

SOLUTIONS MANUAL



MANAGERIAL
ACCOUNTING

Whitecotton
Libby
Phillips



Chapter 02 Job Order Costing

Student Learning Objectives and Related Assignment Materials

| <i>Student Learning Objectives</i> | <i>Mini Exercises</i> | <i>Exercises</i> | <i>Problems (A & B)</i> | <i>Cases and Projects</i> |
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| 1. Describe the key differences between job order costing and process order costing. | 1 | | | 2 |
| 2. Describe the source documents used to track direct materials and direct labor cost to the job cost sheet. | 2, 7 | 1, 3, 19 | | 2 |
| 3. Calculate a predetermined overhead rate and use it to apply manufacturing overhead cost to jobs. | 3, 4, 10 | 1, 5, 6, 7, 9, 11, 14, 16 | A3, 7, 8 B3, 7, 8 | 1, 2, 3 |
| 4. Describe how costs flow through the accounting system in job order costing. | 5, 7, 8, 10 | 1, 3, 7, 9, 11, 13, 14, 16, 20 | A1, 3, 5, 6, 8 B1, 3, 5, 8 | 3, |
| 5. Calculate and disposed of overapplied and underapplied manufacturing overhead. | 6, 10 | 7, 14, | A1, 3, 5, 6, 7, 8 B1, 3, 5, 6, 7, 8 | 3 |
| 6. Calculate the cost of goods manufactured and cost of goods sold. | 12, 13, 14, 15, 16, | 6, 11, 14, 17, 18 | A1, 8 B1, 6, 8 | 3 |
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PowerPoint Slides

| <i>Student Learning Objectives</i> | <i>PowerPoint® Slides</i> |
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| 1. Describe the key differences between job order costing and process order costing. | 1-6 |
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| 6. Calculate the cost of goods manufactured and cost of goods sold. | 32-43 |

Chapter Summary

LO1 - Describe the key differences between job order costing and process order costing.

- Process costing is used by companies that make very homogeneous products or services using a continuous production process.
- Job order costing is used in companies that make unique products or provide specialized services.

LO2 - Describe the source documents used to track direct materials and direct labor cost to the job cost sheet.

- Direct materials are issued to production by using a materials requisition form showing the costs and quantities of all materials requested and the job on which the materials were used.
- Direct labor costs were recorded using labor time tickets on which each worker records the amount of time spent on each specific job.
- The costs incurred for each job are recorded on a separate job cost sheet.

LO3 - Calculate a predetermined overhead rate and use it to apply manufacturing overhead cost to jobs.

- Because manufacturing overhead costs cannot be traced directly to individual jobs, we must use an allocation base or cost driver to apply manufacturing overhead cost to specific jobs.
- The predetermined overhead rate is calculated by dividing the *estimated* total manufacturing overhead by the *estimated* value of the allocation base.
- Manufacturing overhead is applied to specific jobs by multiplying the predetermined overhead rate by the *actual* amount of the allocation base used on the job.

LO4 - Describe how costs flow through the accounting system in job order costing.

- Initially, raw material purchases are recorded in the Raw Materials Inventory account.
- When materials are placed into production, direct materials are recorded in the Work in Process Inventory account; indirect materials are recorded in the Manufacturing Overhead Account.
- When labor costs are incurred, direct labor is recorded in the Work in Process Inventory; indirect labor is recorded in the Manufacturing Overhead Account.
- Actual manufacturing overhead costs are recorded on the debit side of the Manufacturing Overhead Account.
- When manufacturing overhead is applied to specific jobs, the Work in Process Inventory account is debited and the Manufacturing Overhead account is credited.
- When a job is completed, the total cost of goods completed is transferred from the Work in Process Inventory account to the Finished Goods Inventory account.
- When the job is delivered to the customer, the total cost is transferred from Finished Goods Inventory to Cost of Goods Sold.
- Nonmanufacturing costs are recorded as period expenses rather than as part of manufacturing cost flow.

LO5 - Calculate and disposed of overapplied and underapplied manufacturing overhead.

