Job Costing

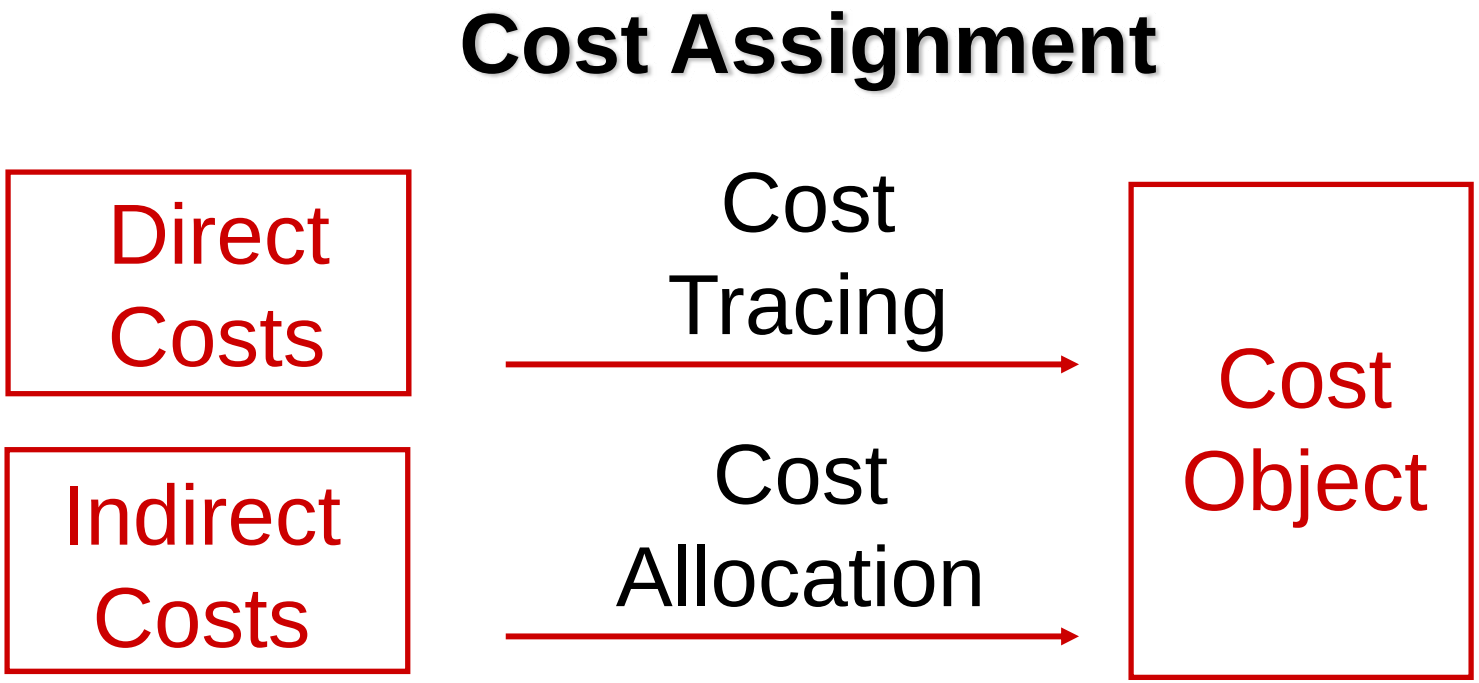
Building Block Concepts of Costing Systems

- The following five terms constitute the building blocks that will be used in this chapter:

1. A ***cost object*** is anything for which a separate measurement of costs is desired.
2. ***Direct costs of a cost object*** are costs that are related to the particular cost object and can be traced to it in an economically feasible way.
3. ***Indirect costs of a cost object*** are costs that are related to the particular cost object but cannot be traced to it in an economically feasible way.

