

Advanced Cost Accounting

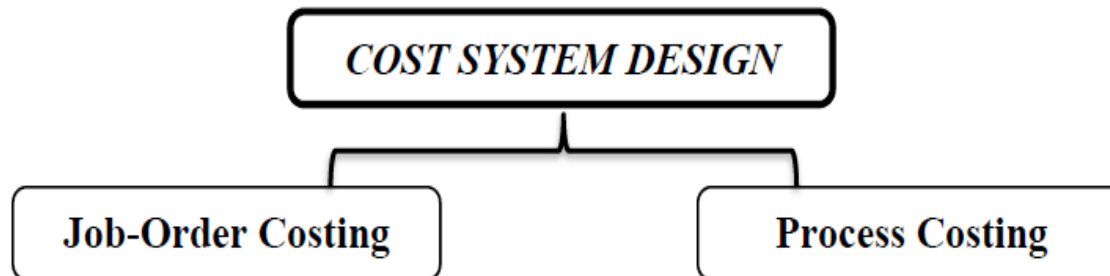
Job Order and Process Costing System Method

System Design Process costing

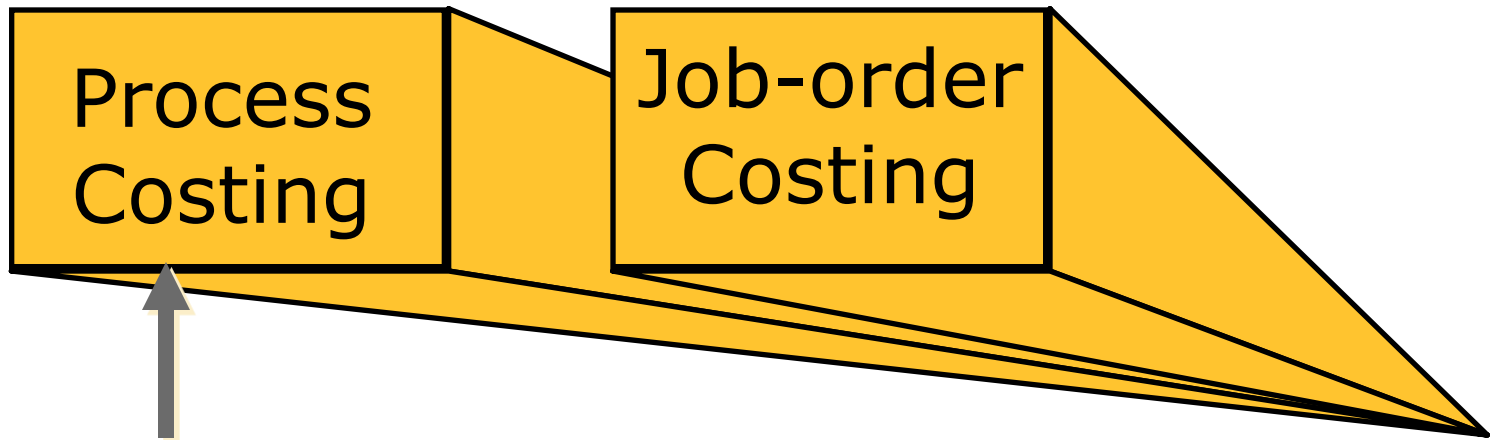
- Introduction to Job order costing and Process costing
- Understand Process costing.
- Understand Job order costing
- Similarities Between Job-Order and Process Costing.
- Differences Between Job-Order and Process Costing.

Job order costing and Process costing

- In Cost and managerial accounting, there are two general types of costing systems to assign costs to products or services that the company provides:



Types of Product Costing Systems



- ❖ **A company produces many units of a single product.**
- ❖ **One unit of product is indistinguishable from other units of product.**
- ❖ **The identical nature of each unit of product enables assigning the same average cost per unit.**

Process costing

- **Process costing** is a method of assigning **costs** to units of production in companies producing large quantities of homogeneous products. Where the costs associated with individual units of output and cannot be differentiated from each other. In other words, the cost of each product produced is assumed to be the same as the cost of every other product (Oil- Cement- a kind of drink- a particular type of ready foods).

used when companies offer a more standardized product. No matter who the customer is, they all end up receiving the same product

