Chapter 12: Responsibility Accounting, Quality Control, and Environmental Cost Management

MULTIPLE CHOICE QUESTIONS

1. When managers of subunits throughout an organization strive to achieve the goals set by top management, the result is:
   A. goal congruence.
   B. planning and control.
   C. responsibility accounting.
   D. delegation of decision making.
   E. strategic control.

   Answer: A LO: 1 Type: RC

2. Which of the following is <u>not</u> an example of a responsibility center?
   A. Cost center.
   B. Revenue center.
   C. Profit center.
   D. Investment center.
   E. Contribution center.

   Answer: E LO: 2 Type: RC

3. A manufacturer's raw-material purchasing department would likely be classified as a:
   A. cost center.
   B. revenue center.
   C. profit center.
   D. investment center.
   E. contribution center.

   Answer: A LO: 2 Type: N

4. Hitchcock Corporation is in the process of overhauling the performance evaluation system for its Los Angeles manufacturing division, which produces and sells parts that are popular in the aerospace industry. Which of the following is <u>least</u> likely to be chosen to evaluate the overall operations of the Los Angeles division?
   A. Cost center.
   B. Responsibility center.
   C. Profit center.
   D. Investment center.
   E. The profit center and investment center are equally unlikely to be chosen.

   Answer: A LO: 2 Type: N

5. A cost center manager:
   A. does not have the ability to produce revenue.
   B. may be involved with the sale of new marketing programs to clients.
   C. would normally be held accountable for producing an adequate return on invested capital.
   D. often oversees divisional operations.
   E. may be the manager who oversees the operations of a retail store.

   Answer: A LO: 2 Type: N

6. The Telemarketing Department of a residential remodeling company would most likely be evaluated as a:
   A. cost center.
   B. revenue center.
   C. profit center.
   D. investment center.
   E. contribution center.

   Answer: B LO: 2 Type: RC

7. If the head of a hotel's food and beverage operation is held accountable for revenues and costs, the food and beverage operation would be considered a(n):
   A. cost center.
   B. revenue center.
   C. profit center.
   D. investment center.
   E. contribution center.

   Answer: C LO: 2 Type: RC

8. Which of the following would have a low likelihood of being organized as a profit center?
   A. A movie theater of a company that operates a chain of theaters.
   B. A maintenance department that charges users for its services.
   C. The billing department of an Internet Services Provider (ISP).
   D. The mayor's office in a large city.
   E. Both "C" and "D" above.

   Answer: E LO: 2 Type: N

9. Easy-to-Use Software operates stores within five regions. Regional managers are held accountable for marketing, advertising, and sales decisions, and all costs incurred within their region. In addition, regional managers decide whether new stores will open, where the stores will be located, and whether the stores will lease or purchase the facilities. Store managers, in contrast, are accountable for marketing, advertising, and sales decisions, and costs incurred within their stores. Ideally, on the basis of this information, what type of responsibility center should the software company use to evaluate its regions and stores?

	Regions	Stores
A.	Profit center	Profit center
B.	Profit center	Cost center
C.	Profit center	Revenue center
D.	Investment center	Profit center
E.	Investment center	Cost center

Answer: D LO: 2 Type: N

10. Decentralized firms can delegate authority by structuring an organization into responsibility centers. Which of the following organizational segments is most like a totally independent, standalone business where managers are expected to "make it on their own"?
A. Cost center.
B. Revenue center.
C. Profit center.
D. Investment center.
E. Contribution center.

Answer: D LO: 2 Type: N

11. A responsibility center in which the manager is held accountable for the profitable use of assets and capital is commonly known as a(n):
A. cost center.
B. revenue center.
C. profit center.
D. investment center.
E. contribution center.

Answer: D LO: 2 Type: RC

12. The Asian Division of a multinational manufacturing organization would likely be classified as a:
A. cost center.
B. revenue center.
C. profit center.
D. investment center.
E. contribution center.

Answer: D LO: 2 Type: N

13. Performance reports help managers:
    A. use management by exception and effectively control operations.
    B. decide whether a cost, profit, or investment center framework is appropriate.
    C. design their organizational hierarchy.
    D. pinpoint trouble spots.
    E. by assisting with functions "A" and "D."

    Answer: E LO: 3 Type: RC

14. Consider the following statements about performance reports:

    I. Performance reports provide feedback to managers and allow them to better control operations.
    II. Many performance reports have budget, actual, and variance data.
    III. Performance reports are often structured around a firm's organizational hierarchy—that is, data relating to lower-level units (e.g., departments) are combined and flow into higher-level units (e.g., stores).

    Which of the above statements is (are) true?
    A. I only.
    B. I and II.
    C. I and III.
    D. II and III.
    E. I, II, and III.

    Answer: E LO: 3 Type: RC

15. Aloha Hotels owns numerous hotels on each of the Hawaiian Islands. The company's performance reporting system is structured around the firm's organizational structure, with information flowing from operating departments at a particular property and later respectively grouped by individual hotel, island operation (i.e., division), and the company as a whole. Which of the following best depicts the detail level of the information given to a department manager versus that reported to a company vice-president?

	Department Manager	Company Vice-President
A.	Somewhat detailed	Somewhat detailed
B.	Somewhat detailed	Somewhat summarized
C.	Somewhat summarized	Somewhat detailed
D.	Somewhat summarized	Somewhat summarized
E.	None of the above because department managers do not receive performance reports.	

    Answer: B LO: 3 Type: N

16. Leisure Time owns six hotels in Hawaii, collectively known as the Hawaiian Division. The various hotels, including the Surf & Sun, have operating departments (such as Maintenance, Housekeeping, and Food and Beverage) that are evaluated as either cost centers or profit centers. The Food and Beverage Department, for example, is a profit center, with activities divided into three segments: Banquets and Catering, Restaurants, and Kitchen. If Leisure Time uses a performance-reporting system that is based on responsibility accounting, which of the following disclosures is likely to occur?
    A. The detailed operating costs of the Surf & Sun's Kitchen Department will appear on the Hawaiian Division's performance report.
    B. The Food and Beverage Department's profit will appear on Kitchen's performance report.
    C. The profit of the Surf & Sun hotel will appear on the Hawaiian Division's performance report.
    D. The Food and Beverage profit at the Surf & Sun will appear on Leisure Time's performance report.
    E. The profit of the Surf & Sun hotel will appear on Food and Beverage's performance report.

