Transferred-In Costs

Example1

Lexington Company produces baseball bats and cricket paddles. It has two departments that process all products. During July, the beginning work in process in the cutting department was half completed as to conversion, and complete as to direct materials. The beginning inventory included $40,000 for materials and $60,000 for conversion costs. Ending work-in-process inventory in the cutting department was 40% complete. Direct materials are added at the beginning of the process.

Beginning work in process in the finishing department was 80% complete as to conversion. Direct materials for finishing the units are added near the end of the process. Beginning inventories included $24,000 for transferred-in costs and $28,000 for conversion costs. Ending inventory was 30% complete. Additional information about the two departments follows:

	Cutting	Finishing
Beginning work-in-process units	20,000	24,000
Units started this period	60,000	
Units transferred this period	64,000	68,000
Ending work-in-process units		20,000
Material costs added	$48,000	$34,000
Conversion costs	28,000	68,500
Transferred-out cost	128,000	

Required:

Prepare a production cost worksheet, using FIFO for the finishing department.

Answer: Production Cost Worksheet
Finishing Department
FIFO Method

Flow of production	**Physical Units**	**Direct Materials**	**Conversion**	**Trans-In**
Work in process, beginning	24,000			
Started during period	64,000			
To account for	88,000			
Good units completed				
Beginning work in process	24,000	24,000	4,800	
Started and completed	44,000	44,000	44,000	44,000
Ending work in process	20,000	0	6,000	20,000
Accounted for	88,000	68,000	54,800	64,000

Costs	**Totals**	**Direct Materials**	**Conversion**	**Trans-in**
WIP, beginning	$52,000			
Costs added during period	230,500	$34,000	$68,500	$128,000
Total costs to account for	$282,500	$34,000	$68,500	$128,000
Divided by equivalent units		68,000	54,800	64,000
Equivalent-unit costs	$ 3.75	$ 0.50	$1.25	$ 2.00

Assignment of costs		
Work in process, beginning		$52,000
Completion of beginning		
Direct Materials (24,000 × $0.50)	$12,000	
Conversion (4,800 × $1.25)	6,000	$18,000
Total Beginning Inventory		70,000
Started and Completed (44,000 × $3.75)		165,000
Total costs transferred out		235,000
Work in process, ending		
Transferred-in (20,000 × $2.00)	$40,000	
Conversion (20,000 × $1.25 × 0.30)	7,500	47,500
Costs accounted for		$282,500

17-26 (35–40 min.) **Transferred-in costs, weighted-average method.**

Trendy Clothing, Inc., is a manufacturer of winter clothes. It has a knitting department and a finishing department. This exercise focuses on the finishing department. Direct materials are added at the end of the process. Conversion costs are added evenly during the process. Trendy uses the weighted-average method of process costing. The following information for June 2014 is available.

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	A	B	C	D	E
1		Physical Units (tons)	Transferred-In Costs	Direct Materials	Conversion Costs
2	Work in process, beginning inventory (June 1)	60	$ 60,000	$ 0	$24,000
3	Degree of completion, beginning work in process		100%	0%	50%
4	Transferred in during June	100			
5	Completed and transferred out during June	120			
6	Work in process, ending inventory (June 30)	40			
7	Degree of completion, ending work in process		100%	0%	75%
8	Total costs added during June		$117,000	$27,000	$62,400

Required:

1. Calculate equivalent units of transferred-in costs, direct materials, and conversion costs.
2. Summarize the total costs to account for, and calculate the cost per equivalent unit for transferred-in costs, direct materials, and conversion costs.
3. Assign costs to units completed (and transferred out) and to units in ending work in process.

SOLUTION

1, 2. & 3. Solution Exhibit 17-26A calculates the equivalent units of work done to date. Solution Exhibit 17-26B summarizes total costs to account for, calculates the cost per equivalent unit of work done to date for transferred-in costs, direct materials, and conversion costs, and assigns these costs to units completed and transferred out and to units in ending work-in-process inventory.

SOLUTION EXHIBIT 17-26A

Summarize the Flow of Physical Units and Compute Output in Equivalent Units; Weighted-Average Method of Process Costing, Finishing Department of Trendy Clothing for June 2014.

	(Step 1)	(Step 2) Equivalent Units		
Flow of Production	Physical Units	Transferred-in Costs	Direct Materials	Conversion Costs
Work in process, beginning (given)	60			
Transferred in during current period (given)	100			
To account for	160			
Completed and transferred out during current period	120	120	120	120
Work in process, ending* (given)	40			
40 × 100%; 40 × 0%; 40 × 75%		40	0	30
Accounted for	160			
Equivalent units of work done to date		160	120	150

*Degree of completion in this department: transferred-in costs, 100%; direct materials, 0%; conversion costs, 75%.

SOLUTION EXHIBIT 17-26B

Summarize the Total Costs to Account for, Compute the Cost per Equivalent Unit, and Assign Costs to the Units Completed and Units in Ending Work-in-Process Inventory; Weighted-Average Method of Process Costing, Finishing Department of Trendy Clothing for June 2014.