Building Block Concepts of Costing Systems

- The relationship among these three concepts is as follows:

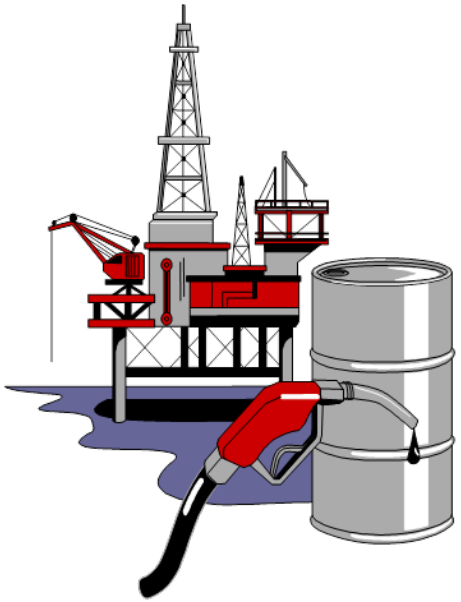


Building Block Concepts of Costing Systems

4. ***Cost pool*** is a grouping of individual cost items.
5. ***Cost allocation base*** is a factor that is the common denominator for systematically linking an indirect cost or group of indirect costs to a cost object.

Job-Costing and Process-Costing Systems

- There are two basic systems used to assign costs to products or services:
  1. Job costing
  2. Process costing
  - In a ***job-costing system***, the cost object is an individual unit, batch, or lot of a distinct product or service called a ***job.***
  - In ***process costing***, the cost object is masses of identical or similar units of a product or service.
  - Process costing allocates costs among all the products manufactured during a period.



General Approach to Job Costing

- The following ***seven-steps approach*** is used to assign ***actual costs*** to individual jobs:
  1. Identify the chosen cost object(s).
  2. Identify the direct costs of the job.
  3. Select the cost-allocation base(s).
  4. Identify the indirect costs associated with each cost-allocation base
  5. Compute the rate per unit of each cost-allocation base used to allocate indirect costs to the job.
  6. Compute the indirect costs allocated to the job.
  7. Compute the cost of the job by adding all direct and indirect costs assigned to it.

General Approach to Job Costing

- D. L. Sports manufactures various sporting goods.
- D. L. is planning to sell a batch of 25 special machines (Job 100) to Healthy Gym for $104,800.
- A key issue for D. L. Sports in determining this price is the cost of doing the job.

General Approach to Job Costing

Step 1: The cost object is Job 100.

Step 2: Identify the direct costs of Job 100.

- Direct material = $45,000
- Direct manufacturing labor = $14,000

General Approach to Job Costing

Step 1: The cost object is Job 100.

Step 2: Identify the direct costs of Job 100.

Step 3: Select the cost-allocation base.

- D.L. chose machines hours as the only allocation base for linking all indirect manufacturing costs to jobs.
- Job 100 used 500 machine hours.
- 2,480 machine hours were used by all jobs.

General Approach to Job Costing

Step 1: The cost object is Job 100.

Step 2: Identify the direct costs of Job 100.

Step 3: Select the cost-allocation base.

Step 4: Identify the indirect costs.

- Actual manufacturing overhead costs were $65,100.

General Approach to Job Costing

Step 1: The cost object is Job 100.

Step 2: Identify the direct costs of Job 100.

Step 3: Select the cost-allocation base.

Step 4: Identify the indirect costs.

Step 5: Compute the rate per unit.

- Actual indirect cost rate is $65,100 ÷ 2,480 = $26.25 per machine hour.

General Approach to Job Costing

Step 1: The cost object is Job 100.

Step 2: Identify the direct costs of Job 100.

Step 3: Select the cost-allocation base.

Step 4: Identify the indirect costs.

Step 5: Compute the rate per unit.

Step 6: Compute the indirect costs allocated to the job.

- $26.25 per machine hour × 500 hours = $13,125

General Approach to Job Costing

Step 1: The cost object is Job 100.

Step 2: Identify the direct costs of Job 100.

Step 3: Select the cost-allocation base.

Step 4: Identify the indirect costs.

Step 5: Compute the rate per unit.

Step 6: Compute the indirect costs allocated to the job.

Step 7: Compute the cost of Job No. 100.

