Standard Costs

Standards are benchmarks or “norms” for measuring performance. Two types of standards are commonly used.

- **Quantity standards** specify how much of an input should be used to make a product or provide a service.
- **Cost (price) standards** specify how much should be paid for each unit of the input.

Deviations from standard deemed significant are brought to the attention of management, a practice known as management by exception.
Variance Analysis Cycle

1. Identify questions
2. Receive explanations
3. Take corrective actions
4. Conduct next period's operations
5. Prepare standard cost performance report
6. Begin
7. Analyze variances
8. Identify questions

Learning Objective

LO1
To explain how direct materials standards and direct labor standards are set

Setting Standard Costs

Accountants, engineers, purchasing agents, and production managers combine efforts to set standards that encourage efficient future production.
Setting Standard Costs

Should we use ideal standards that require employees to work at 100 percent peak efficiency?

I recommend using practical standards that are currently attainable with reasonable and efficient effort.

Engineer  Managerial Accountant

Setting Direct Material Standards

Price Standards

Final, delivered cost of materials, net of discounts.

Quantity Standards

Summarized in a Bill of Materials.

Setting Standards

The zero defects mentality that underlies improvement programs such as Six Sigma advocate for the elimination of defects and waste.

If allowances for waste and spoilage are built into the standard quantity, those allowances should be reduced over time.

Excellence!
Setting Direct Labor Standards

**Rate Standards**

Often a single rate is used that reflects the mix of wages earned.

**Time Standards**

Use time and motion studies for each labor operation.

---

Setting Variable Overhead Standards

**Rate Standards**

The rate is the variable portion of the predetermined overhead rate.

**Activity Standards**

The activity is the base used to calculate the predetermined overhead.

---

Standard Cost Card – Variable Production Cost

*A standard cost card* for one unit of product might look like this:

<table>
<thead>
<tr>
<th>Inputs</th>
<th>A Standard Quantity or Hours</th>
<th>B Standard Price or Rate</th>
<th>A x B Standard Cost per Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct materials</td>
<td>3.0 lbs.</td>
<td>$ 4.00 per lb.</td>
<td>$ 12.00</td>
</tr>
<tr>
<td>Direct labor</td>
<td>2.5 hours</td>
<td>14.00 per hour</td>
<td>35.00</td>
</tr>
<tr>
<td>Variable mfg. overhead</td>
<td>2.5 hours</td>
<td>3.00 per hour</td>
<td>7.50</td>
</tr>
<tr>
<td>Total standard unit cost</td>
<td></td>
<td></td>
<td>$ 54.50</td>
</tr>
</tbody>
</table>
Standards vs. Budgets

Are standards the same as budgets? A budget is set for total costs.

A standard is a per unit cost. Standards are often used when preparing budgets.

Price and Quantity Standards

Price and quantity standards are determined separately for two reasons:

1. The purchasing manager is responsible for raw material purchase prices and the production manager is responsible for the quantity of raw material used.

2. The buying and using activities occur at different times. Raw material purchases may be held in inventory for a period of time before being used in production.

A General Model for Variance Analysis

Variance Analysis

- Price Variance: Difference between actual price and standard price
- Quantity Variance: Difference between actual quantity and standard quantity
A General Model for Variance Analysis

Variance Analysis

<table>
<thead>
<tr>
<th>Price Variance</th>
<th>Quantity Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Materials price variance</td>
<td></td>
</tr>
<tr>
<td>Labor rate variance</td>
<td></td>
</tr>
<tr>
<td>VOH spending variance</td>
<td></td>
</tr>
<tr>
<td>Materials quantity variance</td>
<td></td>
</tr>
<tr>
<td>Labor efficiency variance</td>
<td></td>
</tr>
<tr>
<td>VOH efficiency variance</td>
<td></td>
</tr>
</tbody>
</table>

Actual Quantity × Actual Price

Actual Quantity × Standard Price

Actual Quantity × Standard Price

Price Variance

Quantity Variance

Actual quantity is the amount of direct materials, direct labor, and variable manufacturing overhead actually used.
A General Model for Variance Analysis

Actual Quantity $\times$ Actual Price $\rightarrow$ Price Variance
Actual Quantity $\times$ Standard Price $\rightarrow$ Quantity Variance
Standard Quantity $\times$ Standard Price $\rightarrow$ Total Variance

Standard quantity is the standard quantity allowed for the actual output for the period.

