

Exercise 10-12 (30 minutes)

1. Number of units manufactured.....	20,000
Standard labor time per unit.....	× 0.3*
Total standard hours of labor time allowed.....	6,000
Standard direct labor rate per hour.....	× \$12
Total standard direct labor cost.....	<u>\$72,000</u>

*18 minutes ÷ 60 minutes per hour = 0.3 hours

Actual direct labor cost.....	\$73,600
Standard direct labor cost.....	<u>72,000</u>
Total variance—unfavorable	\$ 1,600

2. Actual Hours of Input, at the Actual Rate (AH × AR)	Actual Hours of Input, at the Standard Rate (AH × SR)	Standard Hours Allowed for Output, at the Standard Rate (SH × SR)
	5,750 hours × \$12.00 per hour = \$69,000	6,000 hours* × \$12.00 per hour = \$72,000
\$73,600		
↑	↑	↑
	Rate Variance, \$4,600 U	Efficiency Variance, \$3,000 F
	Total Variance, \$1,600 U	

*20,000 units × 0.3 hours per unit = 6,000 hours

Alternative Solution:

$$\text{Labor rate variance} = AH (AR - SR)$$
$$5,750 \text{ hours } (\$12.80 \text{ per hour}^* - \$12.00 \text{ per hour}) = \$4,600 \text{ U}$$

*\$73,600 ÷ 5,750 hours = \$12.80 per hour

Labor efficiency variance = SR (AH – SH)

$$\$12.00 \text{ per hour } (5,750 \text{ hours} - 6,000 \text{ hours}) = \$3,000 \text{ F}$$

Exercise 10-12 (continued)

3. Actual Hours of Input, at the Actual Rate (AH × AR)	Actual Hours of Input, at the Standard Rate (AH × SR)	Standard Hours Allowed for Output, at the Standard Rate (SH × SR)
	5,750 hours × \$4.00 per hour = \$23,000	6,000 hours × \$4.00 per hour = \$24,000
\$21,850		
↑	↑	↑
Spending Variance, \$1,150 F	Efficiency Variance, \$1,000 F	
Total Variance, \$2,150 F		

Alternative Solution:

Variable overhead spending variance = AH (AR – SR)
 5,750 hours (\$3.80 per hour* – \$4.00 per hour) = \$1,150 F

*\$21,850 ÷ 5,750 hours = \$3.80 per hour

Variable overhead efficiency variance = SR (AH – SH)
 \$4.00 per hour (5,750 hours – 6,000 hours) = \$1,000 F