		Total Production Costs	Transferred-in Costs	Direct Materials	Conversion Costs
(Step 3)	Work in process, beginning (given)	$84,000	$ 60,000	$ 0	$24,000
	Costs added in current period (given)	206,400	117,000	27,000	62,400
	Total costs to account for	$290,400	$ 177,000	$27,000	$86,400
(Step 4)	Costs incurred to date		$ 117,000	$27,000	$86,400
	Divide by equivalent units of work done to date (Solution Exhibit 17-26A)		÷ 160	÷ 120	÷ 150
	Cost per equivalent unit of work done to date		$1,106.25	$ 225	$ 576
(Step 5)	Assignment of costs:				
	Completed and transferred out (120 units)	$228,870	(120[a] × $1,106.25)	+ (120[a] × $225)	+ (120[a] × $576)
	Work in process, ending (40 units):	61,530	(40[b] × $1,105.25)	+ (0[b] × $225)	+ (30[b] × $576)
	Total costs accounted for	$290,400	$ 177,000	+ $27,000	+ $86,400

[a] Equivalent units completed and transferred out from Sol. Exhibit 17-26A, step 2.
[b] Equivalent units in ending work in process from Sol. Exhibit 17-26A, step 2.

17-27 (35–40 min.) **Transferred-in costs, FIFO method.**

Refer to the information in Exercise 17-26. Suppose that Trendy uses the FIFO method instead of the weighted-average method in all of its departments. The only changes to Exercise 17-26 under the FIFO method are that total transferred-in costs of beginning work in process on June 1 are $45,000 (instead of $60,000) and total transferred-in costs added during June are $114,000 (instead of $117,000).

Required:

Do Exercise 17-26 using the FIFO method. Note that you first need to calculate equivalent units of work done in the current period (for transferred-in costs, direct materials, and conversion costs) to complete beginning work in process, to start and complete new units, and to produce ending work in process.

SOLUTION

Solution Exhibit 17-27A calculates the equivalent units of work done in the current period (for transferred-in costs, direct-materials, and conversion costs) to complete beginning work-in-process inventory, to start and complete new units, and to produce ending work in process. Solution Exhibit 17-27B summarizes total costs to account for, calculates the cost per equivalent unit of work done in the current period for transferred-in costs, direct materials, and conversion costs, and assigns these costs to units completed and transferred out and to units in ending work-in-process inventory.

SOLUTION EXHIBIT 17-27A

Summarize the Flow of Physical Units and Compute Output in Equivalent Units; FIFO Method of Process Costing, Finishing Department of Trendy Clothing for June 2014.

	(Step 1)	(Step 2) Equivalent Units		
Flow of Production	**Physical Units**	**Transferred-in Costs**	**Direct Materials**	**Conversion Costs**
Work in process, beginning (given)	60	(work done before current period)		
Transferred-in during current period (given)	100			
To account for	160			
Completed and transferred out during current period:				
From beginning work in process[a]	60			
[60 × (100% – 100%); 60 × (100% – 0%); 60 × (100% – 50%)]		0	60	30
Started and completed	60[b]			
(60 × 100%; 60 × 100%; 60 × 100%)		60	60	60
Work in process, ending[c] (given)	40			
(40 × 100%; 40 × 0%; 40 × 75%)		40	0	30
Accounted for	160			
Equivalent units of work done in current period		100	120	120

[a] Degree of completion in this department: Transferred-in costs, 100%; direct materials, 0%; conversion costs, 50%.

[b] 120 physical units completed and transferred out minus 60 physical units completed and transferred out from beginning work-in-process inventory.

[c] Degree of completion in this department: transferred-in costs, 100%; direct materials, 0%; conversion costs, 75%.

SOLUTION EXHIBIT 17-27B

Summarize the Total Costs to Account for, Compute the Cost per Equivalent Unit, and Assign Costs to the Units Completed and Units in Ending Work-in-Process Inventory; FIFO Method of Process Costing, Finishing Department of Trendy Clothing for June 2014.

		Total Production Costs	Transferred-in Costs	Direct Materials	Conversion Costs
(Step 3)	Work in process, beginning (given)	$ 69,000	$ 45,000	$ 0	$ 24,000
	Costs added in current period (given)	203,400	114,000	27,000	62,400
	Total costs to account for	$272,400	$159,000	$27,000	$86,400
(Step 4)	Costs added in current period		$114,000	$27,000	$ 62,400
	Divide by equivalent units of work done in current period (Solution Exhibit 17-27A)		÷ 100	÷ 120	÷ 120
	Cost per equivalent unit of work done in current period		$ 1,140	$ 225	$ 520
(Step 5)	Assignment of costs:				
	Completed and transferred out (160 units)				
	Work in process, beginning (60 units)	$ 69,000	$45,000	+ $0	+ $24,000
	Costs added to beginning work in process in current period	29,100	(0[a] × $1,140)	+ (60[a] × $225)	+ (30[a] × $520)
	Total from beginning inventory	98,100			
	Started and completed (60 units)	113,100	(60[b] × $1,140)	+ (60[b] × $225)	+ (60[b] × $520)
	Total costs of units completed and transferred out	211,200			
	Work in process, ending (40 units):	61,200	(40[c] × $1,140)	+ (0[c] × $225)	+ (30[c] × $520)
	Total costs accounted for	$272,400	$159,000	+ $27,000	+ $86,400

[a] Equivalent units used to complete beginning work in process from Solution Exhibit 17-27A, step 2.

[b] Equivalent units started and completed from Solution Exhibit 17-27A, step 2.

[c] Equivalent units in ending work in process from Solution Exhibit 17-27A, step 2.