• Direct materials	$45,000
• Direct labor	14,000
• Factory overhead	13,125
• Total	$72,125

General Approach to Job Costing

- What is the gross margin of this job?
  - Revenues $104,800
  - Cost of goods sold 72,125
  - Gross margin $ 32,675

Two Major Cost Objects

1. Products
2. Responsibility centers

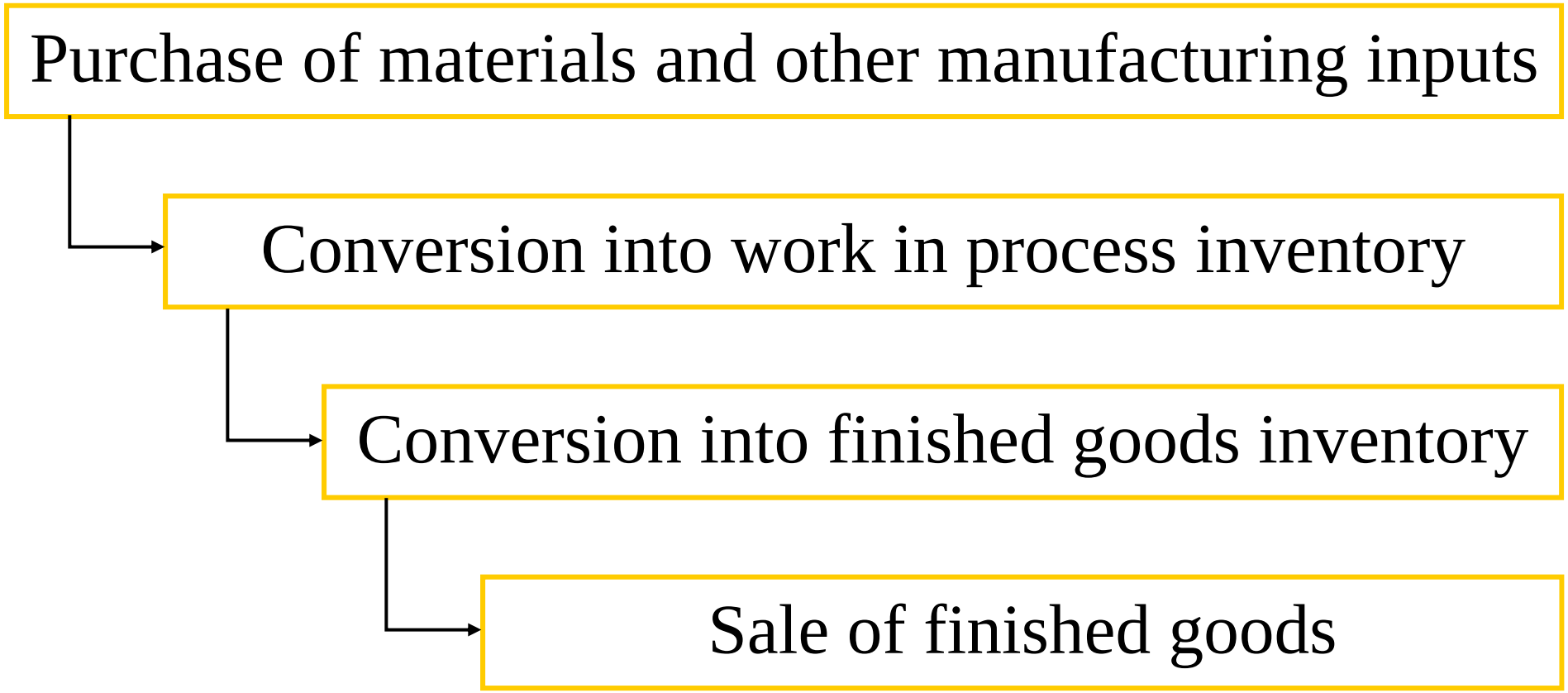
Actual Costing and Normal Costing

- ***Actual Costing*** is a job-costing system that uses actual costs to determine the cost of individual jobs.
  - Actual costing is a method of job costing that traces direct costs to a cost object by the actual direct-cost rate(s) times the actual quantity of the direct cost input(s)
  - and allocates indirect costs to a cost object by using the actual indirect-cost rate(s) times the actual quantity of the cost allocation base.
- ***Normal Costing*** is a costing method that allocates indirect costs based on the budgeted indirect-cost rate(s) times the actual quantity of the cost allocation base(s).

Normal Costing

- Assume that D. L. Sports budgets $60,000 for total manufacturing overhead costs and 2,400 machine hours.
- What is the budgeted indirect-cost rate?
  - $60,000 ÷ 2,400 = $25 per hour
- How much indirect cost was allocated to Job 100?
  - 500 machine hours × $25 = $12,500
- What is the cost of Job 100 under normal costing?
  - Direct materials 45,000
    Direct labor 14,000
    Factory overhead 12,500
    Total $71,500

Transactions



Transactions

$80,000 worth of materials (direct and indirect) were purchased on credit.