    Answer: C LO: 3 Type: N

17. A cost pool is:
    A. a collection of homogeneous costs to be assigned.
    B. the combined result of decisions made by different responsibility center managers.
    C. the primary function of a responsibility accounting system.
    D. the amount of cost that has been allocated, say, 10%, to a user department.
    E. the tool used to allocate cost dollars to user departments.

    Answer: A LO: 4 Type: RC

18. A cost object is:
    A. a collection of costs to be assigned.
    B. a responsibility center, product, or service to which cost is to be assigned.
    C. the tool used to charge cost dollars to user departments.
    D. the primary function of a responsibility accounting system.
    E. a common cost.

    Answer: B LO: 4 Type: RC

19. Kelly Corporation, with operations throughout the country, will soon allocate corporate overhead to the firm's various responsibility centers. Which of the following is definitely not a cost object in this situation?
    A. The maintenance department.
    B. Product no. 675.
    C. Kelly Corporation.
    D. The Midwest division.
    E. The telemarketing center.

    Answer: C LO: 4 Type: N

20. An allocation base for a cost pool should ideally be:
    A. machine hours.
    B. a cost object.
    C. a common cost.
    D. a cost driver.
    E. direct labor, either cost or hours.

    Answer: D LO: 4 Type: RC

21. Which of the following is an appropriate base to distribute the cost of building depreciation to responsibility centers?
    A. Number of employees in the responsibility centers.
    B. Budgeted sales dollars of the responsibility centers.
    C. Square feet occupied by the responsibility centers.
    D. Budgeted net income of the responsibility centers.
    E. Total budgeted direct operating costs of the responsibility centers.

    Answer: C LO: 4 Type: N

22. David Corporation is in the process of selecting allocation bases so that selected costs can be charged to responsibility centers. Would the number of employees likely be a good base to use to allocate the costs of Human Resources, Building and Grounds, and Repairs and Maintenance to user centers?

	Human Resources	Buildings and Grounds	Repairs and Maintenance
A.	Yes	Yes	Yes
B.	Yes	No	Yes
C.	Yes	No	No
D.	No	Yes	Yes
E.	No	Yes	No

    Answer: C LO: 4 Type: N

23. Cost pools should be charged to responsibility centers by using:
    A. budgeted amounts of allocation bases because the cost allocation to one responsibility center should influence the allocations to others.
    B. budgeted amounts of allocation bases because the cost allocation to one responsibility center should <u>not</u> influence the allocations to others.
    C. actual amounts of allocation bases because the cost allocation to one responsibility center should influence the allocations to others.
    D. actual amounts of allocation bases because the cost allocation to one responsibility center should <u>not</u> influence the allocations to others.
    E. some other approach.

    Answer: B LO: 4 Type: RC

Use the following to answer questions 24-25:

Management of Children Are Precious (CAP), an operator of day-care facilities, wants the firm's profit to be subdivided by center. The firm's accountant has provided the following data:

Center	Actual Revenue	Budgeted Revenue	Actual Direct Costs	Budgeted Direct Costs
Downtown	$ 340,200	$ 320,000	$ 300,000	$ 300,000
Irvine	534,600	560,000	440,000	510,000
H Beach	745,200	720,000	740,000	690,000
Totals	$1,620,000	$1,600,000	$1,480,000	$1,500,000

CAP's advertising, which is handled by the home office, is not reflected in the preceding figures and amounted to $60,000.

24. If advertising expense were allocated to centers based on actual center profitability, how much advertising would be allocated to Irvine?
    A. $19,800.
    B. $21,000.
    C. $30,000.
    D. $40,543.
    E. Some other amount.

    Answer: D LO: 4 Type: A

25. Assume that management used the allocation base that is most influenced by advertising effort and consistent with sound managerial accounting practices. How much advertising would be allocated to Irvine?
    A. $17,838.
    B. $19,800.
    C. $20,000.
    D. $20,400.
    E. $21,000.

    Answer: E LO: 4 Type: A, N

26. Responsibility accounting systems strive to:
    A. place blame on guilty individuals.
    B. provide information to managers.
    C. hold managers accountable for both controllable and noncontrollable costs.
    D. identify unfavorable variances.
    E. provide information so that managers can make decisions that are in the best interest of their individual centers rather than in the best interests of the firm as a whole.

    Answer: B LO: 4 Type: RC

27. Controllable costs, as used in a responsibility accounting system, consist of:
    A. only fixed costs.
    B. only direct materials and direct labor.
    C. those costs that a manager can influence in the time period under review.
    D. those costs about which a manager has some knowledge.
    E. those costs that are influenced by parties external to the organization.

    Answer: C LO: 4 Type: RC

28. For a company that uses responsibility accounting, which of the following costs is <u>least</u> likely to appear on a performance report of an assembly-line supervisor?
    A. Direct materials used.
    B. Departmental supplies.
    C. Assembly-line labor.
    D. Repairs and maintenance.
    E. Assembly-line facilities depreciation.

    Answer: E LO: 4 Type: N

29. Common costs:
    A. are not easily related to a segment's activities.
    B. are easily related to a segment's activities.
    C. are charged to the operating segments of a company.
    D. are not charged to the operating segments of a company.
    E. are best described by characteristics "A" and "D" above.

    Answer: E LO: 5 Type: RC

30. Harris Company is preparing a segmented income statement, subdivided into departments (billing, purchasing, and telemarketing). Which of the following choices correctly describes the accounting treatment of the firm's compensation cost for key executives (president and vice-presidents)?
    A. The cost is charged to the departments.
    B. The cost is not charged to the departments because, although easily traceable to the departments, it is not controllable at the departmental level.
    C. The cost is not charged to the departments because, although controllable at the departmental level, it is not easily traceable to the departments.
    D. The cost is not charged to the departments because it is both easily traceable to the departments and controllable by the departments.
    E. The cost is not charged to the departments because it is neither easily traceable to the departments nor controllable by the departments.