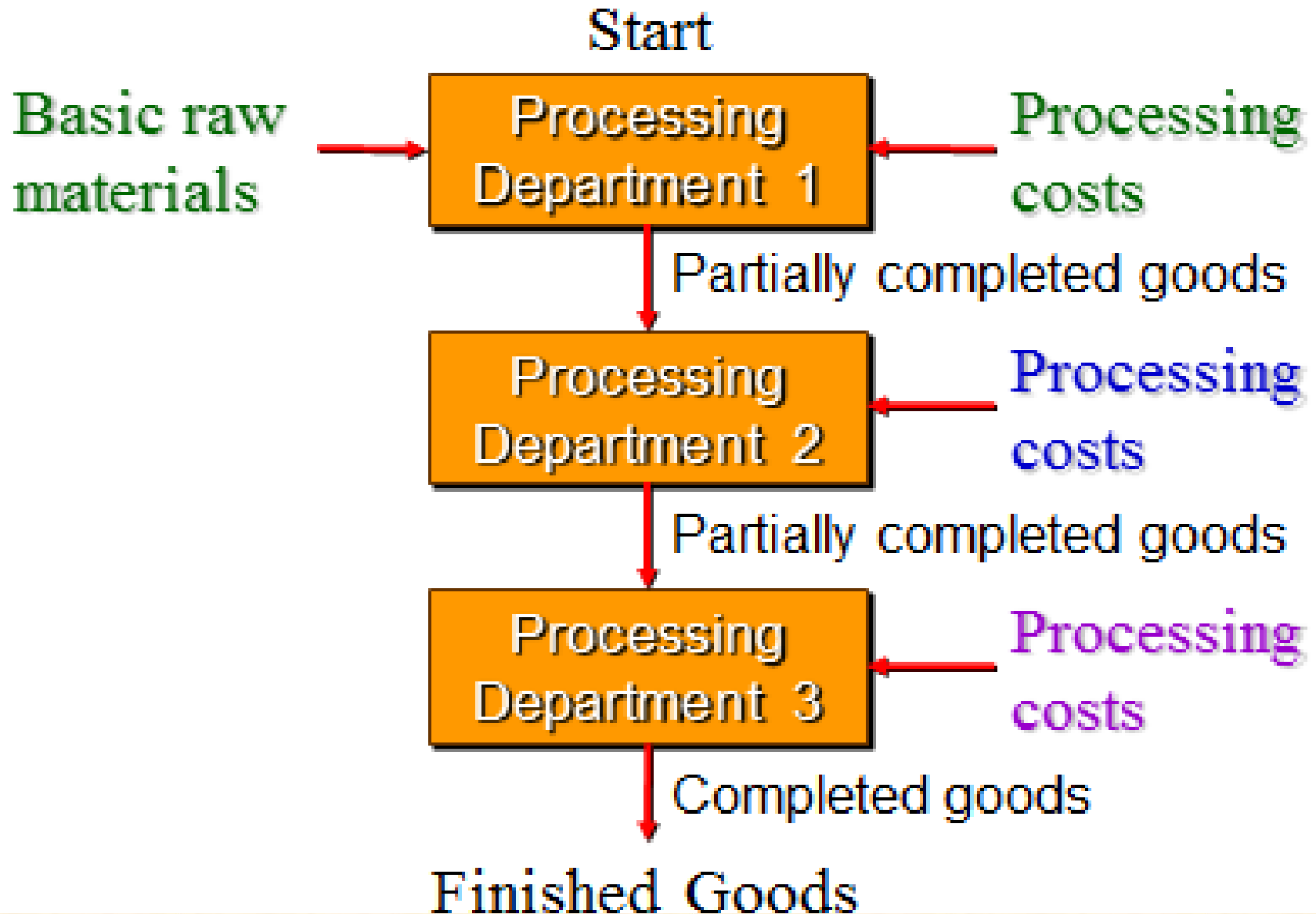
- Used to record the **cost** of a product at each **process** or stage of manufacture. Example: (preparing – cooking – packaging).

Process costing

- Some companies have homogeneous or very similar products that are not made to order and are produced in large volumes. They continually process their product, moving it from one function to the next until it is completed.
- In these companies, the manufacturing costs incurred are allocated to the proper functions or departments within the factory process rather than to specific products. Under this system, each department is assigned a cost centre. That means product costs are tracked by department rather than by job.