Materials Control	
80,000	

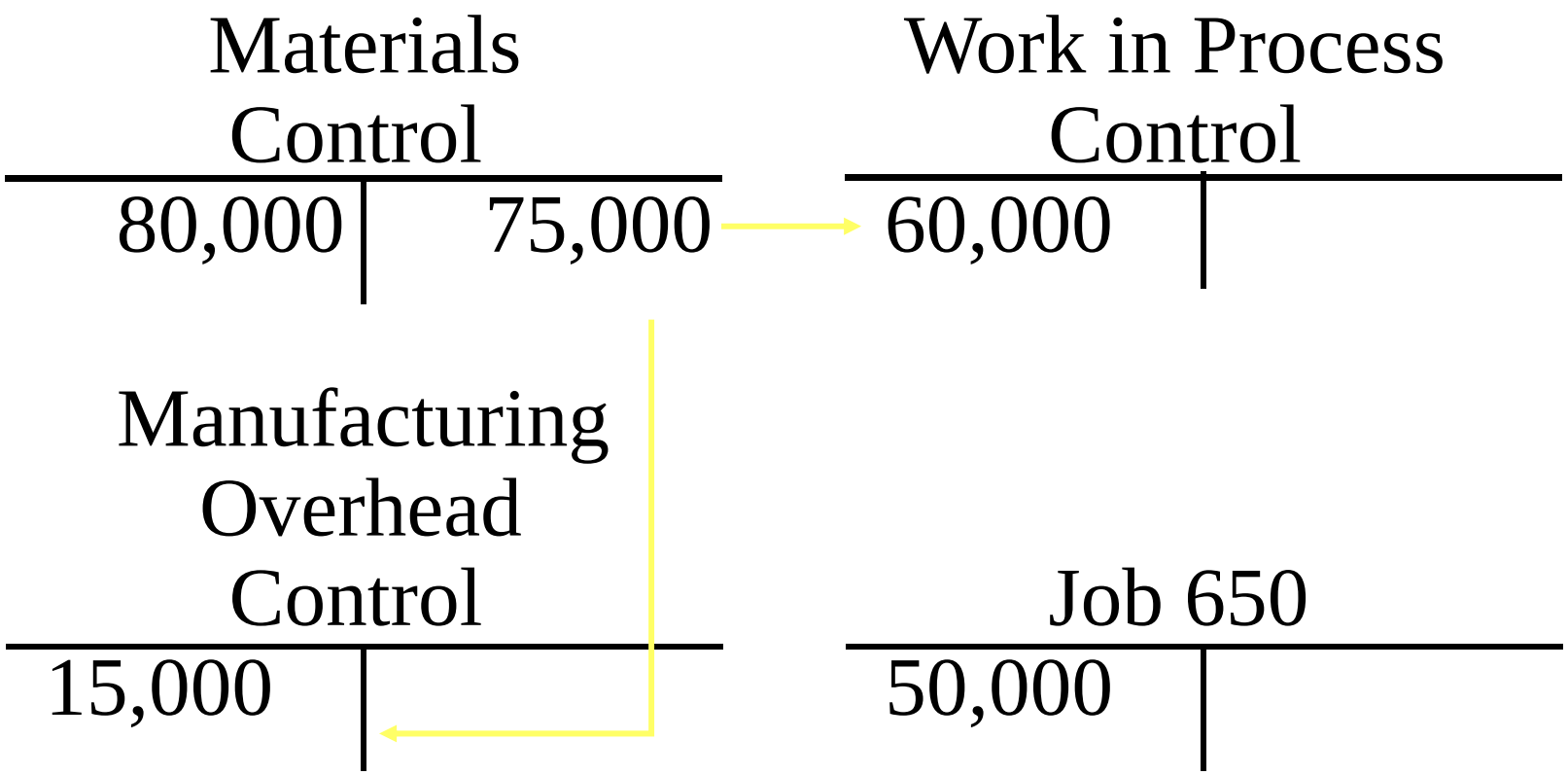
Accounts Payable Control	
	80,000

Transactions

- Materials costing $75,000 were sent to the manufacturing plant floor.
  - $50,000 were issued to Job No. 650 and
  - $10,000 to Job 651.
  - $15,000 of indirect materials were issued.
- What is the journal entry?