- Actual overhead costs are recorded on the debit side of the Manufacturing Overhead account; applied manufacturing overhead costs are recorded on the credit side. Thus, the balance in the Manufacturing Overhead account represents the amount of overapplied or underapplied overhead.
- If the overhead account has a debit balance, actual overhead costs were higher than applied overhead costs; that is, overhead was underapplied.

- If the overhead account has a credit balance, applied overhead costs were higher than actual overhead costs; that is, overhead was overapplied.
- At the end of the year, the remaining overhead balance is typically transferred to the Cost of Goods Sold account. Overapplied overhead decreases (credits) the Cost of Goods Sold account; underapplied overhead increases (debits) the Cost of Goods Sold account.

LO6 - Calculate the cost of goods manufactured and cost of goods sold.

- The manufacturing costs that flow out of the Work in Process Inventory and into Finished Goods Inventory are called cost of goods manufactured. When the product is sold, the cost is transferred to the Cost of Goods Sold account.
- Initially, the cost of goods manufactured and the cost of goods sold are based on direct materials, direct labor, and **applied manufacturing overhead** costs.
- The Cost of Goods Sold account is updated to reflect actual manufacturing overhead costs through an adjustment for overapplied or underapplied manufacturing overhead.

| Chapter Outline | Teaching Notes |
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| <p>I. Job Order versus Process Costing LO 1 - Describe the key differences between job order costing and process order costing.</p> <p>A. Process costing is used by companies that make standardized or homogeneous products or services.</p> <ol style="list-style-type: none"> 1. Because each unit is the same, there is no need to track cost of each unit individually. 2. Process costing breaks the production process down into its basic steps, or process, and then average the total cost of the process over the number of units produced. <p>B. Job order costing is used in companies that offer customized or unique products or services.</p> <ol style="list-style-type: none"> 1. Unlike process costing, in which each unit is identical to the next, job order costing is used for situations in which each unit or customer tends to be very different from the next. 2. Job order costing is also common in service industries that serve clients or customers with unique needs. <p>C. The key difference between job order costing and process costing is whether the company’s products or services are heterogeneous (different) or homogeneous (similar).</p> <ol style="list-style-type: none"> 1. Job order costing relates to: <ol style="list-style-type: none"> a. Unique products and services, such as a custom-built ship. b. Customized to the needs of the customer or client. c. Costs accumulated by job or customer. d. Job cost sheet for each unique unit, customer, or job. 2. Process order costing relates to: <ol style="list-style-type: none"> a. Homogeneous products and services, such as cans of soda. b. Mass-production of products in series of standardized processes. c. Costs accumulated by process. d. Production report for each production process. <p>II. Assigning Manufacturing Costs to Jobs LO 2 - Describe the source documents used to track direct materials and direct labor cost to the job cost sheet.</p> <p>A. Manufacturing Costs are divided into three different categories:</p> <ol style="list-style-type: none"> 1. Direct materials are the primary materials input that can be directly and conveniently traced to each job. 2. Direct Labor is the hands-on work that goes into producing a product or service. 3. Manufacturing Overhead includes all other costs of producing a product that cannot be directly or conveniently traced to an individual unit. | <p>Exhibit 2.1 <u>Examples:</u> Beverage, toilet tissue, petroleum product</p> <p>Custom Home Built, Service Industries such as accounting and law firms</p> <p>Video Program 4</p> <p>Handout 2-1 Video Program 3</p> <p><i>Urge students to complete the Self-Study Practice for LO 1.</i></p> <p>Exhibit 2.2 <u>Examples:</u> to build a home Concrete, lumber, fixtures</p> <p>Installing the plumbing</p> <p>Cost of site supervision, depreciation on equipments</p> <p>Handout 2-2</p> |