    Answer: E LO: 5 Type: N

31. West Coast Electronics (WCE) operates 87 stores and has three divisions: California, Oregon, and Washington. Which of the following costs would <u>not</u> appear on Oregon's portion of WCE's segmented income statement?
    A. Costs related to statewide advertising contracts, negotiated by Oregon's divisional manager.
    B. Variable sales commissions paid to Oregon's salespeople.
    C. Compensation paid to Oregon's chief operating officer, as determined by WCE's management.
    D. Oregon's allocated share of general WCE corporate overhead.
    E. Items "C" and "D" above.

    Answer: D LO: 5 Type: N

32. The difference between the profit margin controllable by a segment manager and the segment profit margin is caused by:
    A. variable operating expenses.
    B. allocated common expenses.
    C. fixed expenses controllable by the segment manager.
    D. fixed expenses traceable to the segment but controllable by others.
    E. other revenue.

    Answer: D LO: 5 Type: RC

33. The profit margin controllable by the segment manager would <u>not</u> include:
    A. variable operating expenses.
    B. fixed expenses controllable by the segment manager.
    C. a share of the company's common fixed expenses.
    D. income tax expense.
    E. items "C" and "D" above.

    Answer: E LO: 5 Type: RC

34. A segment contribution margin would reflect the impact of:
    A. variable operating expenses.
    B. fixed expenses controllable by the segment manager.
    C. fixed expenses traceable to the segment but controllable by others.
    D. common fixed expenses.
    E. items "A," "B," and "C" above.

    Answer: A LO: 5 Type: RC

35. Gathersburg Retail has three stores in Maryland. Which of the following costs would likely be excluded when computing the profit margin controllable by store no. 3's manager?
    A. Hourly labor costs incurred by personnel at store no. 3.
    B. Property taxes attributable to store no. 3.
    C. The salary of Gathersburg's president.
    D. The salary of store no. 3's manager.
    E. Items "B," "C," and "D" above.

    Answer: E LO: 5 Type: N

36. Which of the following measures would reflect the variable costs incurred by a business segment?

	Segment Contribution Margin	Profit Margin Controllable by Segment Manager	Segment Profit Margin
A.	Yes	No	No
B.	Yes	No	Yes
C.	Yes	Yes	No
D.	Yes	Yes	Yes
E.	No	Yes	Yes

    Answer: D LO: 5 Type: RC

37. Which of the following measures would reflect the fixed costs controllable by a segment manager?

	Segment Contribution Margin	Profit Margin Controllable by Segment Manager	Segment Profit Margin
A.	Yes	No	No
B.	Yes	No	Yes
C.	Yes	Yes	No
D.	Yes	Yes	Yes
E.	No	Yes	Yes

    Answer: E LO: 5 Type: RC

38. Which of the following would be the best measure on which to base a segment manager's performance evaluation for purposes of granting a bonus?
    A. Segment sales revenue.
    B. Segment contribution margin.
    C. Profit margin controllable by the segment manager.
    D. Segment profit margin.
    E. Segment net income.

    Answer: C LO: 5 Type: N

39. Sands Corporation operates two stores: J and K. The following information relates to store J:

Sales revenue	$1,300,000
Variable operating expenses	600,000
Fixed expenses:	
Traceable to J and controllable by J	275,000
Traceable to J and controllable by others	80,000

J's segment contribution margin is:
A. $345,000.
B. $425,000.
C. $620,000.
D. $700,000.
E. $745,000.

Answer: D LO: 5 Type: A

40. Thompson Corporation operates two stores: A and B. The following information relates to store A:

Sales revenue	$900,000
Variable operating expenses	400,000
Fixed expenses:	
Traceable to A and controllable by A	275,000
Traceable to A and controllable by others	120,000

A's segment profit margin is:
A. $105,000.
B. $225,000.
C. $380,000.
D. $500,000.
E. $505,000.

Answer: A LO: 5 Type: A

41. The following data relate to Department no. 3 of Tsay Corporation:

Segment contribution margin	$540,000
Profit margin controllable by the segment manager	310,000
Segment profit margin	150,000

On the basis of this information, Department no. 3's variable operating expenses are:
A. $80,000.
B. $160,000.
C. $230,000.
D. $390,000.
E. not determinable.

Answer: E LO: 5 Type: A

42. The following data relate to Department no. 2 of Young Corporation:

Segment contribution margin	$480,000
Profit margin controllable by the segment manager	230,000
Segment profit margin	110,000

On the basis of this information, fixed costs traceable to Department no. 2 but controllable by others are:
A. $120,000.
B. $140,000.
C. $250,000.
D. $370,000.
E. not determinable.

Answer: A LO: 5 Type: A

Use the following to answer questions 43-47:

The following information was taken from the segmented income statement of Restin, Inc., and the company's three divisions:

	Restin, Inc.	Los Angeles Division	Bay Area Division	Central Valley Division
Revenues	$750,000	$200,000	$235,000	$325,000
Variable operating expenses	410,000	110,000	120,000	180,000
Controllable fixed expenses	210,000	65,000	75,000	70,000
Noncontrollable fixed expenses	60,000	15,000	20,000	25,000

In addition, the company incurred common fixed costs of $18,000.

43. Bay Area's segment profit margin is:
A. $14,000.
B. $18,000.
C. $20,000.
D. $40,000.
E. $115,000.

Answer: C LO: 5 Type: A

44. The profit margin controllable by the Central Valley segment manager is:
A. $32,000.
B. $44,000.
C. $50,000.
D. $75,000.
E. $145,000.

Answer: D LO: 5 Type: A

45. Assuming use of a responsibility accounting system, which of the following amounts should be used to evaluate the performance of the Los Angeles division manager?
    A. $4,000.
    B. $8,000.
    C. $10,000.
    D. $25,000.
    E. $90,000.

    Answer: D   LO: 5   Type: A, N

46. Which of the following amounts should be used to evaluate whether Restin, Inc., should continue to invest company resources in the Los Angeles division?
    A. $4,000.
    B. $8,000.
    C. $10,000.
    D. $25,000.
    E. $90,000.

    Answer: C   LO: 5   Type: A, N

47. Assume that the Los Angeles division increases its promotion expense, a controllable fixed cost, by $10,000. As a result, revenues increase by $50,000. If variable expenses are tied directly to revenues, the new Los Angeles segment profit margin is:
    A. $12,500.
    B. $22,500.
    C. $32,500.
    D. $50,000.
    E. $60,000.