A General Model for Variance Analysis

Actual Quantity $\times$ Actual Price $\rightarrow$ Price Variance
Actual Quantity $\times$ Standard Price $\rightarrow$ Quantity Variance
Standard Quantity $\times$ Standard Price $\rightarrow$ Total Variance

Actual price is the amount actually paid for the input used.

A General Model for Variance Analysis

Actual Quantity $\times$ Actual Price $\rightarrow$ Price Variance
Actual Quantity $\times$ Standard Price $\rightarrow$ Quantity Variance
Standard Quantity $\times$ Standard Price $\rightarrow$ Total Variance

Standard price is the amount that should have been paid for the input used.
## A General Model for Variance Analysis

<table>
<thead>
<tr>
<th>Actual Quantity</th>
<th>Actual Quantity</th>
<th>Standard Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>× Actual Price</td>
<td>× Standard Price</td>
<td>× Standard Price</td>
</tr>
<tr>
<td>Price Variance</td>
<td>Quantity Variance</td>
<td></td>
</tr>
</tbody>
</table>

\[
\begin{align*}
(AQ \times AP) - (AQ \times SP) & \quad (AQ \times SP) - (SQ \times SP) \\
AQ &= \text{Actual Quantity} \\
AP &= \text{Actual Price} \\
SP &= \text{Standard Price} \\
SQ &= \text{Standard Quantity}
\end{align*}
\]

## Learning Objective

**LO2**

To compute the direct materials price and quantity variances and explain their significance

## Material Variances Example

Glacier Peak Outfitters has the following direct material standards for the fiberfill in its mountain parka.

*0.1 kg. of fiberfill per parka at $5.00 per kg.*

Last month, 210 kgs of fiberfill were purchased and used to make 2,000 parkas. The material cost a total of $1,029.
## Material Variances Summary

<table>
<thead>
<tr>
<th>Actual Quantity</th>
<th>Actual Quantity</th>
<th>Standard Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>210 kgs.</td>
<td>210 kgs.</td>
<td>200 kgs.</td>
</tr>
<tr>
<td>$4.90 per kg.</td>
<td>$5.00 per kg.</td>
<td>$5.00 per kg.</td>
</tr>
<tr>
<td>= $1,029</td>
<td>= $1,050</td>
<td>= $1,000</td>
</tr>
</tbody>
</table>

Price variance: $21 favorable

Quantity variance: $50 unfavorable
Material Variances:
Using the Factored Equations

**Materials price variance**
\[ MPV = AQ \times (AP - SP) \]
\[ = 210 \text{ kgs} \times ($4.90/kg - $5.00/kg) \]
\[ = 210 \text{ kgs} \times (-$0.10/kg) \]
\[ = -$21 \ F \]

**Materials quantity variance**
\[ MQV = SP \times (AQ - SQ) \]
\[ = $5.00/kg \times (210 \text{ kgs} - (0.1 \text{ kg/parka} \times 2,000 \text{ parkas})) \]
\[ = $5.00/kg \times (210 \text{ kgs} - 200 \text{ kgs}) \]
\[ = $5.00/kg \times 10 \text{ kgs} \]
\[ = $50 \ U \]

Isolation of Material Variances

I need the price variance sooner so that I can better identify purchasing problems. You just don’t understand the problems that purchasing managers have.

I’ll start computing the price variance when material is purchased rather than when it’s used.