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| <p>B. In a job order cost system, all of the manufacturing costs are recorded on a document called Job cost sheet, which provides a detailed record of the cost incurred to complete a specific job, including direct materials, direct labor, and applied manufacturing overhead.</p> <p>C. All that is needed to keep track of the costs of specific jobs is a set of records called source documents.</p> <ol style="list-style-type: none"> 1. Before materials that can be used on a job, a material requisition form – a form that lists the quantity and cost of the direct materials used on a specific job – must be filled out. <ol style="list-style-type: none"> a. This form is used to control the physical flow of materials out of inventory and into production. b. It provides the information needed to record the cost of raw materials in the accounting system. 2. A direct labor time ticket is a source document that shows how much time a worker has spent on various jobs each week. <p>LO 3 - Calculate a predetermined overhead rate and use it to apply manufacturing overhead cost to jobs.</p> <p>D. Unlike direct materials and direct labor, which can be traced to individual jobs using source documents, manufacturing overhead cannot be directly traced to specific jobs and must be assigned to jobs using an allocation base.</p> <ol style="list-style-type: none"> 1. An allocation base should explain why the cost is incurred. 2. An allocation base that is causally related to cost incurrence is sometimes called a cost driver. <p>E. Before we assign manufacturing overhead cost to jobs, we must first calculate a predetermined overhead rate using our chosen allocation base.</p> <ol style="list-style-type: none"> 1. The predetermined overhead rate is calculated as follows. <i>Predetermined overhead rate = Estimated total manufacturing overhead cost ÷ Estimated units in the allocation base</i> 2. The overhead rate is calculated for an entire accounting period and is based on estimated rather than actual value. <p>F. Once the predetermined overhead rate has been established, accountants use it to determine how much overhead should be added to each job.</p> <ol style="list-style-type: none"> 1. They calculate the applied manufacturing overhead by multiplying predetermined overhead rate by the <i>actual value</i> of the allocation base used on the job, as follows. <i>Predetermined overhead rate × Actual value of the allocation base for each job = overhead applied to an individual job</i> 2. Because the predetermined overhead is based on estimated | <p>Handout 2-3</p> <p><u>Examples:</u> The number of students is the cost driver for the cost of handouts.</p> <p><i>Ensure that students understand why it is necessary to estimate and assign the manufacturing overhead.</i></p> <p><i>Emphasize that predetermined overhead rate calculation uses estimated amounts rather than actual amounts in the ratio.</i></p> |

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| <p>data, applied manufacturing overhead is unlikely to be exactly the same as the actual manufacturing overhead cost incurred.</p> <ol style="list-style-type: none"> 3. Therefore, we need to learn how to record actual manufacturing overhead and account for the difference between actual manufacturing overhead and applied manufacturing overhead later in this chapter. <p>III. Recording the Flow of Cost in Job Order Costing</p> <p>LO 4 - Describe how costs flow through the accounting system in job order costing.</p> <ol style="list-style-type: none"> A. The three inventory accounts that are used to record manufacturing costs follow. <ol style="list-style-type: none"> 1. Raw Materials Inventory represents the cost of materials purchased from suppliers but not yet used in production. This account includes the direct materials and the indirect materials. 2. Work in Process Inventory represents the total cost of jobs that are still in process. <ol style="list-style-type: none"> a. Any cost that is added to the Work in Process Inventory account must be also recorded on the individual job cost sheet. b. The total cost of all jobs in process should be equal to the balance in the Work in Process Inventory. 3. Finished Goods Inventory represents the cost of jobs that have been completed but not yet sold. The cost of a job completed remains in the Finished Goods Inventory account until it is sold. B. Only direct materials and direct labor costs are recorded directly in the Work in Process Inventory account. All indirect or manufacturing overhead costs flow through the Manufacturing Overhead account. C. The manufacturing overhead account is a temporary holding account used to record actual and applied manufacturing overhead costs. <ol style="list-style-type: none"> 1. Actual manufacturing overhead costs are accumulated on the debit (left-hand) side of the manufacturing overhead account. 2. The credit (right-hand) side of the manufacturing overhead account shows the amount of manufacturing overhead that is applied to specific jobs based on the predetermined overhead rate. D. As jobs are produced, the Work in Process inventory account accumulates the direct materials, direct labor, and applied manufacturing overhead for each job. E. When a job is completed, its total manufacturing cost is transferred | <p><i>Urge students to complete the Self-Study Practice for LO 3.</i></p> <p>Exhibit 2.3</p> <p>Exhibit 2.4 Exhibit 2.5</p> <p>Exhibit 2.6</p> <p>Exhibit 2.7</p> |