    Answer: B   LO: 5   Type: A

48. Quality of conformance refers to:
    A. the extent to which a product meets the specifications of its design.
    B. the extent to which a product adds value to a firm's product line.
    C. the extent to which a product is designed for its intended use.
    D. the extent to which a product maximizes non-value-added activities in the production process.
    E. a cost control that is achievable.

    Answer: A   LO: 6   Type: RC

49. Which of the following is <u>not</u> a cost of quality?
    A. External failure cost.
    B. Internal failure cost.
    C. Production inefficiency cost.
    D. Prevention cost.
    E. Appraisal cost.

    Answer: C   LO: 6   Type: RC

50. Which of the following costs is often considered the hardest to measure?
    A. Prevention costs.
    B. Appraisal costs.
    C. Internal failure costs.
    D. External failure costs.
    E. The cost of lost sales.

    Answer: E   LO: 6   Type: RC

51. Which of the following costs would be classified as a prevention cost on a quality report?
    A. Reliability engineering.
    B. Materials inspection.
    C. Rework.
    D. Warranty repairs.
    E. Out-of-court liability settlements.

    Answer: A   LO: 6   Type: RC

52. Which of the following costs would be classified as an appraisal cost on a quality report?
    A. Reliability engineering.
    B. Materials inspection.
    C. Rework.
    D. Warranty repairs.
    E. Out-of-court liability settlements.

    Answer: B   LO: 6   Type: RC

53. If goods are inspected and found to be defective, any rework costs related to these units before the units are transferred to the finished-goods warehouse would be classified as a(n):
    A. external failure cost.
    B. internal failure cost.
    C. production inefficiency cost.
    D. prevention cost.
    E. appraisal cost.

    Answer: B   LO: 6   Type: RC

54. Which of the following costs would be classified as an internal failure cost on a quality report?
    A. Reliability engineering.
    B. Materials inspection.
    C. Rework.
    D. Warranty repairs.
    E. Out-of-court liability settlements.

    Answer: C   LO: 6   Type: RC

55. The cost of servicing a unit under a warranty agreement is known as a(n):
   A. external failure cost.
   B. internal failure cost.
   C. production inefficiency cost.
   D. prevention cost.
   E. appraisal cost.

   Answer: A   LO: 6   Type: RC

56. Which of the following costs would be classified as an external failure cost on a quality report?
   A. Reliability engineering.
   B. Materials inspection.
   C. Rework.
   D. Warranty repairs.
   E. Pilot studies/focus-group sessions.

   Answer: D   LO: 6   Type: RC

57. Which of the following choices correctly depicts a prevention cost and an external failure cost?

	Prevention Cost	External Failure Cost
A.	Inspection of work in process	Warranty costs
B.	Quality training	Product liability lawsuits
C.	In-house rework of defective units	Transportation costs to customer sites
D.	Customer complaints	Reliability engineering
E.	Choices "A" and "B" above.	

   Answer: B   LO: 6   Type: RC

58. Elizabeth, Inc., was having significant quality problems in its manufacturing plant. To remedy the situation, management implemented various up-front procedures and programs that were expected to reduce the production of bad units to acceptable (normal) levels and benefit the firm financially. If the procedures and programs functioned as intended, what is likely true about the amounts the company incurred for prevention cost, internal failure cost, and external failure cost?

	Prevention Cost	Internal Failure Cost	External Failure Cost
A.	Increase	Increase	Increase
B.	Increase	Increase	Decrease
C.	Increase	Decrease	Increase
D.	Increase	Decrease	Decrease
E.	Decrease	Decrease	Decrease

   Answer: D   LO: 6   Type: N

59. The costs that follow appeared on Omaha's quality cost report:

Warranty costs	$15,000
Raw-materials inspection	10,000
Quality training	31,000
Customer complaints	5,500
Rework of defective units	12,800

The sum of Omaha's appraisal and internal failure costs is:
A. $10,000.
B. $12,800.
C. $22,800.
D. $68,800.
E. some other amount.

Answer: C LO: 6 Type: A

60. The costs that follow appeared on Lexington’s quality cost report:

Warranty costs	$19,000
Raw-materials inspection	9,000
Quality training	40,000
Customer complaints	4,100
Production stoppages from machine breakdowns	7,800

The sum of Lexington’s prevention and external failure costs is:
A. $40,000.
B. $49,000.
C. $59,000.
D. $63,100.
E. some other amount.

Answer: D LO: 6 Type: A

61. Under the contemporary view of product quality, companies should strive to:
A. balance failure costs with the sum of prevention and appraisal costs.
B. increase total quality costs.
C. achieve zero defects in manufacturing.
D. inspect after-the-fact rather than install a series of preventative manufacturing controls.
E. operate at the top of the total quality cost curve.

Answer: C LO: 7 Type: RC

62. Which of the following is a helpful tool in identifying the frequency of quality-control problems?
    A. Decision trees.
    B. Scatter diagrams.
    C. Pareto diagrams.
    D. Flowcharts.
    E. Decision tables.

    Answer: C   LO: 7   Type: RC

63. Many companies (especially those in Europe) now require their suppliers to meet specified quality guidelines issued by the:
    A. International Standards Organization (ISO).
    B. Quality Assurance Institute (QAI).
    C. Taguchi Standards Association (TSA).
    D. Pareto Standards Institute (PSI).
    E. an organization other than those mentioned above.

    Answer: A   LO: 7   Type: RC

64. All of the following concepts are related to environmental management (cost and otherwise) <u>except</u>:
    A. dynamic programming efforts.
    B. sustainable development.
    C. monitoring costs.
    D. abatement costs.
    E. remediation costs.

    Answer: A   LO: 8   Type: RC

65. Costs incurred to reduce or eliminate pollution are commonly known as:
    A. monitoring costs.
    B. abatement costs.
    C. on-site remediation costs.
    D. off-site remediation costs.
    E. hidden costs.

    Answer: B   LO: 8   Type: RC

66. Clean-up costs are commonly classified as:
    A. monitoring costs.
    B. abatement costs.
    C. remediation costs.
    D. internal failure costs.
    E. external failure costs.

    Answer: C   LO: 8   Type: N

67. Which of the following fail to be captured and reported by a company's accounting system as an environmental cost?
    A. Monitoring costs.
    B. Abatement costs.
    C. Hidden costs.
    D. On-site remediation costs.
    E. Off-site remediation costs.

