2. Assume you are the cost accountant at the manufacturing plant where the preceding scenario takes place. According to the IMA's *Statement of Ethical Professional Practice,* what are your obligations in this situation?

14-56 **Journal Entries in a Standard Cost System** Boron Chemical Company produces a synthetic resin that is used in the automotive industry. The company uses a standard cost system. For each gallon of output, the following direct manufacturing costs are anticipated:

Direct labor: 2 hours at $25.00 per hour	$50.00
Direct materials: 2 gallons at $10.00 per gallon	$20.00

During December of 2010, Boron produced a total of 2,500 gallons of output and incurred the following direct manufacturing costs:

Direct labor: 4,900 hours worked @ an average wage rate of $19.50 per hour
Direct materials:
Purchased: 6,000 gallons @ $10.45 per gallon
Used in production: 5,100 gallons

Boron records price variances for materials at the time of purchase.

Required Give journal entries for the following events and transactions:

1. Purchase, on credit, of direct materials.
2. Direct materials issued to production.
3. Direct labor cost of units completed this period.
4. Direct manufacturing cost (direct labor plus direct materials) of units completed and transferred to Finished Goods Inventory.
5. Sale, for $150 per gallon, of 2,000 gallons of output. (*Hint:* You will need two journal entries here.)

14-57 **Behavioral Considerations and Continuous-Improvement Standards** At a recent seminar you attended, the invited speaker was discussing some of the advantages and disadvantages of standard costs in terms of evaluating performance and motivating goal-congruent behavior on the part of employees. One criticism of standard costs in particular caught your attention: the use of conventional standard costs may not provide appropriate incentives for improvements needed to compete effectively with world-class organizations. The speaker then discussed so-called "continuous-improvement standard costs." Such standards embody systematically lower costs over time. For example, on a monthly basis, it might be appropriate to budget a 1 percent reduction in per-unit direct labor cost.

Assume that the standard wage rate into the foreseeable future is $40 per hour. Assume, too, that the budgeted labor-hour standard for October 2010 is 1.0 hour and that this standard is reduced each month by 1 percent. During December of 2010 the company produced 10,000 units of XL-10, using 9,980 direct labor hours. The actual wage rate per hour in December was $42.50.

Required

1. Prepare a table that contains the standard labor-hour requirement per unit and standard direct labor cost per unit for the four months, October 2010 through January 2011.
2. Compute the direct labor efficiency variance for December 2010.
3. What behavioral considerations apply to the decision to use continuous-improvement standards?

14-58 **Financial versus Nonfinancial Performance Indicators for Operational Control** As indicated in the text, both financial and nonfinancial performance indicators play important roles in an organization's overall operational control system. Explain, concisely, the relative advantage of each type of performance indicator. That is, what role would each type of performance indicator play in helping to ensure that operations are in control? (*Hint:* Think about this issue both from the standpoint of managers and from the standpoint of operating personnel.)

14-59 **Standard Costs and Ethics** Ohio Apple Orchards (OAO), Inc., produces an organic, super-premium apple juice that it markets to specialty food outlets. OAO purchases its apples from a select group of farmers located in the Midwest. Recently, a graduate of the local university, Susanna Wu, joined the staff of OAO. Among Susanna's first responsibilities was the change to develop and implement a standard

Required

1. What is the most appropriate time to record any variance of actual materials prices from standard? Explain.
2. What is the total direct labor rate (price) variance for October?
3. What is the total direct labor efficiency variance for October?
4. What is the total direct materials purchase price variance for October?
5. What is the total direct materials usage variance for October?
6. What is the variable overhead spending variance for October?
7. What is the variable overhead efficiency variance for October?
8. What is the budget (spending) variance for fixed overhead for October?
9. What is the production-volume variance for October?

(CMA Adapted)

15-58 **Four-Variance Analysis** Able Control Company, which manufactures electrical switches, uses a standard cost system and carries all inventory at standard cost. The standard factory overhead cost per switch is based on direct labor hours:

Variable overhead	(5 hours at $8/hour)	$ 40
Fixed overhead	(5 hours at $12*/hour)	60
Total standard overhead cost per unit produced		$100

*Based on a practical capacity of 300,000 direct labor hours per month.

The following information is for the month of October:

- The company produced 56,000 switches, although 60,000 switches were scheduled to be produced.
- The company worked 275,000 direct labor hours at a total cost of $2,550,000.
- Variable overhead costs were $2,340,000.
- Fixed overhead costs were $3,750,000.

The production manager argued during the last performance review that the company should use a more up-to-date base for charging factory overhead costs to production. She commented that her factory had been highly automated in the last two years and as a result now has hardly any direct labor. The factory hires only highly skilled workers to set up production runs and to do periodic adjustments of machinery whenever the need arises.

Required

1. Compute the following for Able Control Company:
   a. The fixed overhead spending variance for October.
   b. The production-volume variance for October.
   c. The variable overhead spending variance for October.
   d. The variable overhead efficiency variance for October.
2. Comment on the implications of the variances and suggest any action that the company should take to improve its operations.

(CMA Adapted)

15-59 **Comprehensive Variance Analysis** Organet Stamping Company manufactures a variety of products made of plastic and aluminum components. During the winter months, substantially all production capacity is devoted to lawn sprinklers for the following spring and summer seasons. Other products are manufactured during the remainder of the year. Because a variety of products are manufactured throughout the year, factory volume is measured using production labor hours rather than units of production.

Production volume has grown steadily for the past several years, as the following schedule of production labor indicates:

This year	32,000 hours
1 year ago	30,000 hours
2 years ago	27,000 hours
3 years ago	28,000 hours
4 years ago	26,000 hours