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| <p>side) is greater than the actual overhead (debit side).</p> <p>3. Overhead cost is underapplied if the amount applied (credit side) is less than the actual overhead (debit side).</p> <p>B. Disposing of Overapplied or Underapplied Manufacturing Overhead</p> <p>1. To remove the overapplied overhead with credit balance, we will debit Manufacturing Overhead Inventory account and credit (decrease) the Cost of Goods Sold account.</p> <p>2. To remove the underapplied overhead with debit balance, we will credit Manufacturing Overhead Inventory and debit (increase) the Cost of Goods Sold account.</p> <p>LO 6 - Calculate the Cost of Goods Manufactured and Cost of Goods Sold.</p> <p>C. Preparing the Cost of Goods Manufactured Report – the total cost that is transferred out of Work in Process Inventory and into Finished Goods Inventory is called cost of goods manufactured or cost of goods completed.</p> <p>1. Calculation of cost of goods manufactured is as follows.</p> <ul style="list-style-type: none"> Beginning raw materials inventory + Raw materials purchased - Indirect raw materials - Ending raw materials inventory = Direct materials used + Direct labor + Manufacturing overhead = Total current manufacturing costs + Beginning work in process inventory - Ending work in process inventory = Cost of goods manufactured <p>2. Calculation of cost of goods sold is as follows.</p> <ul style="list-style-type: none"> Beginning finished goods inventory + Cost of goods manufactured - Ending finished goods inventory = Unadjusted cost of goods sold +/- Underapplied manufacturing overhead / Overapplied manufacturing overhead = Adjusted cost of goods sold <p>D. Supplement: Journal Entries for Job Order Costing</p> <p>1. Recording the purchase and issue of materials.</p> <p>a. The journal entry to record the purchase of raw materials follows.</p> | <p><i>Encourage students to brainstorm possible solutions for underapplied or overapplied overhead</i></p> <p>Exhibit 2.8</p> <p><i>Urge students to complete the Self-Study Practice for LO 5.</i></p> <p>Handout 2-5</p> |

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| <p><i>Dr. Raw Materials Inventory</i> XXXX <i>Cr. Accounts Payable</i> XXXX</p> <p>b. The journal entry to record the issuance of direct and indirect materials follows.</p> <p><i>Dr. Work in Process Inventory</i> XXXX <i>Dr. Manufacturing Overhead</i> XXXX <i>Cr. Raw Materials Inventory</i> XXXX</p> <p>2. Recording labor cost. The journal entry to record the direct and indirect labor follows.</p> <p><i>Dr. Work in Process Inventory</i> XXXX <i>Dr. Manufacturing Overhead</i> XXXX <i>Cr. Wages Payable</i> XXXX</p> <p>3. Recording actual manufacturing overhead. The combined journal entry to record all actual manufacturing overhead, such as wages, taxes, insurance, depreciation, is as follows.</p> <p><i>Dr. Manufacturing Overhead</i> XXXX <i>Cr. Cash</i> XXXX <i>Cr. Wages Payable</i> XXXX <i>Cr. Taxes Payable</i> XXXX <i>Cr. Prepaid Insurance</i> XXXX <i>Cr. Accumulated Depreciation</i> XXXX</p> <p>4. Recording applied manufacturing overhead. The journal entry to record the applied manufacturing overhead follows.</p> <p><i>Dr. Work in Process Inventory</i> XXXX <i>Cr. Manufacturing overhead</i> XXXX</p> <p>5. Transferring costs to Finished Goods Inventory and Cost of Goods Sold.</p> <p>a. The journal entry to record transferring costs to Finished Goods Inventory follows.</p> <p><i>Dr. Finished Goods Inventory</i> XXXX <i>Cr. Work in Process Inventory</i> XXXX</p> <p>b. The journal entry to record transfer from Finished Goods Inventory to Cost of Goods Sold follows.</p> <p><i>Dr. Work in Process Inventory</i> XXXX <i>Cr. Finished Goods Inventory</i> XXXX</p> <p>6. Recording nonmanufacturing costs. Example: The journal entry to record nonmanufacturing costs are as follows.</p> <p><i>Dr. Commission Expense</i> XXXX <i>Cr. Cash or Commission Payable</i> XXXX</p> | <p>Encourage students to study the terms in this chapter and complete the Demonstration Case at the end of the chapter.</p> |

