

chapter 1 Variance Analysis & Standard Costing

Standard: It is the benchmark for performance measurement

Variance: Difference between actual & standard



Favourable Variance: Actual Cost < Standard Cost

Unfavourable Variance: Actual Cost > Standard Cost

Exercise-4 From sheet: (handcopy use)

Given,

AQ = 20,000 / Actual Quantity

AP = \$ 2.40 Per Ounce / Actual Price

SQ = (2500 × 7.2) = 18,000 / standard Quantity

SP = \$ 2.50 Per Ounce / standard Price

$$\begin{aligned}\therefore \text{Price Variance} &= (AQ \times AP) - (AQ \times SP) \\ &= (20,000 \times 2.4) - (20,000 \times 2.5) \\ &= 2000 \\ &= \text{favourable Variance}\end{aligned}$$

$$\begin{aligned}
 \therefore \text{Quantity Variance} &= (AQ \times SP) - (SQ \times SP) \\
 &= (20,000 \times 2.5) - (18,000 \times 2.5) \\
 &= 50,000 - 45,000 \\
 &= 5000 \\
 &= \text{Unfavourable Variance.}
 \end{aligned}$$

* Requirement b:-

Given,

Actual Hour, AH = 900 hours

Standard Hour, SH = $(0.4 \times 2500) = 1000$

Actual Rate, AR = \$12 Per hour.

Standard Rate, SR = \$10 Per hour.

$$\begin{aligned}
 &\rightarrow 900 \text{ hour } \times \frac{10800}{900} = \$12 \\
 \therefore 1 \text{ hour } &\times \frac{10800}{900} = \$12
 \end{aligned}$$

$$\begin{aligned}
 \therefore \text{Rate Variance} &= (AH \times AR) - (AH \times SR) \\
 &= (900 \times 12) - (900 \times 10) \\
 &= 1800 \text{ (Favourable Variance)}
 \end{aligned}$$

$$\begin{aligned}
 \therefore \text{Efficiency Variance} &= (AH \times SR) - (SH \times SR) \\
 &= (900 \times 10) - (1000 \times 10) \\
 &= 1000 \\
 &= \text{Unfavourable Variance}
 \end{aligned}$$

Type of Variance:

Material Variance

- a) Price Variance
- b) Quantity Variance

Labour Variance

- a) rate Variance
- b) efficiency Variance

Overhead Variance

- a) Spending Variance
- b) efficiency Variance.

Formulas

* Material Variance:

- a) Price Variance = $(AQ \times AP) - (AQ \times SP)$
- b) Quantity Variance = $(AQ \times SP) - (SQ \times SP)$

* Labour Variance:

- a) Rate Variance: $(AH \times AR) - (AH \times SR)$
- b) efficiency Variance: $(AH \times SR) - (SH \times SR)$

* Overhead Variance:

- a) Spending Variance: $(AH \times AR) - (AH \times SR)$
- b) Efficiency Variance: $(AH \times SR) - (SH \times SR)$

A → Actual, S → Standard
Q → Quantity, R → Rate
H → Hour, P → Price

Exercise ~ 01+

Given,

Actual { Production 4000 chopping board
Material = 11000 feet hardwood
Total material Cost = 18700

Standard { Material = 2.5 feet Per board.
Cost = \$ 1.80 Per feet

Requirement (a) :-

Standard material for 4000 board = $(4000 \times 2.5) \text{ ft}$
= 10,000 ft.

Standard material cost = $(1.80 \times 10,000)$
= 18,000 \$

∴ difference between actual and standard cost
 $(18700 - 18000)$
= 700 → Unfavourable.

Requirement (b):

$$\begin{aligned}\text{Quantity Variance} &= (AQ \times SP) - (SQ \times SP) \\ &= (11,000 \times 1.8) - (10,000 \times 1.8) \\ &= 19,800 - 18,000 \\ &= 1800 \text{ (unfavourable)}\end{aligned}$$

$$\begin{aligned}\text{Price Variance} &= (AQ \times AP) - (AQ \times SP) \\ &= (11,000 \times 1.7) - (11,000 \times 1.8) \\ &= 18,700 - 19,800 \\ &= 1100 \text{ (favourable)}\end{aligned}$$