

Problem 4-20 (45 minutes)

FIFO method

1. Equivalent Units of Production

	<i>Materials</i>	<i>Conversion</i>
To complete beginning work in process:		
Materials: 20,000 units x (100% – 100%)	0	
Conversion: 20,000 units x (100% – 75%) ...		5,000
Units started and completed during the period (180,000 units started – 40,000 units in ending inventory).....	140,000	140,000
Ending work in process:		
Materials: 40,000 units x 100% complete.....	<u>40,000</u>	
Conversion: 40,000 units x 25% complete		<u>10,000</u>
Equivalent units of production	<u>180,000</u>	<u>155,000</u>

2. Cost per Equivalent Unit

	<i>Materials</i>	<i>Conversion</i>
Cost added during the period (a).....	\$334,800	\$238,700
Equivalent units of production (b).....	180,000	155,000
Cost per equivalent unit (a) ÷ (b).....	\$1.86	\$1.54

3. See the next page.

4. Cost Reconciliation

Costs to be accounted for:	
Cost of beginning work in process inventory	\$ 50,000
Costs added to production during the period (\$334,800 + \$238,700).....	<u>573,500</u>
Total cost to be accounted for	<u>\$623,500</u>
Costs accounted for as follows:	
Cost of ending work in process inventory	\$ 89,800
Costs of units transferred out.....	<u>533,700</u>
Total cost accounted for	<u>\$623,500</u>

Problem 4-20 (continued)

3. Costs of Ending Work in Process Inventory and Units Transferred Out

	<i>Materials</i>	<i>Conversion</i>	<i>Total</i>
Ending work in process inventory:			
Equivalent units of production	40,000	10,000	
Cost per equivalent unit	\$1.86	\$1.54	
Cost of ending work in process inventory	\$74,400	\$15,400	<u>\$89,800</u>
Units transferred out:			
Cost in beginning work in process inventory	\$25,200	\$24,800	\$50,000
Cost to complete the units in beginning work in process inventory:			
Equivalent units of production required to complete the beginning inventory	0	5,000	
Cost per equivalent unit	\$1.86	\$1.54	
Cost to complete the units in beginning inventory	0	\$7,700	\$7,700
Cost of units started and completed this period:			
Units started and completed this period	140,000	140,000	
Cost per equivalent unit	\$1.86	\$1.54	
Cost of units started and completed this period	\$260,400	\$215,600	<u>\$476,000</u>
Cost of units transferred out			<u>\$533,700</u>