LO 1: Describe Standard Costs

Terms

Standard costs
Ideal standards
Normal standards
Direct material price standard
Direct labor price standard
Standard predetermined overhead rate
Normal capacity

Standards:

- Standards are benchmarks or "norms" for measuring performance. Standards relate to the quantity and costs of inputs used in manufacturing goods or providing services.
- Price Standards specify how much should be paid for each unit of the input.
- Quantity Standards specify how much of an input such as raw material should be used to make a product or provide service.
- Concerned with each individual cost component that makes up the entire budget- a standard cost is a unit amount

Direct Materials				
Standard direct materials price	X	Standard direct material quantity	=	Standard direct materials cost per unit
Direct Labor				
Standard direct labor rate	X	Standard direct labor hours	=	Standard direct labor cost per unit
Manufacturing Overhead				
Budgeted overhead costs	/	Expected standard activity index	=	Standard predetermined overhead rate
Standard predetermined overhead rate	X	Activity index quantity standard	=	Standard manufacturing overhead cost per unit

+ Standard direct materials cost per unit
+ Standard direct labor cost per unit
+ Standard manufacturing overhead cost per unit
= Total Standard Cost per Unit

Advantage of using standard costs:

- Facilitate management planning
- Promote cost-conscious awareness
- Useful in price setting
- Contribute to management control
- Useful in highlighting variances in management by exception
- Simplifies costing of inventories

Setting standards:

- Ideal standards are optimum levels at perfect conditions
- Normal standards are efficient, but achievable levels
- Overhead is set using normal capacity, which is the average activity output the company should experience over the long run

Practice #1
Firefly, Inc accumulated the following standard cost data for the glow pillow.

Direct materials: 2 lbs at $3 per pound
Direct labor: .5 hours at $15 per hour
Manufacturing overhead: based on direct labor hour, predetermined rate of $20 per direct labor hour

Compute the standard cost of one glow pillow.

LO 2: Direct Materials Variance

Terms

Variances	Total material variance
Unfavorable	Material price variance
Favorable	Material quantity variance

All Variances:

- Variances are computed for each manufacturing cost: direct materials, direct labor, variable overhead and fixed overhead.
- The total variance for each manufacturing cost is the difference between the actual costs incurred and the standard costs that should have been incurred
    - Material variance + labor variance + overhead variance = total variance
- The total variance is divided into price and quantity (hours) variances for each manufacturing cost.
- All variances are favorable or unfavorable.
    - Favorable if actual price or quantity is less than standard price or quantity.
    - Unfavorable if actual price or quantity is greater than standard price or quantity.
- The general variance model is:

Total Variance

Actual Quantity X Actual Price	Actual Quantity X Standard Price	Standard Quantity X Standard Price

Price Variances
SP (AQ - SQ)

Quantity Variances
AQ (AP – SP)

LO 2: Direct Materials Variances

- Material Price Variance
  - The difference between the actual unit price paid and the standard price per unit of direct materials, multiplied by the quantity purchased.
  - May result from many factors such as receiving more cash or quantity discounts than expected, price reductions or increases from the supplier or purchasing a different quality of materials. This usually begins in the purchasing department
  - Identified at time of purchase; formula is
    - (Actual Quantity x Actual Price)-(Actual Quantity x Standard Price)
    - Or (AQ x AP) – (AQ x SP)
    - Or simplified: AQ (AP - SP)

- Material Quantity Variance
  - The difference between the actual quantity of materials used in production and the standard quantity allowed for the actual output, multiplied by the standard price per unit of materials.
  - May result from many factors such as shortchanging the actual amount of material used, fewer rejects or spoilage than expected, faulty machines, inferior materials quality, untrained workers, and poor supervision.
  - Identified at time of usage; formula is
    - (Actual Quantity x Standard Price)-(Standard Quantity x Standard Price)
    - Or (AQ x SP) – (SQ x SP)
    - Or Simplified: SP (AQ - SQ)

Practice #2

H Company manufactures a number of consumer items for general household use. During the recent month, the company manufactured 4,000 chopping blocks using 11,000 feet of hardwood. The hardwood cost the company $18,700 when purchased. According to the standard cost card, each chopping block requires 2.5 board feet of hardwood, at a cost of $1.80 per board feet.