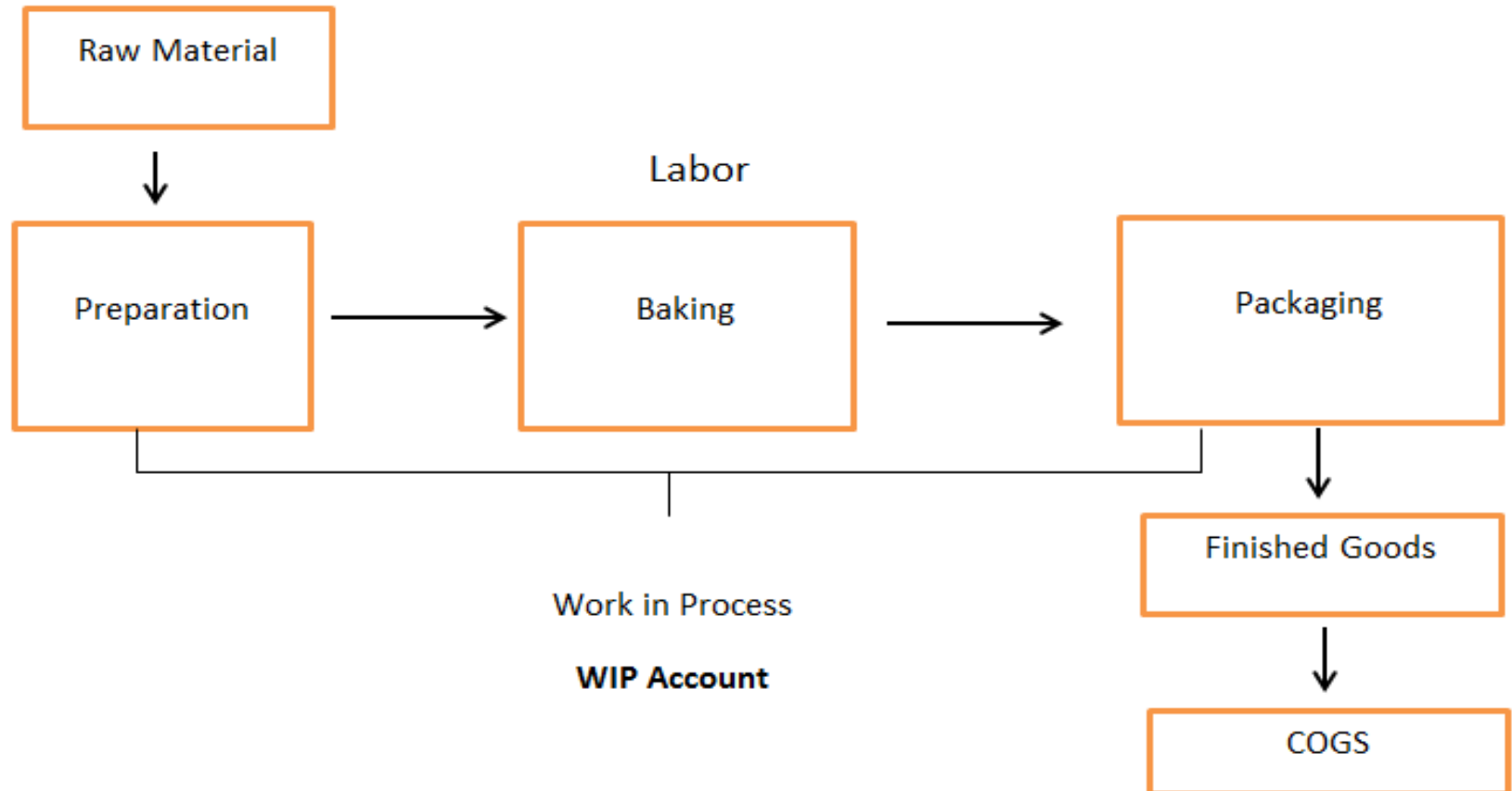
Examples, cement, steel, automotive parts, and computers, refine oil or bottle drinks.

