred (Conversion @ **$1,003.42**)				
Total Ending Work in Process				
Total Cost Allocation				

Download free eBooks at bookboon.com

Solution 5

COST ALLOCATION:

			EQUIVALENT UNITS		
				CONVERSION	
		TOTAL COST	DIRECT MATERIALS	DIRECT LABOR	FACTORY OVERHEAD
Transferred to Finished Goods					
From Beginning Inventory					
Cost in Beginning Inventory	$	5,850,000			
To complete (Material @ **$211.36**)		634,091	3,000		
To complete (Conver. @ **$1,094.12**)		2,625,882		2,400	2,400
	$	9,109,973			
Started and Comp. (@ **$1,305.48**)		7,832,888	6,000	6,000	6,000
Total Cost to Finished Goods	$	16,942,861			
Ending Work in Process					
Incurred (Material @ **$211.36**)	$	887,727	4,200		
Incurred (Conversion @ **$1,094.12**)		1,969,412		1,800	1,800
Total Ending Work in Process	$	2,857,139			
Total Cost Allocation	$	19,800,000			

Download free eBooks at bookboon.com

Click on the ad to read more

Problem 6

Cambridge Office Furniture produces high-quality desks. Each desk is produced from a single large tree in a 3-step process consisting of milling, sanding, and cutting. All raw material is introduced at the start of the milling process. The company uses a process costing system for all costs incurred throughout the production cycle. The following data were extracted from each department's cost of production report prepared for November:

Milling Dept. The beginning balance of work in process was $550,000. During November, additional costs of $990,000 were incurred. The additional costs were attributable to direct materials (80%), direct labor (15%), and factory overhead (5%). The ending balance of work in process was $265,000.

Sanding Dept. The beginning balance of work in process was $305,000. During November, additional costs of $600,000 were incurred. The additional costs were attributable to direct labor (75%) and factory overhead (25%). The ending balance of work in process was $420,000.

Cutting Dept. The beginning balance of work in process was $490,000. During November, additional costs of $175,000 were incurred. The additional costs were attributable to direct labor (65%) and factory overhead (35%). The ending balance of work in process was $260,000.

Prepare summary journal entries to reflect costs incurred by each department during November, as well as the transfer of costs between departments and into finished goods.

Download free eBooks at bookboon.com

Worksheet 6

GENERAL JOURNAL			
Date	**Accounts**	**Debit**	**Credit**
April			
	To record material, labor, and overhead for Milling		
April			
	To transfer completed units from Milling to Sanding ($550,000 + $990,000 - $265,000)		
April			
	To record labor and overhead for Sanding		
April			
	To transfer completed units from Sanding to Cutting		
April			
	To record labor and overhead for Cutting		
April			
	To transfer completed units to finished goods		

Download free eBooks at bookboon.com

Solution 6

GENERAL JOURNAL			
Date	**Accounts**	**Debit**	**Credit**
April	Work in Process Inventory - Mill	990,000	
	Raw Materials Inventory		792,000
	Salaries Payable		148,500
	Factory Overhead		49,500
	To record material, labor, and overhead for Milling		
April	Work in Process Inventory - Sand	1,275,000	
	Work in Process Inventory - Mill		1,275,000
	To transfer completed units from Milling to Sanding ($550,000 + $990,000 - $265,000)		
April	Work in Process Inventory - Sand	600,000	
	Salaries Payable		450,000
	Factory Overhead		150,000
	To record labor and overhead for Sanding		
April	Work in Process Inventory - Cut	1,760,000	
	Work in Process Inventory - Sand		1,760,000
	To transfer completed units from Sanding to Cutting ($305,000 + $1,275,000 + 600,000 - $420,000)		
April	Work in Process Inventory - Cut	175,000	
	Salaries Payable		113,750
	Factory Overhead		61,250
	To record labor and overhead for Cutting		
April	Finished Goods Inventory	2,165,000	
	Work in Process Inventory - Cut		2,165,000
	To transfer completed units to finished goods ($490,000 + $1,760,000 + 175,000 - $260,000)		

Download free eBooks at bookboon.com

Problem 7

Carpet Clean produces carpet cleaning products. Ultimate Clean is a one-step cleaner that is produced in a three-step process. The three phases of production consist of mixing, blending, and bottling. Below is a partial schedule of December's costs for each phase of production. Complete the schedule and respond to the questions that follow.