| Chapter Outline | Teaching Notes |
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| <i>Dr. Advertising Expense</i> XXXX | |
| <i>Cr. Cash, Prepaid Advertising, or Payable</i> XXXX | |
| <i>Dr. Depreciation Expense</i> XXXX | |
| <i>Cr. Accumulated Depreciation</i> XXXX | |
| <i>Dr. Salaries and administrative Expense</i> XXXX | |
| <i>Cr. Cash, Prepaid s, or Payable</i> XXXX | |

Summary of Related Video Programs

Program 3 – Job Order Costing (11:39)

Various managers explain and illustrate how costs are estimated, measured and reported in their job order cost systems. After noting the difficulties in assigning all overhead costs to a particular job order or unit of product, the use of a predetermined overhead rate to apply overhead to production is explained. The video segment ends with an explanation of the meaning and disposition of the balance in the overhead account.

Program 4 – Process Costing (12:31)

The video segment begins with an introduction of the need to compute equivalent units, which is followed by a detailed discussion and illustration of the use of the weighted average method to compute equivalent units. Then, various process cost reports are overviewed and the benefits of process costing systems are stressed. Each of the four basic steps in a process cost system and the information provided by each (i.e., number of units worked on, number of equivalent units produced, cost per equivalent unit and location of costs of goods) are addressed in the context of the departmental production report.

Supplemental Enrichment Activities

Note: These activities would be suitable for individual or group activities in class.

- **Handout 2-1** (LO 1) is designed to ensure that students understand the linkage between products and different costing systems.
- **Handout 2-2** (LO 2) is designed to ensure that students understand how to assign different costs to different manufacturing cost categories. The knowledge they learn here is important for understanding the concepts of cost flows (LO4).
- **Handout 2-3** (LO's 3 and 5) is designed to ensure that students know how to calculate predetermined overhead rate and use this information to figure out the applied manufacturing overhead. Also, students are asked to calculate underapplied or overapplied manufacturing overhead.
- **Handout 2-4** (LO 4) is designed to ensure that students understand the cost flows.
- **Handout 2-5** (LO 6) is designed to ensure that students are able to calculate the cost of goods manufactured and the cost of goods sold using the provided information.

Handout 2-1 (LO1)

Enter the letter (X) next to the descriptions of products, jobs or services under the column for either using job order costing or process costing in production.

| Descriptions | Job Order Costing | Process Costing |
|---|-------------------|-----------------|
| A. Customized home | | |
| B. Auto repair | | |
| C. Accounting firm | | |
| D. Beverage | | |
| E. Small Appliance | | |
| F. Lawn service | | |
| G. Hanna Montana Show | | |
| H. Gasoline | | |
| I. Attorney service | | |
| J. Computer mouse | | |
| K. Submarine built for U.S. Department of Defense | | |
| L. Light bulb | | |

Solution:

Chapter 02 - Job Order Costing

| Descriptions | Job Order Costing | Process Costing |
|---|-------------------|-----------------|
| A. Customized home | X | |
| B. Auto repair | X | |
| C. Accounting firm | X | |
| D. Beverage | | X |
| E. Small Appliance | | X |
| F. Lawn service | X | |
| G. Hanna Montana Show | X | |
| H. Gasoline | | X |
| I. Attorney service | X | |
| J. Computer mouse | | X |
| K. Submarine built for U.S. Department of Defense | X | |
| L. Light bulb | | X |

Handout 2-2 (LO2)

- A. Direct Materials
- B. Direct Labor
- C. Manufacturing Overhead
- D. Nonmanufacturing Cost