Sequential Processing Departments



EX: Cookies Factory has three departments:

1. Preparation
2. Baking
3. Packaging



1. Raw Material

WIP- Prepration xxx

WIP - Baking. xxx

WIP Packaging xxx

Raw Material xxx

2. Direct Labour

WIP- Preparation xxx

WIP - Baking. xxx

WIP Packaging xxx

Wages Payable xxx

3. Applied Overhead

WIP- Preparation xxx

WIP - Baking. xxx

WIP Packaging xxx

Overhead xxx

- Examples of companies that use process costing include:
 1. **Chevron Corporation** (petroleum **products**)
 2. **The Wrigley Company** (chewing gum).
 3. **Pittsburgh Paints** (paint)
 4. **Coca Cola** company.

Types of Product Costing Systems



- ❖ **Many different products are produced each period.**
- ❖ **Products are manufactured to order.**
- ❖ **The unique nature of each order requires tracing or allocating costs to each job, and maintaining cost records for each job.**

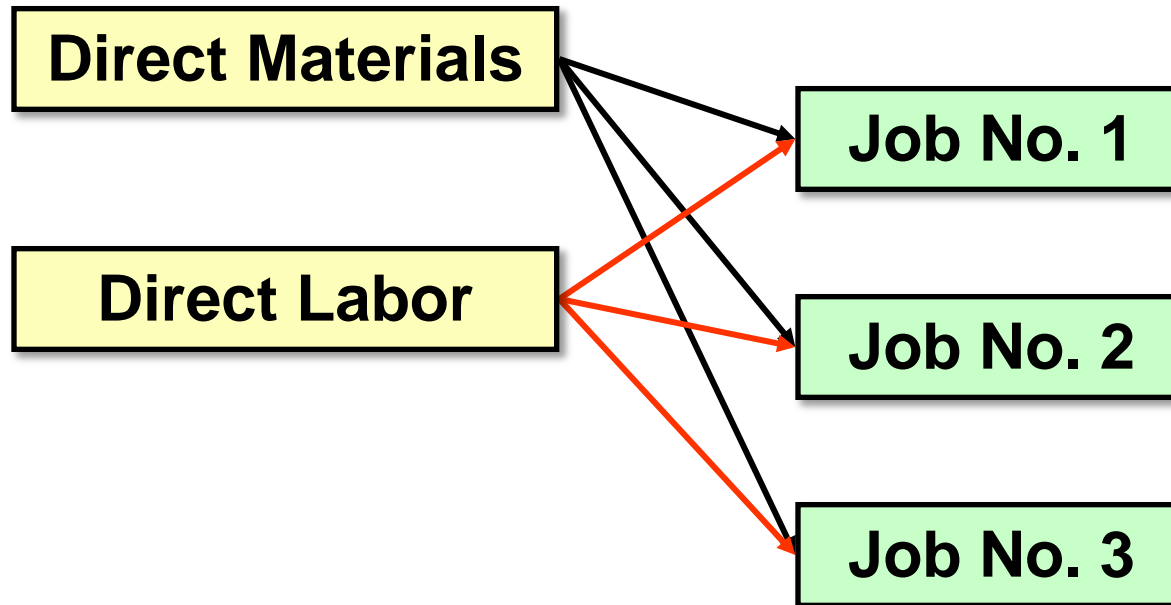
Job-Order Costing: An Overview

Examples of companies that would use job-order costing include:

1. Boeing (aircraft manufacturing)
2. Bechtel International (large scale construction)
3. Walt Disney Studios (movie production)

