

Chapter 22—Standard Costs and Performance Reports

Solutions to Practice Quiz

1. This is a good example of a cost center:
- a. A Kroger Supermarket
  - b. Apple Computers, Inc.
  - c. The jet engine division of General Electric
  - d. The English department of a university

Answer: *d*

Rationale: A supermarket is a good example of a profit center and Apple Computers, Inc. is a good example of an investment center. Depending on the discretion awarded division management, the jet engine division could be classified as an investment or a profit center. The English department is the best example of a cost center.

2. Responsibility accounting systems:
- a. Are primarily intended to determine who is at fault for errors
  - b. Should emphasize factors controllable by individual managers or groups
  - c. Should place significant pressure on managers to meet performance targets
  - d. Should always emphasize profit, a company's bottom line

Answer: *b*

Rationale: Answer "a" is incorrect. The goal of responsibility accounting is identify deviations from plans, not to place blame. A deviation may result, for example, from changed circumstances beyond the control of any manager. In that case, investigation of the deviation might indicate a need to adjust plans. Answer "c" is incorrect. Too much pressure to meet performance targets might encourage unethical behavior or encourage managers to avoid taking advantage of new opportunities. Answer "d" is incorrect because managers of cost centers do not have profit as a "bottom line." And, in the long run, the relationship between profits and investment is a better measure of performance.

3. Presented is an abbreviated performance report for the month of November:

	<u>Actual</u>	<u>Budget</u>	<u>Variance</u>
Units	<u>7,400</u>	<u>6,600</u>	
Costs:			
Direct materials	\$42,000	\$ 35,000	\$ 7,000 U
Direct labor	162,500	145,000	17,500 U
Variable factory overhead	185,000	150,000	35,000 U
Fixed factory overhead	<u>107,000</u>	<u>115,000</u>	<u>8,000 F</u>
Total costs	<u>\$496,500</u>	<u>\$445,000</u>	<u>\$51,500 U</u>

The total flexible budget variance is:

- a. \$51,500 Unfavorable
- b. \$67,500 Unfavorable
- c. \$11,500 Unfavorable
- d. \$67,500 Favorable

Answer: c

Rationale:

Budgeted variable cost per unit =  $[(\$35,000 + 145,000 + 150,000) / 6,600] = \$50$

Flexible budget for actual activity =  $\$115,000 + (7,400 \times \$50) = \$485,000$

Flexible budget variance =  $\$496,500 \text{ actual} - \$485,000 \text{ flexible budget}$

= \$11,500 Unfavorable

4. The following additional information is available for the materials costs in Question 3:

- Standard cost per unit produced: 3 liters @ \$2.50 per liter
- Actual use of raw materials 19,000 liters @ \$4.00 per liter

The materials price and materials quantity variances are:

- a. \$33,300 U materials price variance and \$12,800 F materials quantity variance
- b. \$28,500 U materials price variance and \$8,000 F materials quantity variance
- c. \$28,500 F materials price variance and \$8,000 U materials quantity variance
- d. None of the above

Answer: b

Rationale:

Materials price variance  $(\$4.00 \text{ AP} - \$2.50 \text{ SP}) \times 19,000 \text{ AQ} = \underline{\$28,500 \text{ U}}$

Materials quantity variance  $[19,000 \text{ AQ} - (7,400 \times 3 \text{ SQ})] \times \$2.50 \text{ SP} = \underline{\$8,000 \text{ F}}$

5. The following additional information is available for the labor costs in Question 3.
- Standard cost per unit of product 2.0 direct labor hours @ \$25 per labor hour
  - Actual use of direct labor is 13,500 hours @ \$28 per hour

The labor rate and the labor efficiency variances are:

- a. \$40,500 U labor rate variance and \$32,500 F labor efficiency variance
- b. \$44,400 U labor rate variance and \$36,400 F labor efficiency variance
- c. \$32,500 F labor rate variance and \$40,500 U labor efficiency variance
- d. None of the above

Answer: *a*

Rationale: Labor rate variance  $(\$28 \text{ AR} - \$25 \text{ SR}) \times 13,500 \text{ AH} = \underline{\$40,500 \text{ U}}$   
 Labor efficiency variance  $[13,500 \text{ AH} - (7,400 \times 2.0 \text{ SH})] \times \$25 = \underline{\$32,500 \text{ F}}$

6. The following additional information is available for the variable overhead costs in Question 3:
- Standard cost per unit of product 3 liters of raw materials @ \$15 per liter
  - Actual use of raw materials was 19,000 liters and actual variable overhead was \$280,000

The variable overhead spending and variable overhead efficiency variances are:

- a. \$10,000 F spending and \$24,000 U efficiency
- b. \$48,000 F spending and \$5,000 F efficiency
- c. \$5,000 F spending and \$63,000 U efficiency
- d. \$5,000 F spending and \$48,000 F efficiency

Answer: *d*

Rationale:

Variable overhead spending variance  $\$280,000 - (19,000 \times \$15) = \underline{\$5,000 \text{ F}}$   
 Variable overhead efficiency variance  $[19,000 \text{ AQ} - (7,400 \times 3 \text{ SQ})] \times \$15 = \underline{\$48,000 \text{ F}}$

7. Budgeted October sales of the Cowboy Company include 250 pairs of cowboy boots at \$250 each. Actual sales were 130 pairs of boots at \$325 each. The October sales price and sales revenue variances for cowboy boots are:
- a. \$18,750 F sales price variance and \$39,000 U sales volume variance
  - b. \$9,750 F sales price variance and \$30,000 U sales volume variance
  - c. \$9,750 F sales price variance and \$30,000 F sales volume variance
  - d. None of the above

Answer: *b*

Rationale: Sales price variance  $(\$325 \text{ ASP} - \$250 \text{ ABS}) \times 130 \text{ AS} = \underline{\$9,750 \text{ F}}$   
 Sales volume variance  $(130 \text{ AS} - 250 \text{ BS}) \times \$250 \text{ BSP} = \underline{\$30,000 \text{ U}}$

8. Using the information in Question 7 if the actual and standard cost of a pair of boots was \$120 October's net sales volume variance is:
- a. \$15,600 Unfavorable
  - b. \$14,400 Unfavorable
  - c. \$32,500 Unfavorable
  - d. \$16,900 Unfavorable

Answer: *a*

Rationale: Budgeted contribution margin = \$250 – \$120 = \$130

Net sales volume variance (130 AS – 250 BS) x \$130 = \$15,600 U