Classify the following costs into one of the above four categories:

1. _____ Salaries of site supervisors
2. _____ Fixture used in building home
3. _____ Depreciation of equipments used in production
4. _____ Depreciation of headquarter building
5. _____ Glue used in assembling wooden tables
6. _____ Utilities cost of the factory
7. _____ Compensation of the CEO
8. _____ Wages of workers framing the home
9. _____ Utilities cost of the building for administration
10. _____ Hard disks used for building laptop computers

Solution:

- | | | | | |
|------|------|------|------|-------|
| 1. C | 2. A | 3. C | 4. D | 5. C |
| 6. C | 7. D | 8. B | 9. D | 10. A |

Handout 2-3 (LO's 3 and 5)

Leo, Inc. expects to assemble 20,000 units of laptop computers this coming month. The amount of manufacturing overhead incurred this coming month is estimated to be \$1,100,000. The number of direct labor hours is estimated to be 4,000 hours. Leo, Inc. is currently using direct labor hours as the single allocation base to apply manufacturing overhead to the jobs. Leo, Inc. receives a job order which requires labor work of 200 hours. Answer the following questions.

1. Calculate the predetermined overhead rate used to apply manufacturing overhead.
2. Based on your answer in (1), calculate how much of manufactured overhead should be applied to this specific order.
3. The amount of *actual* manufacturing overhead incurred equals \$1,200,000 at the end of this month. The amount of *applied* manufacturing overhead during this month is \$1,050,000. Calculate the overapplied or underapplied manufacturing overhead.
4. Indicate how to dispose of the overapplied or underapplied manufacturing overhead.

Solution:

1. Predetermined overhead rate = Estimated manufacturing overhead ÷ Estimated allocation base
= \$1,100,000 ÷ 4,000 direct labor hours = \$275 per direct labor hours (DLH).
2. Applied manufacturing overhead = Predetermined overhead rate × actual value of allocation base
= \$275 per DLH × 200 DLHs = \$55,00
3. Since the applied manufacturing overhead is less than (or under) the actual manufacturing overhead, the difference \$150,000 (\$1,200,000 - \$1,050,000) represents the underapplied manufacturing overhead.
4. Since we have underapplied overhead, we need to apply (or add) more overhead to fix the problem. Underapplied overhead is represented by a debit ending balance on the Manufacturing Overhead account because the applied manufacturing overhead (credit side) is less than the actual manufacturing overhead (debit side). In order to dispose of the underapplied manufacturing overhead, we will increase (debit) the Cost of Goods Sold account and apply more to (credit) the Manufacturing Overhead account. The Manufacturing Overhead account will have a zero balance after we dispose of the underapplied manufacturing overhead.

Handout 2-4 (LO4)

Answer as True or False. If the answer is False, change the statement to make it True.

1. ____ If raw materials used can be traced conveniently to a specific job, it should be assigned to Work in Process Inventory and removed from Raw Materials Inventory.
2. ____ When labor costs are incurred, direct labor is added (debited) to Manufacturing Overhead account.
3. ____ The left side of Manufacturing Overhead Inventory account represents the actual manufacturing overhead incurred.
4. ____ Work in Process Inventory accumulates the direct materials, direct labor, and the *applied* manufacturing overhead cost for each job.
5. ____ Manufacturing Overhead account is credited as manufacturing overhead is applied to Work in Process Inventory.
6. ____ Once a job has been sold, its total cost is transferred out of Finished Goods Inventory to Cost of Goods Sold.
7. ____ Actual manufacturing overhead costs include all of the indirect manufacturing costs incurred but cannot traced to the specific jobs.
8. ____ If a job is completed, its total manufacturing cost is transferred out of Finished Goods Inventory and assigned to Work in Process Inventory.
9. ____ Raw Materials Inventory, Work in Process Inventory, and Finished Goods accounts are available on the income statement.
10. ____ Cost of goods manufactured represents the cost of goods completed during the accounting period.