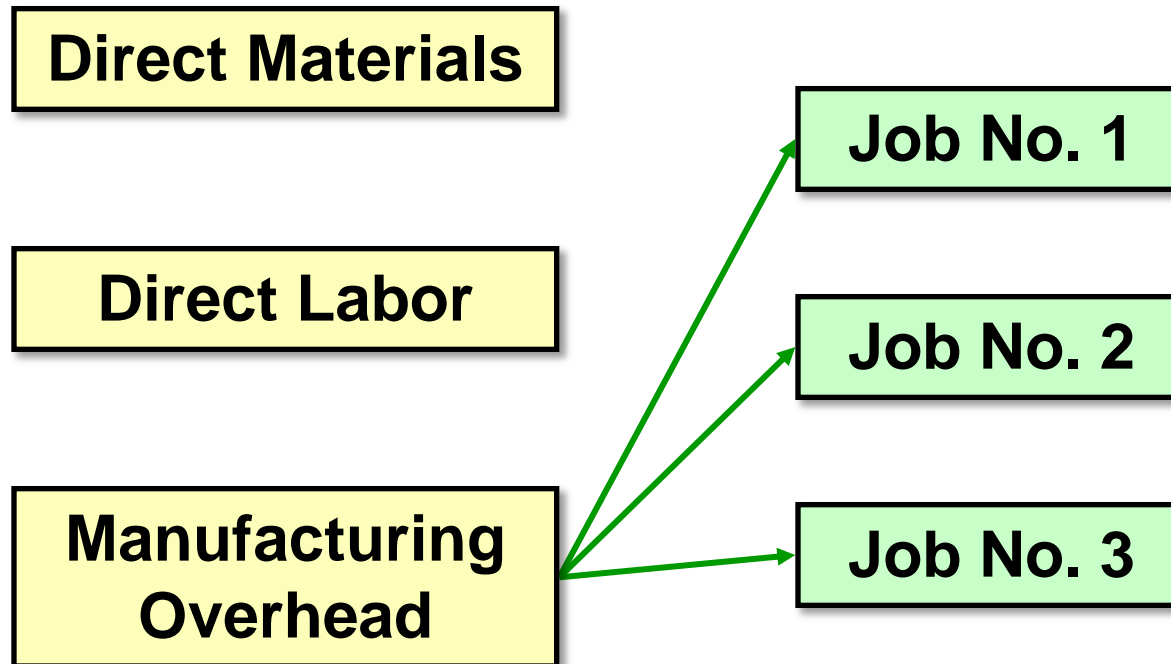


Job-Order Costing - An Example

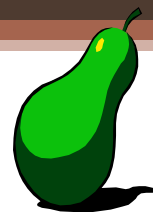


**Charge
direct
material and
direct labor
costs to
each job as
work is
performed.**

Job-Order Costing - An Example



Manufacturing Overhead, including *indirect materials* and *indirect labor*, are allocated to all jobs rather than directly traced to each job.



The Job Cost Sheet

PearCo Job Cost Sheet

Job Number A - 143

Date Initiated 3-4-11

Date Completed _____

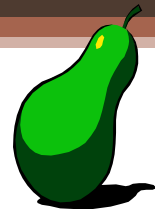
Department B3

Units Completed _____

Item Wooden cargo crate

| Direct Materials | | Direct Labor | | | Manufacturing Overhead | | |
|------------------|--------|--------------|-------|--------|------------------------|------|--------|
| Req. No. | Amount | Ticket | Hours | Amount | Hours | Rate | Amount |
| | | | | | | | |

| Cost Summary | | Units Shipped | | |
|------------------------|--|---------------|--------|---------|
| | | Date | Number | Balance |
| Direct Materials | | | | |
| Direct Labor | | | | |
| Manufacturing Overhead | | | | |
| Total Cost | | | | |
| Unit Product Cost | | | | |



Measuring Direct Materials Cost

PearCo Materials Requisition Form

Requisition No. **X7 - 6890**

Date **3-4-11**

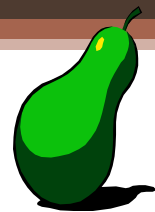
Job No. **A - 143**

Department **B3**

| Description | Quantity | Unit Cost | Total Cost |
|----------------|----------|-----------|------------------|
| 2 x 4, 12 feet | 12 | \$ 3.00 | \$ 36.00 |
| 1 x 6, 12 feet | 20 | 4.00 | 80.00 |
| | | | \$ 116.00 |

Authorized
Signature

Will E. Delite



Measuring Direct Materials Cost

PearCo Job Cost Sheet

Job Number **A - 143**

Date Initiated **3-4-11**

Department **B3**

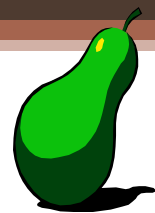
Date Completed _____

Item **Wooden cargo crate**

Units Completed _____

| Direct Materials | | Direct Labor | | | Manufacturing Overhead | | |
|------------------|---------------|--------------|-------|--------|------------------------|------|--------|
| Req. No. | Amount | Ticket | Hours | Amount | Hours | Rate | Amount |
| X7-6890 | \$ 116 | | | | | | |

| Cost Summary | | Units Shipped | | |
|------------------------|---------------|---------------|--------|---------|
| | | Date | Number | Balance |
| Direct Materials | \$ 116 | | | |
| Direct Labor | | | | |
| Manufacturing Overhead | | | | |
| Total Cost | | | | |
| Unit Product Cost | | | | |