    Answer: C   LO: 8   Type: RC

68. A company that strives to maximize the value of its pollution-related activities would follow a(n):
    A. process improvement strategy.
    B. prevention strategy.
    C. end-of-pipe strategy.
    D. visible cost strategy.
    E. matrix strategy.

    Answer: B   LO: 8   Type: RC

EXERCISES

Cost Centers vs. Profit Centers: Analysis of Operations, Manager Behavior

69. Wireless, Inc., provides a variety of telecommunications services to residential and commercial customers from its massive campus-like headquarters in suburban Orlando. For a number of years the firm's maintenance group has been organized as a cost center, rendering services free of charge to the company's user departments (sales, billing, accounting, marketing, research, and so forth).

    Requests for maintenance have grown considerably, and demand is approaching the point where quality and timeliness of services provided is becoming an issue. As a result, management is studying whether the maintenance operation should be converted from a cost center to a profit center, with users to be billed for services performed.

    Required:

    A. Differentiate between a cost center and a profit center. How is each of these centers evaluated?
    B. What will likely happen to the number of user service requests if the company makes the switch to a profit-center form of organization? Why?
    C. Assume that a user department has requested a particular service, one that is time consuming and costly to perform. The maintenance group's actual cost incurred in providing this service is $17,800, and the user has agreed to pay $20,800 if the switch to a profit center is made. If this case is fairly typical within the firm, which of the two forms of organization (cost center or profit center) will result in a more responsive, service-oriented maintenance group for Wireless? Why?

    LO: 2 Type: RC, N

    Answer:

    A. Cost centers and profit centers are different types of responsibility units within an organization. With a cost center, a manager is held accountable for the amount of cost incurred; in contrast, with a profit center, managers are evaluated on the amount of profit generated, namely, revenues minus expenses.

    B. The number of service requests is likely to drop because users will now be charged for services provided. In cases where services are free, users sometimes use and abuse the privilege.

    C. The profit center form of organization will probably result in a more service-oriented maintenance group. The profit-center manager would be willing to perform services as long as capacity is available and revenues exceed expenses. Naturally, the added profit is viewed favorably, and the quality of services may actually increase. On the other hand, if organized as a cost center, providing additional service will likely result in higher costs, which could be viewed unfavorably in performance evaluations.

Responsibility Accounting: Controllability and Centers

70. Branson Corporation manufactures decorative, sculpted accessories that are sold by interior decorators and home furnishing stores. The following situation concerns two Branson employees: Deborah Philbun, head of the company's Billing Department, and Gary Bitner, the firm's general manager.

    Philbun's Billing Department makes heavy use of hourly employees and is evaluated as a cost center. Understanding the need for prompt collection of receivables, Philbun strives to run a first-class operation. Philbun also understands the need to contribute in a big way to Branson's financial performance so she continually strives to minimize Billing Department expenses.

    Unfortunately, Philbun experienced a heated discussion with Bitner several weeks ago, the subject being the shoddy operation that she is running. Bitner complained loudly about the lack of timely billings to customers and the general lack of attention to detail, as many complaints have surfaced about erroneous invoices and customer statements.

    Required:
    A. What is meant by the term "responsibility accounting?"
    B. What measure(s) of performance would companies normally use to evaluate a cost-center manager?
    C. Does Bitner have a valid reason to be upset with Philbun? Given the nature of the Billing Department, did Deborah err in her quest to minimize expenses? Explain.
    D. Is it likely that the Billing Department could be evaluated as a profit center? Why?

    LO: 1, 2, 3 Type: RC, N

    Answer:
    A. Responsibility accounting refers to the various concepts and tools that are used within an organization to evaluate the performance of people and various sub-units (such as divisions and departments). Managers are appointed to oversee these sub-units and held accountable for items under their control.

    B. The manager of a cost center is typically evaluated on the amount of cost incurred. The costs should be under the manager's control, and the service provided by the center should be high.

    C. Yes. Although Philbun understands the need to run a first-class operation and contribute to Branson's overall financial performance, she may have taken things a bit too far. A cost-center manager should strive to run an operation that provides high-quality service at the lowest possible cost. This does not necessarily mean cost minimization, which often results in the elimination of key tasks (i.e., the "fine points") needed to achieve quality. It is possible that the department's late billings and errors in invoices and customer statements may have been caused by such eliminations.

    D. No. A profit-center manager is evaluated on the basis of revenues generated and costs incurred. The Billing Department does not produce any revenues for Branson—it merely handles customer invoices and statements. Sales of company products are likely the responsibility of a separate Sales Department.

Fixing Responsibility

71. Consider the following situation:

The marketing manager of Gilroy, Inc., accepted a rush order for a nonstock item from a valued customer. The manager filed the necessary paperwork with the production department, and a production manager did the same with purchasing for needed raw materials. Unfortunately, a purchasing clerk temporarily lost the paperwork; by the time it was found, it was too late to order from Gilroy's regular supplier. A new supplier was located that quoted a very attractive price.

The materials soon arrived and were found to be of poor quality, thus giving rise to a favorable materials price variance, an unfavorable materials quantity variance, and an unfavorable labor efficiency variance. These latter two variances, as was the usual case, appeared on the production manager's performance report for the period just ended.

Required:

A. Given that the company uses a responsibility accounting system, should the production manager be penalized for poor performance? Briefly discuss, keeping in mind that a production manager is generally in a very good position to control material usage and labor efficiency.
B. Should anything be done to correct the situation? If "yes," briefly explain.

LO: 3 Type: N

Answer:

A. No. Although the variances appear on the production manager's performance report and are often under his or her control, an adjustment is needed in this case. The problem appears to be the fault of the purchasing clerk who misplaced the paperwork. Another explanation may be that the fault lies with the marketing department for accepting a rush order and possibly putting a strain on the entire manufacturing system.

B. Yes. These variances should be discussed to determine who's to blame and then cross-charged against that individual's department.

Segmented Income Statement: Incomplete Data

72. County Cable Services Inc., is organized in three segments: Metro, Suburban, and Outlying. Data for the company and for these segments follow.