Solution:

1. **T** If raw materials used can be traced conveniently to a specific job, it should be assigned to Work in Process Inventory and removed from Raw Materials Inventory.
2. **F** When labor costs are incurred, direct labor is added (debited) to Manufacturing Overhead account.
 Correct Statement:
Direct labor is added (debited) to Work in Process account.
3. **T** The left side of Manufacturing Overhead Inventory account represents the actual manufacturing overhead incurred.
4. **T** Work in Process Inventory accumulates the direct materials, direct labor, and the *applied* manufacturing overhead cost for each job.
5. **T** Manufacturing Overhead account is credited as manufacturing overhead is applied to Work in Process Inventory.
6. **T** Once a job has been sold, its total cost is transferred out of Finished Goods Inventory to Cost of Goods Sold.
7. **T** Actual manufacturing overhead costs include all of the indirect manufacturing costs incurred but cannot traced to the specific jobs.
8. **F** If a job is completed, its total manufacturing cost is transferred out of Finished Goods Inventory and assigned to Work in Process Inventory.
 Correct Statement:
If a job is completed, its total manufacturing cost is transferred out of Work in Process Inventory and assigned to Finished Goods Inventory.
9. **F** Raw Materials Inventory, Work in Process Inventory, and Finished Goods accounts are available on the income statement.
 Correct Statement:
Raw Materials Inventory, Work in Process Inventory, and Finished Goods accounts are available on the balance sheet.
10. **T** Cost of goods manufactured represents the cost of goods completed during the accounting period.

Handout 2-5 (LO6)

The accounting information of Leo, Inc. in May is as follows.

Chapter 02 - Job Order Costing

| | |
|--------------------------------|---------|
| Beginning Raw Materials | \$1,000 |
| Ending Raw Materials | 1,500 |
| Purchase of Raw Materials | 2,000 |
| Beginning Work in Process | 3,000 |
| Ending Work in Process | 2,000 |
| Beginning Finished Goods | 3,000 |
| Ending Finished Goods | 2,000 |
| Direct Labor | 2,000 |
| Manufacturing overhead applied | 1,500 |

Answer the following questions:

1. Calculate the cost of raw materials used in production during May.
2. Calculate total current manufacturing costs for the month of May assuming that all raw materials used are direct materials.
3. Calculate cost of goods manufactured for the month of May.
4. Calculate the unadjusted cost of goods sold for the month of May.
5. If actual manufacturing overhead incurred equals \$2,000, indicate the amount of underapplied or overapplied overhead at the end of May.
6. Calculate the adjusted cost of goods sold after you remove the underapplied or overapplied overhead.

Solution:

- | | | | |
|----|---|-------------------------|---------|
| 1. | | Beginning Raw Materials | \$1,000 |
| | + Purchase of Raw Materials | 2,000 | |
| | - Ending Raw Materials | <u>1,500</u> | |
| | = Raw Materials used | 1,500 | |
| | - Indirect Materials | <u>0</u> | |
| | = Direct Materials | <u>1,500</u> | |
| | | | |
| 2. | Total current manufacturing cost = direct materials used + direct labor + applied manufacturing overhead = \$1,500 + \$2,000 + \$1,500 = \$5,000. | | |
| | | | |
| 3. | Beginning Work in Process | \$3,000 | |
| | + Total current manufacturing costs | 5,000 | |
| | - Ending Work in Process | <u>2,000</u> | |
| | = Cost of Goods Manufactured | <u>6,000</u> | |
| | | | |
| 4. | Beginning Finished Goods | 3,000 | |
| | + Cost of Goods Manufactured | 6,000 | |
| | - Ending Finished Goods | <u>2,000</u> | |
| | = Unadjusted Cost of Goods Sold | <u>7,000</u> | |
| | | | |
| 5. | Underapplied manufacturing overhead = Actual manufacturing overhead – Applied manufacturing overhead = \$2,000 - \$1,500 = \$500. | | |
| | | | |
| 6. | Adjusted cost of goods sold = unadjusted cost of goods sold + Underapplied manufacturing overhead = \$7,000 – \$500 = \$7,500. | | |