Measuring Direct Labor Costs

PearCo Employee Time Ticket

Time Ticket No. **36**

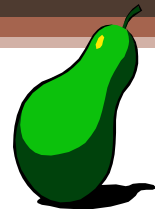
Date **3-5-11**

Employee **I. M. Skilled**

Station **42**

| Starting Time | Ending Time | Hours Completed | Hourly Rate | Amount | Job No. |
|---------------|-------------|-----------------|-----------------|-----------------|--------------|
| 0800 | 1600 | 8.00 | \$ 11.00 | \$ 88.00 | A-143 |
| Totals | | 8.00 | \$ 11.00 | \$ 88.00 | A-143 |

Supervisor **C. M. Workman**



Job-Order Cost Accounting

PearCo Job Cost Sheet

Job Number A - 143

Date Initiated 3-4-11

Department B3

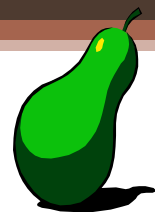
Date Completed _____

Item Wooden cargo crate

Units Completed _____

| Direct Materials | | Direct Labor | | | Manufacturing Overhead | | |
|------------------|--------|--------------|-------|--------|------------------------|------|--------|
| Req. No. | Amount | Ticket | Hours | Amount | Hours | Rate | Amount |
| X7-6890 | \$ 116 | 36 | 8 | \$ 88 | | | |

| Cost Summary | | Units Shipped | | |
|------------------------|--------|---------------|--------|---------|
| | | Date | Number | Balance |
| Direct Materials | \$ 116 | | | |
| Direct Labor | \$ 88 | | | |
| Manufacturing Overhead | | | | |
| Total Cost | | | | |
| Unit Product Cost | | | | |



Job-Order Cost Accounting

PearCo Job Cost Sheet

Job Number A - 143

Date Initiated 3-4-11

Date Completed 3-5-11

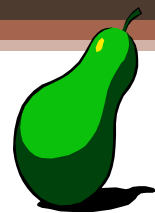
Department B3

Units Completed 2

Item Wooden cargo crate

| Direct Materials | | Direct Labor | | | Manufacturing Overhead | | |
|------------------|--------|--------------|-------|--------|------------------------|------|--------|
| Req. No. | Amount | Ticket | Hours | Amount | Hours | Rate | Amount |
| X7-6890 | \$ 116 | 36 | 8 | \$ 88 | 8 | \$ 4 | \$ 32 |

| Cost Summary | | Units Shipped | | |
|------------------------|--------|---------------|--------|---------|
| | | Date | Number | Balance |
| Direct Materials | \$ 116 | | | |
| Direct Labor | \$ 88 | | | |
| Manufacturing Overhead | \$ 32 | | | |
| Total Cost | | | | |
| Unit Product Cost | | | | |



Job-Order Cost Accounting

PearCo Job Cost Sheet

Job Number A - 143

Date Initiated 3-4-11

Department B3

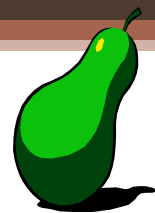
Date Completed 3-5-11

Item Wooden cargo crate

Units Completed 2

| Direct Materials | | Direct Labor | | | Manufacturing Overhead | | |
|------------------|--------|--------------|-------|--------|------------------------|------|--------|
| Req. No. | Amount | Ticket | Hours | Amount | Hours | Rate | Amount |
| X7-6890 | \$ 116 | 36 | 8 | \$ 88 | 8 | \$ 4 | \$ 32 |

| Cost Summary | | Units Shipped | | |
|------------------------|---------------|---------------|--------|---------|
| | | Date | Number | Balance |
| Direct Materials | \$ 116 | | | |
| Direct Labor | \$ 88 | | | |
| Manufacturing Overhead | \$ 32 | | | |
| Total Cost | \$ 236 | | | |
| Unit Product Cost | | | | |



Job-Order Cost Accounting

PearCo Job Cost Sheet

Job Number A - 143

Date Initiated 3-4-11

Date Completed 3-5-11

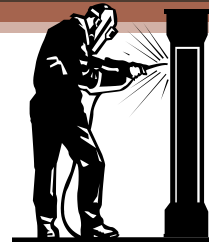
Department B3

Units Completed 2

Item Wooden cargo crate

| Direct Materials | | Direct Labor | | | Manufacturing Overhead | | |
|------------------|--------|--------------|-------|--------|------------------------|------|--------|
| Req. No. | Amount | Ticket | Hours | Amount | Hours | Rate | Amount |
| X7-6890 | \$ 116 | 36 | 8 | \$ 88 | 8 | \$ 4 | \$ 32 |