Required: Compute the material quantity variance and material price variance.

LO 3: Direct Labor Variances and Manufacturing Overhead

Terms

Total labor variance
Labor price variance
Labor quantity variance
Total overhead variance
Standard hours allowed

LO 3: Direct Labor Variances

- Labor Price Variance
  - The difference between the actual hourly labor rate and the standard rate per hour, multiplied by the actual number of hours worked during the period.
  - May result from many factors such as using workers with different wage rates than expected, different benefits costs per hour, annual wage rate increases more or less than expected, or a different number of overtime hours than expected.
  - Identified when direct labor hours are worked; formula is
    - (Actual Hours x Actual Rate)-(Actual Hours x Standard Rate)
    - Or (AH x AR) – (AH x SR)
    - Or Simplified: AH(AR - SR)

- Labor Quantity Variance
  - The difference between the actual hours worked and the standard hours <u>allowed</u> for the actual output, multiplied by the standard hourly labor rate.
  - May result from many factors such as poorly trained or motivated workers, materials of a different quality than standard, faulty equipment causing breakdowns and work interruptions, fewer equipment breakdowns than expected, poor supervision of workers, or using workers with different level of skills than expected.
  - Identified when direct labor hours are worked; formula is
    - (Actual Hours x Standard Rate)-(Standard Hours x Standard Rate)
    - Or (AH x SR) – (SH x SR)
    - Or Simplified: SR (AH - SH)

<u>Practice #3</u>

Z Company produces custom-painted cake plates for a number of major department stores. During the most recent week, the company prepared 6,000 plates using 1,150 direct labor-hours. The company paid its direct labor workers at an average pay rate of $10.00 per hour. According to the standard cost card, each plate should require .20 direct-hours at a cost of $9.50 per hour.

Required: Compute the labor price variance and a labor quantity variance.

LO 3: Total Overhead Variance

- The difference between the actual overhead costs and overhead costs applied based on standard hours allowed for the amount of goods produced
- Overhead variances may be separated into Overhead Controllable (price) and Overhead Volume (quantity) Variances.

Actual Overhead	-	Overhead Applied	=	Total Overhead Variance

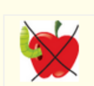
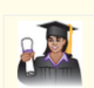
LO 4: Variance Reports and Balanced Scorecard

Terms

Balanced scorecard
Financial perspective
Customer perspective
Internal process perspective
Learning and growth perspective

Variance Reports:
- The form and content of reports can vary, but should be given to managers as soon as possible, and should include explanations for variances
- Facilitate management by exception
- The costing of inventories using standards is allowed under GAAP when there are no significant difference between actual and standard, and may be presented in the financial statements at standard

Balanced Scorecard:
- Provide financial and non-financial features to better assess performance and anticipate results
- Creates linkages so high-level goals are communicated throughout the company
- Provides measurable objectives for non-financial measures
- Integrates all company's goals into a single performance measurement
- Uses four categories
    - Financial
    - Customer
    - Internal process
    - Learning and growth

Perspective		Objective
Financial		Return on assets.
		Net income.
		Credit rating.
		Share price.
		Profit per employee.
Customer		Percentage of customers who would recommend product.
		Customer retention.
		Response time per customer request.
		Brand recognition.
		Customer service expense per customer.
Internal Process		Percentage of defect-free products.
		Stockouts.
		Labor utilization rates.
		Waste reduction.
		Planning accuracy.
Learning and Growth		Percentage of employees leaving in less than one year.
		Number of cross-trained employees.
		Ethics violations.
		Training hours.
		Reportable accidents.