Material Variances

Hanson purchased and used 1,700 pounds. How are the variances computed if the amount purchased differs from the amount used?

The price variance is computed on the entire quantity purchased. The quantity variance is computed only on the quantity used.
Responsibility for Material Variances

<table>
<thead>
<tr>
<th>Materials Quantity Variance</th>
<th>Materials Price Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production Manager</td>
<td>Purchasing Manager</td>
</tr>
</tbody>
</table>

The standard price is used to compute the quantity variance so that the production manager is not held responsible for the purchasing manager's performance.

I am not responsible for this unfavorable material quantity variance. You purchased cheap material, so my people had to use more of it.

Your poor scheduling sometimes requires me to rush order material at a higher price, causing unfavorable price variances.

Quick Check

Hanson Inc. has the following direct materials standard to manufacture one Zippy:

- 1.5 pounds per Zippy at $4.00 per pound

Last week, 1,700 pounds of material were purchased and used to make 1,000 Zippies. The material cost a total of $6,630.
Hanson’s material price variance (MPV) for the week was:
   a. $170 unfavorable.
   b. $170 favorable.
   c. $800 unfavorable.
   d. $800 favorable.

\[
\text{MPV} = AQ(AP - SP)
\]
\[
\text{MPV} = 1,700 \text{ lbs.} \times (3.90 - 4.00)
\]
\[
\text{MPV} = $170 \text{ Favorable}
\]

Hanson’s material quantity variance (MQV) for the week was:
   a. $170 unfavorable.
   b. $170 favorable.
   c. $800 unfavorable.
   d. $800 favorable.
Hanson’s material quantity variance (MQV) for the week was:

a. $170 unfavorable.
b. $170 favorable.
c. $800 unfavorable.
d. $800 favorable.

Quick Check

Hanson Inc. has the following materials standard to manufacture one Zippy:

1.5 pounds per Zippy at $4.00 per pound

Last week, 2,800 pounds of material were purchased at a total cost of $10,920, and 1,700 pounds were used to make 1,000 Zippies.
Quick Check ✓ Continued

<table>
<thead>
<tr>
<th>Actual Quantity Purchased</th>
<th>Actual Quantity Purchased</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actual Price</td>
<td>Standard Price</td>
</tr>
<tr>
<td>2,800 lbs.</td>
<td>2,800 lbs.</td>
</tr>
<tr>
<td>$3.90 per lb.</td>
<td>$4.00 per lb.</td>
</tr>
</tbody>
</table>

= $10,920                    = $11,200

Price variance
$280 favorable
Price variance increases because quantity purchased increases.

Quick Check ✓ Continued

<table>
<thead>
<tr>
<th>Actual Quantity Used</th>
<th>Standard Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard Price</td>
<td>Standard Price</td>
</tr>
<tr>
<td>1,700 lbs.</td>
<td>1,500 lbs.</td>
</tr>
<tr>
<td>$4.00 per lb.</td>
<td>$4.00 per lb.</td>
</tr>
</tbody>
</table>

= $6,800                    = $6,000

Quantity variance is unchanged because actual and standard quantities are unchanged.
Quantity variance $800 unfavorable

Learning Objective

<table>
<thead>
<tr>
<th>LO3</th>
</tr>
</thead>
</table>

To compute the direct labor rate and efficiency variances and explain their significance
Labor Variances Example

Glacier Peak Outfitters has the following direct labor standard for its mountain parka.

**1.2 standard hours per parka at $10.00 per hour**

Last month, employees actually worked 2,500 hours at a total labor cost of $26,250 to make 2,000 parkas.