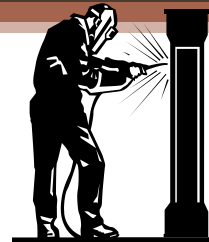
| Cost Summary | | Units Shipped | | |
|--------------------------|---------------|---------------|--------|---------|
| | | Date | Number | Balance |
| Direct Materials | \$ 116 | | | |
| Direct Labor | \$ 88 | | | |
| Manufacturing Overhead | \$ 32 | | | |
| Total Cost | \$ 236 | | | |
| Unit Product Cost | \$ 118 | | | |



Quick Check ✓

Job WR53 at NW Fab, Inc. required \$200 of direct materials and 10 direct labor hours at \$15 per hour. Estimated total overhead for the year was \$760,000 and estimated direct labor hours were 20,000. What would be recorded as the cost of job WR53?

- a. \$200.
- b. \$350.
- c. \$380.
- d. \$730.



Quick Check ✓

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a. \$200.

b. \$350.

c. \$380.

d. \$730.

$$\text{POHR} = \$760,000 / 20,000 \text{ hours} \quad \$38$$

| | | |
|------------------|--|-------|
| Direct materials | | \$200 |
|------------------|--|-------|

| | | |
|--------------|-----------------|-------|
| Direct labor | \$15 x 10 hours | \$150 |
|--------------|-----------------|-------|

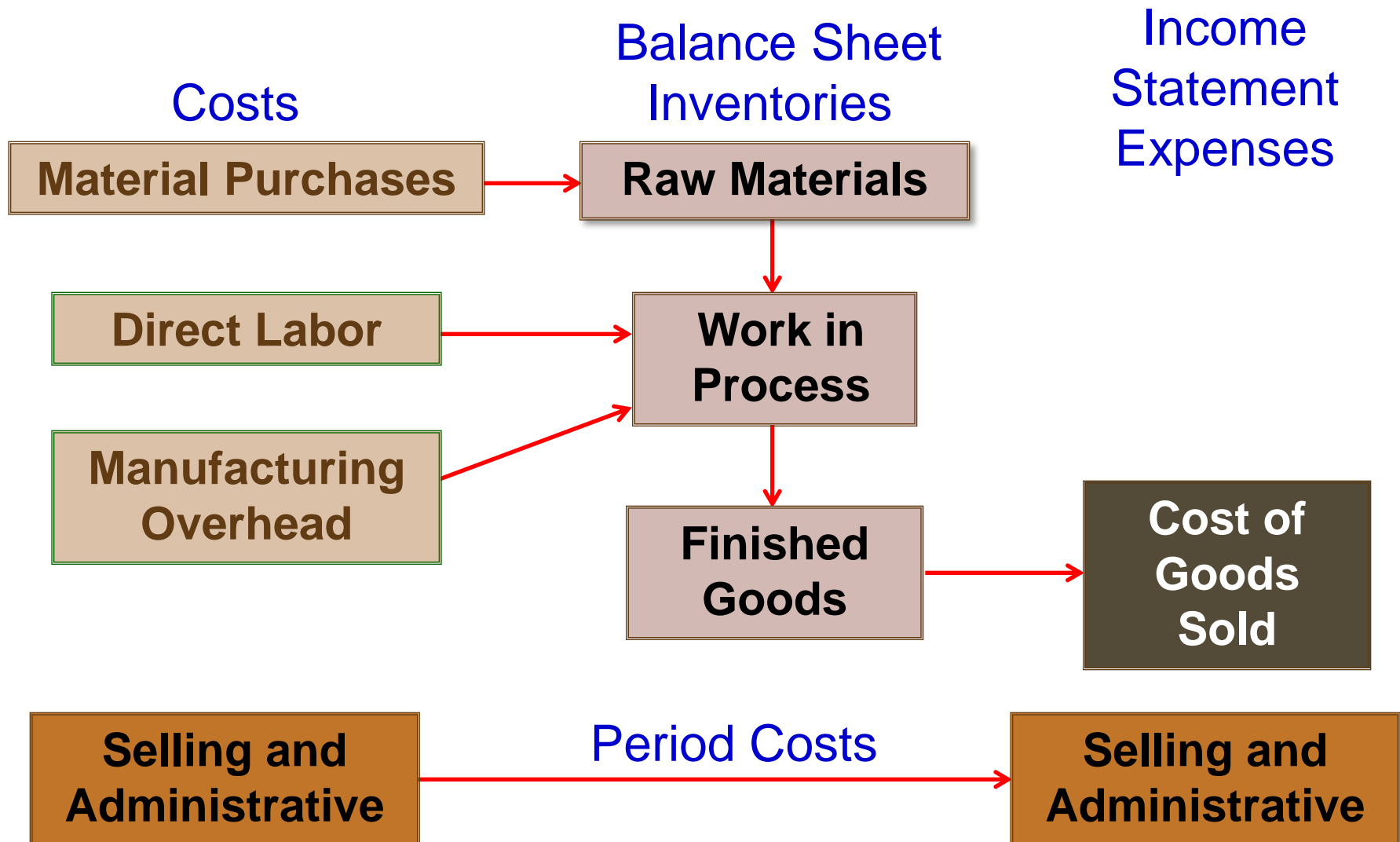
| | | |
|------------------------|-----------------|--------------|
| Manufacturing overhead | \$38 x 10 hours | <u>\$380</u> |
|------------------------|-----------------|--------------|