	Beginning Balance	December Costs	Cost Transfers	Ending Balance
Mixing	$ 518,580	$ 2,599,963	$ (1,834,357)	?
Blending	570,060	?	? (6,082,036)	?
Bottling	818,820	1,717,200	? ?	?
	?	$ 8,477,984	$ (7,480,217)	?

a) Which department experienced a decrease in work-in-process during December?

b) How much was transferred to finished goods inventory?

c) What will be reported as "work in process" at the end of December?

d) If total finished goods inventory decreased by $180,000, and the selling price is equal to 200% of cost of goods sold, how much would be reported for Carpet Clean sales during December?

Download free eBooks at bookboon.com

Worksheet 7

	Beginning Balance	December Costs	Cost Transfers	Ending Balance
Mixing	$ 518,580	$ 2,599,963	$ (1,834,357)	?
Blending	570,060	?	? (6,082,036)	?
Bottling	818,820	1,717,200	? ?	?
	?	$ 8,477,984	$ (7,480,217)	?

a)

b)

c)

d)

Download free eBooks at bookboon.com

Click on the ad to read more

Solution 7

	Beginning Balance	December Costs	Cost Transfers	Ending Balance
Mixing	$ 518,580	$ 2,599,963	$ (1,834,357)	$ 1,284,186
Blending	570,060	4,160,821	1,834,357 (6,082,036)	483,202
Bottling	818,820	1,717,200	6,082,036 (7,480,217)	1,137,839
	$ 1,907,460	$ 8,477,984	$ (7,480,217)	$ 2,905,227

a) Blending experienced a decrease in work in process.

b) $7,480,217 was transferred from bottling to finished goods inventory.

c) Work in process inventory will be reported at $2,905,227.

d) If total finished goods inventory decreased by $180,000, the cost of goods sold would equal $7,660,217 ($7,480,217 + $180,000). The selling price would be $15,320,434 (200% X $7,660,217).

Download free eBooks at bookboon.com

Problem 8

Backyard Playground produces childrens swing-sets. 4,500 swing-sets were produced in a recent production run. The run required 1,500 machine hours, and also required four "set-ups" of equipment. Final inspection required 75 hours of inspection activity. Estimated overhead is estimated at $25 per machine hour, plus $3,500 per "set-up" and $20 per inspection hour. Direct materials and direct labor total $500 per swing-set.

a) Apply activity-based costing and determine the amount assigned to a swing-set.

b) For GAAP purposes, Backyard Playground applies traditional costing methods, and allocates overhead at $40 per machine hour. How much cost would be assigned to the 4,500 swing-sets? What is the per unit cost of a swing-set under the traditional approach? What might explain the higher cost assignment, and how could this influence business decision making?

Worksheet 8

a)

b)

Download free eBooks at bookboon.com

Solution 8

a)

	Units	Per Unit Cost	Total Cost
Direct material/labor	4,500 swing-sets	$500	$ 2,250,000
Machine hours	1,500 hours	$25	37,500
"Set ups"	4	$3,500	14,000
Inspection	75 hours	$20	1,500
			$ 2,303,000

$2,303,000 ÷ 4,500 seahorses = $511.78 per swing-set

b) A traditional approach would assign $2,310,000 to the swing-sets (($500 X 4,500 swing-sets) + ($40 X 1,500 machine hours)). This yields a per unit cost of $513.33 per swing-set.

The traditional method results in a slightly higher assigned cost, possibly because of the averaging of all overhead costs into a single cost pool that is allocated based only on machine hours. ABC divides the process into specific activities, with a goal of determining how much of each specific activity is consumed. In this problem, ABC produced a lower overall cost, possibly because the swing-sets did not involve as many set-ups and/or inspections as did other production activities.