Labor Variances Summary

<table>
<thead>
<tr>
<th>Actual Hours</th>
<th>Actual Hours</th>
<th>Standard Hours</th>
<th>Standard Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,500 hours</td>
<td>2,500 hours</td>
<td>2,400 hours</td>
<td></td>
</tr>
<tr>
<td>$10.50 per hour</td>
<td>$10.00 per hour</td>
<td>$10.00 per hour</td>
<td></td>
</tr>
<tr>
<td>= $26,250</td>
<td>= $25,000</td>
<td>= $24,000</td>
<td></td>
</tr>
</tbody>
</table>

- Rate variance: $1,250 unfavorable
- Efficiency variance: $1,000 unfavorable
### Labor Variances Summary

<table>
<thead>
<tr>
<th>Actual Hours</th>
<th>Actual Rate</th>
<th>Standard Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,500 hours</td>
<td>$10.50 per h</td>
<td>$10.00 per h</td>
</tr>
<tr>
<td>= $26,250</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Actual Hours</th>
<th>Standard Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,500 hours</td>
<td>$10.00 per h</td>
</tr>
<tr>
<td>= $25,000</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Actual Hours</th>
<th>Standard Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,400 hours</td>
<td>$10.00 per h</td>
</tr>
<tr>
<td>= $24,000</td>
<td></td>
</tr>
</tbody>
</table>

### Labor Variances: Using the Factored Equations

#### Labor rate variance

\[ LRV = AH \times (AR - SR) \]

\[ = 2,500 \text{ hours} \times ($10.50 \text{ per hour} - $10.00 \text{ per hour}) \]

\[ = 2,500 \text{ hours} \times $0.50 \text{ per hour} \]

\[ = $1,250 \text{ unfavorable} \]

#### Labor efficiency variance

\[ LEV = SR \times (AH - SH) \]

\[ = $10.00 \text{ per hour} \times (2,500 \text{ hours} - 2,400 \text{ hours}) \]

\[ = $10.00 \text{ per hour} \times 100 \text{ hours} \]

\[ = $1,000 \text{ unfavorable} \]

### Responsibility for Labor Variances

Production managers are usually held accountable for labor variances because they can influence the:

- Mix of skill levels assigned to work tasks.
- Level of employee motivation.
- Quality of production supervision.
- Quality of training provided to employees.
Responsibility for Labor Variances

I am not responsible for the unfavorable labor efficiency variance! You purchased cheap material, so it took more time to process it. I think it took more time to process the materials because the Maintenance Department has poorly maintained your equipment.

Quick Check

Hanson Inc. has the following direct labor standard to manufacture one Zippy:

1.5 standard hours per Zippy at $12.00 per direct labor hour

Last week, 1,550 direct labor hours were worked at a total labor cost of $18,910 to make 1,000 Zippies.

Quick Check

Hanson’s labor rate variance (LRV) for the week was:

a. $310 unfavorable.
b. $310 favorable.
c. $300 unfavorable.
d. $300 favorable.
Hanson’s labor rate variance (LRV) for the week was:

- $310 unfavorable.
- $310 favorable.
- $300 unfavorable.
- $300 favorable.

Quick Check

Hanson’s labor rate variance (LRV) is calculated as follows:

\[ LRV = AH(AR - SR) \]

Given:
- Actual Hours (AH) = 1,550 hrs
- Actual Rate (AR) = $12.20
- Standard Rate (SR) = $12.00

\[ LRV = 1,550 \text{ hrs} \times ($12.20 - $12.00) \\ LRV = 1,550 \times $0.20 \\ LRV = $310 \text{ unfavorable} \]

Quick Check

Hanson’s labor efficiency variance (LEV) for the week was:

- $590 unfavorable.
- $590 favorable.
- $600 unfavorable.
- $600 favorable.