| | | |
|------------|--|--------------|
| Total cost | | <u>\$730</u> |
|------------|--|--------------|

Key Definitions

1. **Raw materials** include any materials that go into the final product.
2. **Work in process** consists of units of production that are only partially complete and will require further work before they are ready for sale to customers.
3. **Finished goods** consist of completed units of product that have not been sold to customers.
4. **Cost of goods manufactured** include the manufacturing costs associated with the goods that were finished during the period,

Flow of Costs: A Conceptual Overview



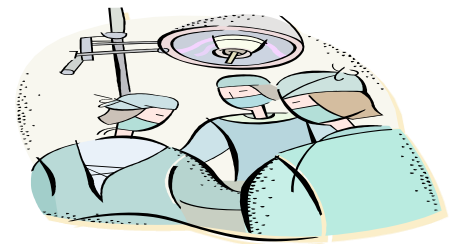
Job Order Costing

- **Job order costing** is used in situations where the company delivers a unique or custom job for its customers.
- Every customer is treated differently and delivered products to specifically suit their needs.
- It is a system for assigning manufacturing **costs** to an individual product or batches of products.

Job Order Costing

- Used only when the products manufactured are sufficiently different from each other. Such as playground equipment company that producing Swings, slides, etc...
- The **job cost** record will report the direct materials and direct labor actually used plus the manufacturing overhead assigned to each **job**.

- An **example** of an industry where **job order costing** is used is the building construction industry since each building is unique.
- **Examples** of manufacturing businesses that **use job order costing** system include clothing factories, air craft manufacturing **companies** etc.
- **Examples** of service businesses that **use job order costing** system include movie producers, accounting firms, law firms, hospitals etc.... because every client is different and unique.



Quick Check ✓

Which of the following companies would be likely to use job-order costing rather than process costing?

- a. Scott Paper Company for Kleenex.
- b. Architects.
- c. Heinz for ketchup.
- d. Caterer for a wedding reception.
- e. Builder of commercial fishing vessels.

Quick Check ✓

Which of the following companies would be likely to use job-order costing rather than process costing?

- a. Scott Paper Company for Kleenex.
- b. Architects.
- c. Heinz for ketchup.
- d. Caterer for a wedding reception.
- e. Builder of commercial fishing vessels.

Similarities Between Job-Order and Process Costing

1. Both systems assign material, labor, and overhead costs to products and they provide a mechanism for computing unit product costs.
2. Both systems use the same manufacturing accounts, including Manufacturing Overhead, Raw Materials, Work in Process, and Finished Goods.

Differences Between Job-Order and Process Costing

| Job order costing | Process costing |
|---|---|
| Used when many different jobs are worked on different period, with each job having different production requirements. | used when a single product is produced on a continuing basis or for a long period of time |
| Costs are accumulated by individual jobs. | Costs are accumulate by department |
| Unit costs are computed by job on the job cost sheet | Unit costs are computed by department |