	Cable Services Inc.	Segments of Company: Metro	Suburban	Outlying
Service revenue	$	$500	$400	$200
Less: Variable costs	225			
Segment contribution margin	$	$	$	$
Less: Controllable fixed costs		200	160	75
Controllable profit margin	$ 440	$200	$	$ 75
Less: Noncontrollable fixed costs			100	
Segment profit margin	$ 180	$ 85	$	$ 30
Less: Common fixed costs				
Income before taxes	$			
Less: Income tax expense	75			
Net income	$ 55			

Variable costs as a percentage of service revenue are: Metro, 20%; Suburban, 18.75%; and Outlying, 25%.

Required:

A. Complete the segmented income statement for County Cable.

B. Evaluate the three segment managers for consideration of a pay raise. Base the managers' performance on an appropriate measure, and rank their performance with respect to absolute dollars and as a percentage of service revenue. What causes any difference in rankings between the two approaches?

LO: 5 Type: A, N

Answer:

A.

	Cable Services Inc.	Metro	Suburban	Outlying
		Segments of Company		
Service revenue	$1,100	$500	$400	$200
Less: Variable costs	225	100	75	50
Segment contribution margin	$ 875	$400	$325	$150
Less: Controllable fixed costs	435	200	160	75
Controllable profit margin	$ 440	$200	$165	$ 75
Less: Noncontrollable fixed costs	260	115	100	45
Segment profit margin	$ 180	$ 85	$ 65	$ 30
Less: Common fixed costs	50			
Income before taxes	$ 130			
Less: Income tax expense	75			
Net income	$ 55			

B. The most appropriate performance measure is controllable profit margin, which is consistent with responsibility accounting. The rankings are:

Dollars:

- Metro: $200 (1)
- Suburban: $165 (2)
- Outlying: $75 (3)

Percentage of service revenue:

- Metro: $200 ÷ $500 = 40% (2)
- Suburban: $165 ÷ $400 = 41.25% (1)
- Outlying: $75 ÷ $200 = 37.5% (3)

The difference in rankings between the two approaches is caused by the fact that Suburban has a slightly lower rate of variable cost incurrence than Metro (18.75% vs. 20%). Notice that controllable fixed costs expressed as a percentage of sales are the same for both segments (40%).

Straightforward (Partial) Segmented Income Statement

73. Fog City Retail operates a retail store in Phoenix, Las Vegas, and Portland. The following information relates to the Phoenix facility:
    - The store sold 65,000 units at $18.00 each, after having purchased the units from various suppliers for $12.50. Phoenix salespeople are paid a 5% commission based on gross sales dollars.
    - Phoenix's sales manager oversees the placement of local advertising contracts, which totaled $54,000 for the year. Local property taxes amounted to $14,500.
    - The sales manager's $65,000 salary is set by Phoenix's store manager. In contrast, the store manager's $134,000 salary is determined by Fog City's vice president.
    - Phoenix incurred $6,800 of other noncontrollable costs along with $10,000 of income tax expense.
    - Nontraceable (common) corporate overhead totaled $68,000.

    Fog City's corporate headquarters is located in Portland, and the company uses responsibility accounting to evaluate performance.

    Required:
    Prepare a segmented income statement for the Phoenix store, being sure to disclose the segment contribution margin, the segment profit margin, and net income.

    LO: 5 Type: A

    Answer:

Sales revenue (65,000 units x $18.00)		$1,170,000
Less variable costs:		
Cost of goods sold (65,000 units x $12.50)	$812,500	
Sales commissions ($1,170,000 x 5%)	58,500	871,000
Segment contribution margin		$ 299,000
Less traceable, controllable fixed costs:		
Local advertising	$ 54,000	
Sales manager's salary	65,000	119,000
Segment profit margin		$ 180,000
Less traceable, uncontrollable fixed costs:		
Local property taxes	$ 14,500	
Store manager's salary	134,000	
Other	6,800	155,300
Income before taxes		$ 24,700
Less: Income tax expense		10,000
Net income		$ 14,700

Note: The nontraceable costs are ignored.

Segmented Income Statement

74. The following selected data relate to the Idaho Division of Far West Enterprises (FWE):

Sales revenue	$4,580,000
Uncontrollable fixed costs traceable to the division	1,360,000
Allocated corporate overhead	590,000
Controllable fixed costs traceable to the division	1,120,000
Variable costs	40% of revenue

Required:

A. Compute the following for the Idaho Division:
   1. Segment contribution margin.
   2. Controllable profit margin.
   3. Segment profit margin.

B. Which of the three preceding measures should be used when evaluating the Idaho Division as an investment of FWE's resources? Why?

C. Assume that management made the decision to prepare a segmented income statement that reflected Idaho's five operating departments. Would all $1,120,000 of the controllable fixed costs be easily traced to the departments? Briefly explain.

D. Which of the five-dollar amounts presented in the body of the problem would be used in computing the income before taxes of Far West Enterprises?

LO: 5 Type: RC, A, N

Answer:

A. 1. Segment contribution margin: $4,580,000 - ($4,580,000 x 40%) = $2,748,000
   2. Controllable profit margin: $2,748,000 - $1,120,000 = $1,628,000
   3. Segment profit margin: $1,628,000 - $1,360,000 = $268,000

B. Segment profit margin—This measure considers all costs of the division whether controllable or not. The company will have to judge whether the segment profit margin, even though it is not totally controllable by the division's management, is an adequate return on the assets (and effort) employed.

C. The $1,120,000 amount is easily traceable to the Idaho Division but not necessarily to the division's individual, smaller departments. Some of the costs might be traceable to these smaller units; some not. Costs that are not traceable are not allocated in an effort to avoid arbitrary results.

D. All five amounts.

Segment Reporting Measures

75. Kasten, Inc., operates a chain of 80 retail stores throughout the Northwest that specializes in the sale of sports equipment. The following costs relate to store no. 19 in Seattle, Washington:

    1. Salary of store manager: $58,000
    2. Allocated corporate overhead: $55,000
    3. Cost of goods sold: $2,560,000
    4. Landscaping and grounds costs (yearly contract): $6,800
    5. Hourly wages of sales clerks: $343,000
    6. Local advertising (negotiated by store manager): $76,000
    7. Property taxes: $25,800
    8. Sales commissions: $221,000

    Required:
    Which of the preceding costs would be used in computing:
    A. Store no. 19's segment contribution margin?
    B. Store no. 19's controllable profit margin?
    C. Store no. 19's segment profit margin?
    D. The net income of Kasten, Inc.?

