

## Answer to Part 1 Practice Questions

### Answer: Question 1.1 – Coe Company

| 1. Cumulative Number<br>of Units | Cumulative<br>Average Time/Unit | Cumulative<br>Total Time |
|----------------------------------|---------------------------------|--------------------------|
| 1                                | 500                             | 500                      |
| 2                                | $500 \times .9 = 450$           | $450 \times 2 = 900$     |
| 4                                | $450 \times .9 = 405$           | $405 \times 4 = 1620$    |

- $\$25 \times 500 \text{ hours} \times 4 \text{ units} = \$50,000$  with no learning curve  
 $\$25 \times 405 \times 4 \text{ units} = \$40,500$  with 90% learning curve  
 $\$50,000 - \$40,500 = \$9,500$  savings
- Budgetary slack is the practice of underestimating budgeted revenues, or overestimating budgeted costs, to make budgeted targets more easily achievable.  
Budgetary slack misleads top management about the true profit potential of the company, which leads to inefficient resource planning and allocation as well as poor coordination of activities across different parts of the company.
- $1,740 \times (25.00 - [44,805/1,740]) = 1,305\text{U}$   
 $25.00 \times (1,740 - [4 \times 500]) = 6,500\text{F}$   
Direct labor rate variance remains the same, but direct labor efficiency variance will become \$3000 negative, because actual hours 1740 is more than expected from 90% learning curve 1620.
- A factor that could cause an unfavorable price variance and a favorable efficiency variance is using a higher-skilled labor force that would be paid more per hour but would work more quickly.
- Direct labor efficiency variance would be even more unfavorable if an 80% learning curve was used. The lower number implies more benefit from learning.
- For a new product, the company may have no way of forecasting the amount of improvement (if any) from savings. The company may set up a production method that is more efficient than prototype, but will not gain further efficiencies.