Quick Check

Hanson’s labor efficiency variance (LEV) is calculated as follows:

\[ LEV = SR(AH - SH) \]

Given:
- Standard Rate (SR) = $12.00
- Actual Hours (AH) = 1,550 hrs
- Standard Hours (SH) = 1,500 hrs

\[ LEV = $12.00 (1,550 \text{ hrs} - 1,500 \text{ hrs}) \\ LEV = $12.00 \times 50 \text{ hrs} \\ LEV = $600 \text{ unfavorable} \]
Actual Hours              Actual Hours Standard Hours
×                                  ×                ×
Actual Rate              Standard Rate            Standard Rate

Rate variance
$310 unfavorable

Efficiency variance
$600 unfavorable

1,550 hours                 1,550 hours                 1,500 hours
×                                  ×               ×
$12.20 per hour          $12.00 per hour           $12.00 per hour
= $18,910                     = $18,600                     = $18,000

Learning Objective

To compute the variable manufacturing overhead spending and efficiency variances

Variable Manufacturing Overhead Variances

Glacier Peak Outfitters has the following direct variable manufacturing overhead labor standard for its mountain parka.

1.2 standard hours per parka at $4.00 per hour

Last month, employees actually worked 2,500 hours to make 2,000 parkas. Actual variable manufacturing overhead for the month was $10,500.
### Variable Manufacturing Overhead Variances Summary

<table>
<thead>
<tr>
<th>Actual Hours</th>
<th>Actual Rate</th>
<th>Actual Hours</th>
<th>Standard Rate</th>
<th>Standard Hours</th>
<th>Standard Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,500 hours</td>
<td>$4.20 per hour</td>
<td>2,500 hours</td>
<td>2,400 hours</td>
<td>2,400 hours</td>
<td>$4.00 per hour</td>
</tr>
<tr>
<td>×</td>
<td></td>
<td>×</td>
<td>×</td>
<td>×</td>
<td>×</td>
</tr>
<tr>
<td>$10,500</td>
<td></td>
<td>$10,000</td>
<td>$9,600</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Spending variance $500 unfavorable**

**Efficiency variance $400 unfavorable**

1.2 hours per parka × 2,000 parkas = 2,400 hours
**Variable Manufacturing Overhead Variances: Using Factored Equations**

**Variable manufacturing overhead spending variance**

\[ \text{VMSV} = \text{AH} (\text{AR} - \text{SR}) \]

\[ = 2,500 \text{ hours} (\$4.20 \text{ per hour} - \$4.00 \text{ per hour}) \]

\[ = 2,500 \text{ hours} (\$0.20 \text{ per hour}) \]

\[ = \$500 \text{ unfavorable} \]

**Variable manufacturing overhead efficiency variance**

\[ \text{VMEV} = \text{SR} (\text{AH} - \text{SH}) \]

\[ = \$4.00 \text{ per hour} (2,500 \text{ hours} - 2,400 \text{ hours}) \]

\[ = \$4.00 \text{ per hour} (100 \text{ hours}) \]

\[ = \$400 \text{ unfavorable} \]

---

**Quick Check ✓**

Hanson Inc. has the following variable manufacturing overhead standard to manufacture one Zippy:

1.5 standard hours per Zippy at $3.00 per direct labor hour

Last week, 1,550 hours were worked to make 1,000 Zippies, and $5,115 was spent for variable manufacturing overhead.

---

**Quick Check ✓**

Hanson’s spending variance (VOSV) for variable manufacturing overhead for the week was:

a. $465 unfavorable.
b. $400 favorable.
c. $335 unfavorable.
d. $300 favorable.
Hanson’s spending variance (VOSV) for variable manufacturing overhead for the week was:

- $465 unfavorable.
- $400 favorable.
- $335 unfavorable.
- $300 favorable.

\[ VOSV = AH(AR - SR) \]
\[ VOSV = 1,550 \text{ hrs} \times ($3.30 - $3.00) \]
\[ VOSV = $465 \text{ unfavorable} \]

Hanson’s efficiency variance (VOEV) for variable manufacturing overhead for the week was:

- $435 unfavorable.
- $435 favorable.
- $150 unfavorable.
- $150 favorable.

\[ VOEV = SR(AH - SH) \]
\[ VOEV = $3.00 \times (1,550 \text{ hrs} - 1,500 \text{ hrs}) \]
\[ VOEV = $150 \text{ unfavorable} \]
Chapter 8-23