    LO: 5 Type: N

    Answer:
    A. 3, 5, 8
    B. 3, 4, 5, 6, 8
    C. 1, 3-8
    D. 1-8

Segmented Income Statement Relationships, Cost Allocation, Responsibility Accounting

76. Pretty Lady is an upscale boutique that operates various stores throughout Florida. The company, which has three divisions (Miami, Naples, and Tampa), reported the following information for the year just ended (in thousands):

	Miami	Naples	Tampa
Sales revenue	$9,000	$6,000	$5,000
Divisional contribution margin	6,400	4,400	3,500
Profit margin controllable by division manager	1,500	1,900	1,000
Divisional profit margin	1,000	700	200

Pretty Lady also reported $600 of common fixed expenses that top management wants to allocate to the divisions on the basis of sales revenue. As the company's chief executive office notes, "Each division helped to incur a portion of these costs and, as a result, should absorb its fair share." The firm has adopted various responsibility accounting procedures to evaluate division personnel.

Required:

A. Compute the company's total sales revenue.
B. Calculate the amount of variable operating expense incurred by the Naples Division.
C. Calculate the fixed costs controllable by Miami's management.
D. Calculate the fixed costs traceable to the Tampa Division but controllable by others.
E. Pretty Lady desires to promote a division manager to the corporate office to oversee selected operations. In determining which individual to promote, should Pretty Lady's top management focus on the profit margin controllable by the division manager or the overall divisional profit margin? Briefly explain.
F. If the company follows the desires of top management, how much of the common fixed expenses would be allocated to the Tampa Division?
G. Do cost allocations such as those in part "F" typically appear on a segmented income statement?

LO: 4, 5   Type: A, N

Answer:

A. $9,000 + $6,000 + $5,000 = $20,000
B. $6,000 - $4,400 = $1,600
C. $6,400 - $1,500 = $4,900
D. $1,000 - $200 = $800
E. Top management should focus on the profit margin controllable by the division manager. The company has adopted various responsibility accounting procedures, which are based on the idea of holding personnel accountable for items under their control.
F. Tampa has 25% of the sales revenue ($5,000 ÷ $20,000) and, accordingly, should absorb 25% of the common fixed expenses, or $150 ($600 x 25%).
G. No

Segmented Reporting

77. Segmented income statements are used to show revenues, expenses, and income for major parts of an organization.

    Required:
    A. Consider a regional chain of department stores that has two or three stores in each of several cities. One way to segment this business is geographically. Describe another way of segmenting the firm.
    B. Segmented income statements often distinguish between "fixed expenses controllable by the segment manager" and "fixed expenses traceable to the segment, but controllable by others." Assume that the Cleveland district has three retail stores. Give two examples of each type of fixed cost.
    C. Common costs create difficulties when preparing segmented income statements. Define "common costs," give an example for the regional chain of department stores, and explain in general terms why such costs create a problem.

    LO: 5 Type: RC, N

    Answer:
    A. Other possible segments:
       - product lines (women's clothing, men's clothing, housewares, etc.)
       - demographic characteristics of customer (gender, use of cash or credit card, approximate age, etc.)

    B. Fixed expenses controllable by the Cleveland regional manager include:
       - regional advertising
       - contracts for maintenance of local facilities such as snowplowing, landscaping, routine building maintenance
       - utilities (controllable to some extent at the individual store level)
       - salaries (within limits set by upper management)

       Fixed expenses traceable to the segment, but controllable by others include:
       - salary of the regional manager
       - building depreciation (assuming the regional manager does not have authority to close or open stores)
       - corporate charges for services such as legal and accounting, MIS, central purchasing, etc.
       - debt-service costs on funds used to acquire (build) the stores

    C. Common costs are costs incurred to benefit more than one segment. Frequently, there is no cause/effect relationship regarding the size of these costs and the segments nor are such costs easily traceable to the segments. Examples include salaries of top corporate officials and costs of the corporate headquarters.

Quality Costs

78. Salido Enterprises has identified the following as having an impact on the company's quality costs:

    1. Inspection of manufactured goods on assembly line
    2. Warranty repairs
    3. Employee training
    4. Quality engineering/design
    5. Units repaired at customers' site
    6. Product testing
    7. Customer complaints
    8. Product liability
    9. Rework of defective goods before transfer to finished goods
    10. Preventive maintenance for equipment
    11. Evaluation of suppliers

    Required:
    A. Classify the eleven costs as prevention, appraisal, internal failure, or external failure.
    B. Briefly contrast the objective of traditional quality control and contemporary quality control.

    LO: 6, 7 Type: RC, N

    Answer:
    A.

1. Appraisal	7. External failure
2. External failure	8. External failure
3. Prevention	9. Internal failure
4. Prevention	10. Prevention
5. External failure	11. Prevention
6. Appraisal	

    B. The traditional view holds that the optimal level of product quality is a balancing act between failure costs and the costs of prevention and appraisal. The goal is to minimize total quality costs by operating at the point where failure costs equal the sum of prevention and appraisal costs. In contrast, the contemporary perspective holds that any deviations from a product's target specifications result in higher costs, with the optimal situation arising at the zero defect level.

Quality Costs

79. Chase, Inc., has identified the following selected quality costs:
    - Warranty costs: $72,000
    - Employee training: $28,000
    - Repair of units prior to shipment to customers: $14,000
    - Quality engineering: $61,000
    - Product inspection during manufacturing: $35,000
    - Travel to customer sites to perform repairs: $6,200

    Required:
    A. Compute the company's prevention, appraisal, internal failure, and external failure costs.
    B. Does a "hidden" quality cost sometimes occur when bad units enter the marketplace? Briefly explain.
    C. Which of the following could have greater negative ramifications for Chase: $50,000 of internal failure costs or $50,000 of external failure costs? Why?

    LO: 6 Type: RC, N

    Answer:
    A. Prevention: Training ($28,000) + quality engineering ($61,000) = $89,000
    Appraisal: Inspection ($35,000)
    Internal failure: Repairs prior to shipment ($14,000)
    External failure: Warranty ($72,000) + travel ($6,200) = $78,200

    B. Yes. When bad units enter the marketplace, the result can be lost sales of the units in question, lost sales of other products courtesy of a tarnished reputation, and a reduced market share. These events give rise to an opportunity cost that is difficult to measure and report (unlike most quality costs, which are observable and measurable).

