

**Exercise 10-10** (20 minutes)

1. Actual Quantity of Input, at Actual Price (AQ × AP)	Actual Quantity of Input, at Standard Price (AQ × SP)	Standard Quantity Allowed for Output, at Standard Price (SQ × SP)
20,000 pounds × \$2.35 per pound = \$47,000	20,000 pounds × \$2.50 per pound = \$50,000	18,400 pounds* × \$2.50 per pound = \$46,000
<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">             Price Variance, \$3,000 F         </div> <div style="text-align: center;">             Quantity Variance, \$4,000 U         </div> </div> <div style="border: 1px solid black; padding: 5px; text-align: center; margin-top: 5px;">             Total Variance, \$1,000 U         </div>		

\*4,000 units × 4.6 pounds per unit = 18,400 pounds

Alternatively:

Materials price variance = AQ (AP – SP)

20,000 pounds (\$2.35 per pound – \$2.50 per pound) = \$3,000 F

Materials quantity variance = SP (AQ – SQ)

\$2.50 per pound (20,000 pounds – 18,400 pounds) = \$4,000 U

### Exercise 10-10 (continued)

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)
	750 hours × \$12.00 per hour = \$9,000	800 hours* × \$12.00 per hour = \$9,600
\$10,425		
	Rate Variance, \$1,425 U	Efficiency Variance, \$600 F
	Total Variance, \$825 U	

\*4,000 units × 0.2 hours per unit = 800 hours

Alternatively:

Labor rate variance = AH (AR – SR)

750 hours (\$13.90 per hour\* – \$12.00 per hour) = \$1,425 U

\*\$10,425 ÷ 750 hours = \$13.90 per hour

Labor efficiency variance = SR (AH – SH)

\$12.00 per hour (750 hours – 800 hours) = \$600 F