

CH 9 Standard Costing

Name: Key

Section: \_\_\_\_\_

1. Variances indicate

- a. the cause of the variance.
- b. who is responsible for the variance.
- c. that actual performance is not going according to plan.
- d. when the variance should be investigated.

2. Which of the following is NOT true about Kaizen Standards?

- a. Kaizen standards are the standards used for continuous improvement.
- b. Kaizen standards are a currently attainable standard that reflects planned improvement.
- c. Kaizen standards are constantly changing.
- d. Kaizen standards are the standards used in traditional costing systems.

3. If the actual labor rate exceeds the standard labor rate and the actual labor hours exceed the number of hours allowed, the labor rate variance and labor efficiency variance will be

Labor Rate Variance

Labor Efficiency Variance

- |   |             |
|---|-------------|
| a. Favorable                                    | Favorable   |
| b. Favorable                                    | Unfavorable |
| c. Unfavorable                                  | Favorable   |
| <input checked="" type="radio"/> d. Unfavorable | Unfavorable |

4. As a general rule, an investigation of a variance should be undertaken only if the

- a. anticipated benefits are greater than zero.
- b. anticipated benefits are greater than the expected costs.
- c. variance is negative.
- d. variance is positive.

5. During September, 40,000 units were produced. The standard quantity of material allowed per unit was 5 pounds at a standard cost of \$2.50 per pound. If there was a favorable usage variance of \$25,000 for September, the actual quantity of materials used must have been 190,000 pounds

$$\begin{aligned} & (AQ - 5 \times 40,000) \times \$2.50 \\ &= (AQ - 200,000) \times \$2.50 \\ &= \$2.50 \cdot AQ - \$500,000 = (\$25,000) \\ & AQ = 190,000 \text{ pounds} \end{aligned}$$

6. Mills Company uses standard costing for direct materials and direct labor. Management would also like to use standard costing for variable and fixed overhead. The following monthly cost functions were developed for manufacturing overhead items:

Overhead Item	Cost Function
Indirect materials	\$1.00 per DLH
Indirect labor	\$1.25 per DLH
Utilities	\$0.50 per DLH
Insurance	\$10,000
Depreciation	\$40,000

SVOR: } \$2.75 per DLH  
 } \$50,000

The cost functions are considered reliable within a relevant range of 20,000 to 40,000 direct labor hours. The company expects to operate at 25,000 direct labor hours per month. In June, actual direct labor hours worked are 24,000. And Standard direct labor hours allowed for production achieved are 27,000. Information for the month of June is as follows:

Actual overhead costs incurred:	
Indirect materials	\$ 20,000
Indirect labor	30,000
Utilities	12,000
Insurance	11,000
Depreciation	40,000
Total	<u>\$113,000</u>

} \$62,000  
 } \$51,000

Required calculation:

- a. Variable overhead spending variance  
 $(\$20,000 + 30,000 + 12,000) - \$2.75 \times 24,000$  or  $(\frac{\$62,000}{24,000 \text{ DLH}} - \$2.75) \times 24,000$   
 $= \$62,000 - 66,000$   
 $= -\$4,000 \text{ F}$   
 $= (\$2.58 - \$2.75) \times 24,000$   
 $= -\$4,080 \text{ F (rounding)}$
- b. Variable overhead efficiency variance  
 $(24,000 - 27,000) \times \$2.75 = -\$8,250 \text{ F}$
- c. Fixed overhead spending variance  
 $\$51,000 - \$50,000 = \$1,000 \text{ U}$
- d. Fixed overhead volume variance  
 $\$50,000 - \frac{\$50,000}{25,000} \times 27,000 = \$4,000 \text{ F}$

e. Budget variance

$$\begin{aligned}
 & \downarrow a \quad \downarrow b \quad \downarrow c \\
 & VOHSV + VOHEV + FOHS \\
 & = -\$4,000 - \$8,250 + \$1,000 = -\$11,250^*
 \end{aligned}$$

$$\begin{aligned}
 \text{or: } & \$113,000 - (\$50,000 + \$2.75 \times 27,000) \\
 & = \$113,000 - \$124,250 \\
 & = -\$11,250
 \end{aligned}$$

\* If use VOHSV = -\$4,080, the result is -\$11,330.

7. Senocot Corporation uses two different types of labor to manufacture its product. The types of labor, Assembly and Finishing, have the following standards:

Labor Type	Standard Mix	Standard Unit Price	Standard Cost
Assembly	800 hours 80%	\$12.00 per unit	\$9,600
Finishing	200 hours 20%	8.00 per unit	\$1,600
	<u>1,000 hrs</u>		<u>\$11,200</u>
Yield	5,000 units		

During January, the following actual production information was provided:

Labor Type	Actual Mix		SM
Assembly	7,000 hours	} ⇒ 10,000 hrs	80% 8,000
Finishing	3,000 hours		20% 2,000
Yield	45,000 units		

Required:

a. Calculate the labor mix variance.

	AH	SM	AH - SM	SP	(AH - SM) · SP
Assembly	7,000	10,000 × 80% = 8,000	-1,000	\$12	-\$12,000
Finishing	3,000	10,000 × 20% = 2,000	1,000	\$8	\$8,000
					<u>-\$4,000 F</u>

Mix Variance = -\$4,000 F

b. Calculate the labor yield variance.

$$\begin{aligned}
 & \left( \frac{5,000 \text{ units}}{1,000 \text{ hr}} \times 10,000 \text{ hr} - 45,000 \text{ units} \right) \times \frac{\$11,200}{5,000 \text{ units}} \\
 & = (50,000 - 45,000) \times \$2.24 = \$11,200 \text{ U}
 \end{aligned}$$