    C. External failure costs of $50,000: These costs are incurred after the product is in the marketplace, meaning that customers may be unhappy from a bad experience. This could lead to lost sales, lost customers, and a damaged reputation. In contrast, although the same $50,000 cost is involved, the expenditures are directed toward fixing defects prior to the units' entry into the marketplace. Thus, the extended impact of bad units (lost sales, lost customers, and so forth) can be avoided.

Quality Cost Composition and Analysis

80. Baker Enterprises implemented a total quality management (TQM) program at the beginning of 20x1, closely monitoring amounts spent on prevention cost, appraisal cost, internal failure cost, and external failure cost. By the end of 20x3, Baker noted a significant improvement in the quality of its finished-goods production, with management sensing that the firm was close to "optimum results from both a quality and expenditure perspective." The quality improvement, coupled with favorable ratings in *Consumer Reports,* has led to a sizable boost in sales volume.

    Required:

    A. Present two examples of prevention costs, appraisal costs, internal failure costs, and external failure costs.
    B. Baker's TQM program is functioning as expected from an operational perspective. If the program is functioning as anticipated from a financial perspective, what has likely happened (increase, decrease, or no effect) to:
        1. The amount spent on total quality costs from 20x1 through 20x3.
        2. The hidden costs incurred by the company from 20x1 through 20x3.
        3. The percentage of quality expenditures on prevention and appraisal costs relative to the sum of internal and external failure costs.
        4. The amount of effort expended on appraisal efforts if the company has gone somewhat overboard in its prevention programs.

    LO: 6, 7 Type: RC, N

    Answer:

    A. Prevention: Quality training, reliability engineering, pilot studies, machine maintenance, purchase of top quality materials
    Appraisal: Inspection, reliability testing
    Internal failure: Scrap, repair, rework, downtime
    External failure: Warranty costs, customer complaints, lawsuits, transportation costs to customer sites, product returns, price allowances

    B. 1. Decrease: the company is close to the optimum point from an expenditure perspective.
        2. Decrease: increased sales from quality improvements and favorable ratings likely translate into fewer lost sales and a better reputation.
        3. Increase: more money spent upfront on prevention and appraisal costs will drive down failure costs, resulting in decreased total quality costs for the firm.
        4. Decrease: highly effective prevention programs often result in a reduced need for inspection.

Quality Costs: Identification and Analysis

81. Los Angeles Technologies (LAT) produces two synthesizers that are popular in the music/entertainment industry: A678 and B443. The company is very concerned about quality and has provided the following information about A678:

Warranty repair costs	$100,000
Reliability engineering	340,000
Rework at LAT's manufacturing plant	80,000
Manufacturing inspection	30,000
Transportation costs to customer sites to fix problems	20,000
Quality training for employees	60,000

Quality cost reports revealed the following about B443:

Prevention costs	80.3%
Appraisal costs	3.9%
Internal failure costs	9.1%
External failure costs	6.7%
Total quality costs	100.0%

Finally, the company's accounting department reported that the percentage of sales revenues consumed by quality costs is lower for B443 than for A678.

Required

A. Classify the costs that relate to A678 as prevention, appraisal, internal failure, or external failure.
B. Using your answer in requirement "A," compute prevention, appraisal, internal failure, and external failure costs as a percentage of A678's total quality costs.
C. Comment on your findings, noting whether the company is "investing" its quality expenditures differently for the two synthesizers.

LO: 6, 7 Type: A, N

Answer:

A. Warranty repair costs: External failure
Reliability engineering: Prevention
Rework at LAT's manufacturing plant: Internal failure
Manufacturing inspection: Appraisal
Transportation costs to customer sites: External failure
Quality training for employees: Prevention

B. Individual quality costs as a percentage of total quality costs:

		% of Total
Prevention ($340,000 + $60,000)	$400,000	63.5%
Appraisal	30,000	4.8%
Internal failure	80,000	12.7%
External failure ($100,000 + $20,000)	120,000	19.0%
Total	$630,000	100.0%

C. Yes, the company is "investing" its quality expenditures differently for the two synthesizers. Los Angeles is spending more up-front on B443 with respect to prevention and appraisal—over 84% of the total quality expenditures. (This figure is approximately 68% for A678.) The net result is significantly lower internal- and external-failure cost percentages and, perhaps more important, lower total quality costs as a percentage of sales.

DISCUSSION QUESTIONS

Performance Reports

82. The performance reports generated by a responsibility accounting system often form a "hierarchy of performance reports." Explain what is meant by this term.

LO: 3 Type: RC

Answer:
The performance evaluations are tied to the organizational chart. The performance report at each level reflects results of the units that report to the manager at that particular level, with the results being combined and "delivered" to the next higher level in the firm. Thus, each manager receives feedback that reflects his or her areas of responsibility, and the whole process parallels a pyramiding of accountability throughout the organization.

Cost Allocation Terms

83. The allocation of costs gives rise to several unique terms. Briefly discuss the following: cost object, cost allocation base, and cost allocation.

    LO: 4 Type: RC

    Answer:
    Cost object—the responsibility centers, products, or services to which costs are to be assigned.

    Cost allocation base—a measure of activity, physical characteristic, or economic characteristic that is used as the basis for cost allocation. Commonly known as cost drivers, examples may include machine hours, labor cost, number of setups, and a host of other items.

    Cost allocation—the process of assigning costs to the cost object by using the cost allocation base.

Quality Costs

84. Companies are devoting an increased amount of attention to quality costs. Briefly explain the difference between internal failure costs and external failure costs. Which of these two costs will likely be more troublesome for an organization that desires to succeed in an extremely competitive marketplace? Briefly discuss.

    LO: 6 Type: RC, N

    Answer:
    Internal failure costs arise from the act of repairing defects prior to sale. In contrast, external failure costs are incurred after a product has been sold. Examples of the latter include lawsuits, warranty repairs, the cost of on-site customer visits, and so forth.

    In an extremely competitive marketplace, external failure costs can be more troublesome. Once it becomes known in the marketplace that a company is having quality problems, its reputation may suffer and customers may turn elsewhere for goods and services. The result is lost sales, lost profits, and a possible erosion of the firm's customer base.