Work in Process Control:		
Job No. 650	50,000	
Job No. 651	10,000	
Manufactoring Overhead Control	15,000	
Materials Control		75,000

Transactions



Transactions

- Total manufacturing payroll for the period was $27,000.
- Job No. 650 incurred direct labor costs of $19,000 and
- Job No. 651 incurred direct labor costs of $3,000.
- $5,000 of indirect labor was also incurred.
- What is the journal entry?

Work in Process Control:		
Job No. 650	19,000	
Job No. 651	3,000	
Manufacturing Overhead Control	5,000	
Wages Payable		27,000

Transactions

Wages Payable Control	
	27,000

Work in Process Control	
60,000	
22,000	

Manufacturing Overhead Control	
15,000	
5,000	

Job 650	
50,000	
19,000	

Transactions

- Wages payable were paid.

Wages Payable Control	27,000	
Cash Control		27,000

Wages Payable Control

27,000	27,000

Cash Control

	27,000

Transactions

- Assume that depreciation for the period is $26,000.
- Other manufacturing overhead incurred amounted to $19,100.
- What is the journal entry?

Manufacturing Overhead Control	45,100	
Accumulated Depreciation Control		26,000
Various Accounts		19,100

- What is the balance of the Manufacturing Overhead Control account?

Transactions

- $62,000 of overhead was allocated to the various jobs of which $12,500 went to Job 650.
- Work in Process Control 62,000
- Manufacturing Overhead Control 62,000

- What are the balances of the control accounts?

Transactions

Manufacturing Overhead Control		Work in Process Control	
15,000	62,000	60,000	
5,000		22,000	
45,100		62,000	
Bal. 3,100		Bal. 144,000	

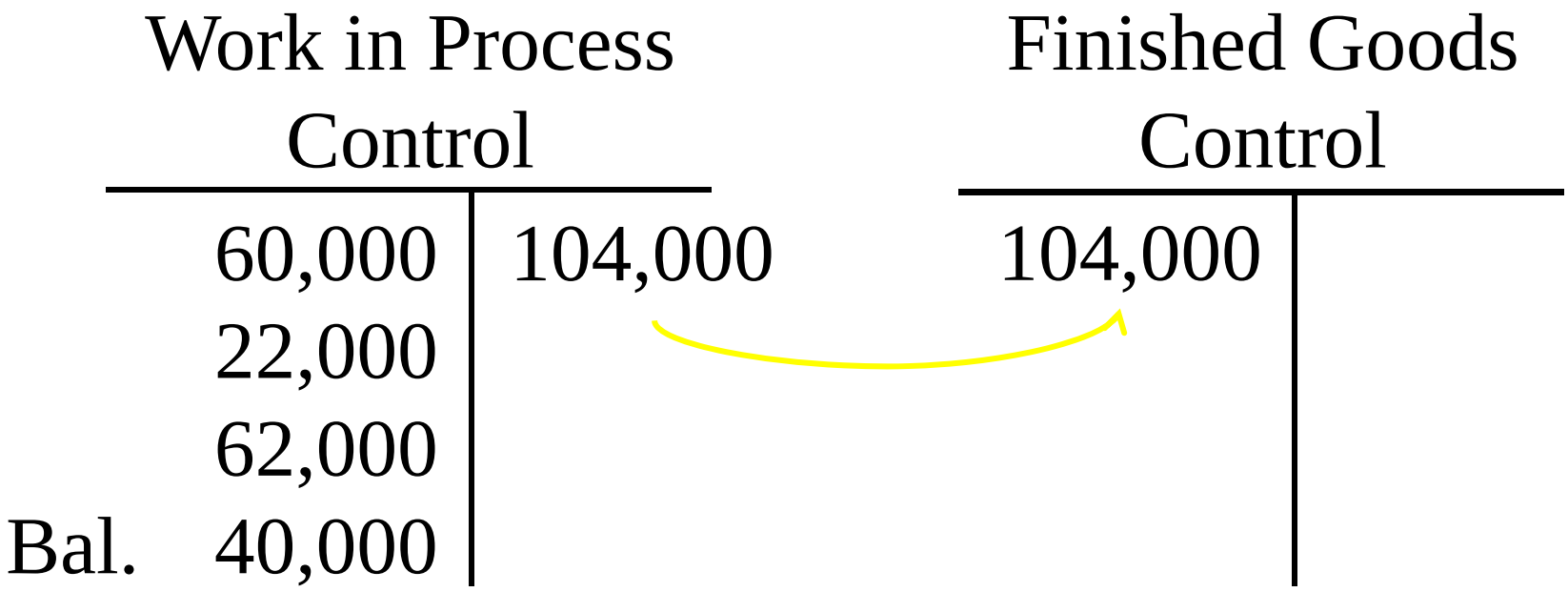
Transactions

The cost of Job 650 is:

Job 650	
50,000	
19,000	
12,500	
Bal. 81,500	

Transactions

- Jobs costing $104,000 were completed and transferred to finished goods, including Job 650.
- What effect does this have on the control accounts?



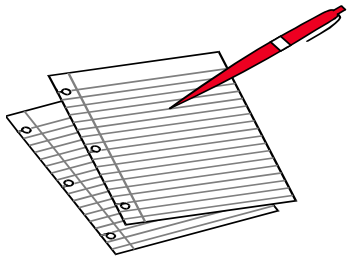
Transactions

- Job 650 was sold for $114,800.
- What is the journal entry?

Accounts Receivable Control	114,800	
Revenues		114,800
Cost of Goods Sold	81,500	
Finished Goods Control		81,500

Transactions

- What is the balance in the Finished Goods Control account?
- $104,000 – $81,500 = $22,500
- Assume that marketing and administrative salaries were $9,000 and $10,000.
- What is the journal entry?



Marketing and Administrative Costs	19,000	
Salaries Payable Control		19,000

Transactions

	Direct Materials Used	$60,000
+	Direct Labor and Overhead	$84,000
–	Cost of Goods Manufactured	$104,000
=	Ending WIP Inventory	$40,000

	Cost of Goods Manufactured	$104,000
–	Ending Finished Goods Inventory	$22,500
=	Cost of Goods Sold	$81,500

Underallocated and Overallocated Costs

Underallocated indirect costs:

The allocated amount of indirect costs is lower than the actually incurred amount

Overallocated indirect costs:

The allocated amount of indirect costs is higher than the actually incurred amount

One possibility to balance the accounts: Write-Off to Cost of Goods-Sold:

Cost of Goods Sold	3,100	
Manufacturing Overhead Control		3,100

True of False ???

- Operations should be tailored to fit the costing system.
- Costing systems are the only source of information for managers.
- A firm may use either job costing or process costing, but cannot use both.
- There is only one correct cost-allocation base for indirect costs for each firm.
- A firm will never use budgeted rates for direct costs.

Pick your Choice I:

- When using normal costing, the indirect costs are allocated to the job by which of the following
  - actual cost x actual input quantity
  - actual cost x budgeted input quantity
  - budgeted cost x actual input quantity
  - budgeted cost x budgeted input quantity

- ABC has the following information for the current year. Budgeted indirect costs are $4,000, the budgeted allocation base is 2,000 hours. Actual indirect costs incurred were $4,200 and the actual allocation base used was 2,050. What is the budgeted indirect-cost rate?
  - $0.50 per hour
  - $1.05 per hour
  - $2.00 per hour
  - $2.10 per hour

Pick your Choice II:

- ABC has the following information for the current year. Budgeted indirect costs are $6,000, the budgeted allocation base is 3,000 hours. Actual indirect costs incurred were $6,304 and the actual allocation base used was 3,075. If ABC is using the actual costing system, how much indirect cost will be allocated to a job that used 40 hours?
  - $78
  - $80
  - $82
  - $84

Exercise:
What is the total cost of the stay of patient Fred Adams?

- Cowley County Hospital uses a job-costing system for all patients who have surgery. In March, the pre-operating room (PRE-OP) and operating room (OR) had budgeted allocation bases of 4,000 nursing hours and 2,000 nursing hours, respectively. The budgeted nursing overhead charges for each department for the month were $168,000 and $132,000, respectively. The hospital floor for surgery patients had budgeted overhead costs of $1,200,000 and 15,000 nursing hours for the month. For patient Fred Adams, actual hours incurred were eight and four hours, respectively, in the PRE-OP and OR rooms. He was in the hospital for 4 days (96 hours). Other costs related to Adams were:

	Pre-OP-costs	OR-costs	In-room-costs
Patient medicine	$ 200	$500	$2,400
Dir. nursing time	$1,000	$ 2,000	$ 3,000