Quick Check

<table>
<thead>
<tr>
<th>Actual Hours</th>
<th>Actual Hours</th>
<th>Standard Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,550 hours</td>
<td>1,550 hours</td>
<td>1,500 hours</td>
</tr>
<tr>
<td>$3.30 per hour</td>
<td>$3.00 per hour</td>
<td>$3.00 per hour</td>
</tr>
</tbody>
</table>

- Spending variance: $465 unfavorable
- Efficiency variance: $150 unfavorable

Variance Analysis and Management by Exception

How do I know which variances to investigate?

Larger variances, in dollar amount or as a percentage of the standard, are investigated first.

Advantages of Standard Cost Systems

Standard costs are a key element of the management by exception approach which helps managers focus their attention on the most important issues.

- Standards that are viewed as reasonable by employees can serve as benchmarks that promote economy and efficiency.
  - Standard costs can greatly simplify bookkeeping.
  - Standard costs fit naturally into a responsibility accounting system.
Potential Problems with Standard Costs

- Emphasizing standards may exclude other important objectives.
- Favorable variances may be misinterpreted.
- Standard cost reports may not be timely.
- Emphasis on negative may impact morale.
- Invalid assumptions about the relationship between labor cost and output.
- Continuous improvement may be more important than meeting standards.

The Balanced Scorecard

A balanced scorecard consists of an integrated set of performance measures that are derived from and support a company's strategy.

- Specific Company Strategy
- Performance measures included in the balanced scorecard

The Balanced Scorecard: From Nonfinancial Performance Measures

- Specific Company Strategy
- Financial Performance Measures: Example: Standard Cost Variances
- Nonfinancial Performance Measures: Examples: Product Quality, Customer Satisfaction
Appendix 8A

General Ledger Entries to Record Variances.

Learning Objective

LO5

Prepare journal entries to record standard costs and variances

Appendix 8A

Journal Entries to Record Variances

We will use information from the Glacier Peak Outfitters example presented earlier in the chapter to illustrate journal entries for standard cost variances. Recall the following:

**Material**
- AQ × AP = $1,029
- AQ × SP = $1,050
- SQ × SP = $1,000
- MPV = $21 F
- MQV = $50 U

**Labor**
- AH × AR = $26,250
- AH × SR = $25,000
- SH × SR = $24,000
- LRV = $1,250 U
- LEV = $1,000 U

Now, let’s prepare the entries to record the labor and material variances.
Appendix 8A
Direct Material Variances

<table>
<thead>
<tr>
<th>Date</th>
<th>Description</th>
<th>Post Ref.</th>
<th>Debit</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Raw Materials</td>
<td>1,050</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Materials Price Variance</td>
<td>21</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Accounts Payable</td>
<td>1,029</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>To record the purchase of material</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Work in Process</td>
<td>1,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Materials Quantity Variance</td>
<td>50</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Raw materials</td>
<td>1,050</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>To record the use of material</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Variable manufacturing overhead variances are usually not recorded in the accounts separately, but are determined as part of the general analysis of overhead.

Appendix 8A
Direct Labor Variances

<table>
<thead>
<tr>
<th>Date</th>
<th>Description</th>
<th>Post Ref.</th>
<th>Debit</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Work in Process</td>
<td>24,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Labor Rate Variance</td>
<td>1,250</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Labor Efficiency variance</td>
<td>1,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Wages Payable</td>
<td>26,250</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>To record direct labor</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Cost Flows in a Standard Cost System

- Inventories are recorded at standard cost.
- Variances are recorded as follows:
  - Favorable variances are credits, representing savings in production costs.
  - Unfavorable variances are debits, representing excess production costs.
- Standard cost variances are usually closed to cost of goods sold.
  - Favorable variances decrease cost of goods sold.
  - Unfavorable variances increase cost of goods sold.
End of Chapter 8