

Problem 3-23 (45 minutes)

1. The cost of raw materials put into production was:

Raw materials inventory, 1/1	\$ 30,000
Debits (purchases of materials)	<u>420,000</u>
Materials available for use.....	450,000
Raw materials inventory, 12/31	<u>60,000</u>
Materials requisitioned for production	<u>\$390,000</u>

2. Of the \$390,000 in materials requisitioned for production, \$320,000 was debited to Work in Process as direct materials. Therefore, the difference of \$70,000 (\$390,000 – \$320,000 = \$70,000) would have been debited to Manufacturing Overhead as indirect materials.

3. Total factory wages accrued during the year
(credits to the Factory Wages Payable account) . \$175,000

Less direct labor cost (from Work in Process).....	<u>110,000</u>
Indirect labor cost.....	<u>\$ 65,000</u>

4. The cost of goods manufactured for the year was \$810,000—the credits to Work in Process.

5. The Cost of Goods Sold for the year was:

Finished goods inventory, 1/1	\$ 40,000
Add: Cost of goods manufactured (from Work in Process) .	<u>810,000</u>
Cost of goods available for sale	850,000
Deduct: Finished goods inventory, 12/31	<u>130,000</u>
Cost of goods sold.....	<u>\$720,000</u>

6. The predetermined overhead rate was:

$$\begin{aligned} \text{Predetermined overhead rate} &= \frac{\text{Manufacturing overhead cost applied}}{\text{Direct materials cost}} \\ &= \frac{\$400,000}{\$320,000} = 125\% \text{ of direct materials cost} \end{aligned}$$

Problem 3-23 (continued)

7. Manufacturing overhead was overapplied by \$15,000, computed as follows:

Actual manufacturing overhead cost for the year (debits).....	\$385,000
Applied manufacturing overhead cost (from Work in Process—this would be the credits to the Manufacturing Overhead account)	<u>400,000</u>
Overapplied overhead.....	<u>\$(15,000)</u>

8. The ending balance in Work in Process is \$90,000. Direct labor makes up \$18,000 of this balance, and manufacturing overhead makes up \$40,000. The computations are:

Balance, Work in Process, 12/31	\$90,000
Less: Direct materials cost (given).....	(32,000)
Manufacturing overhead cost (\$32,000 × 125%)	<u>(40,000)</u>
Direct labor cost (remainder)	<u>\$18,000</u>